PROJECT-SPECIFIC ANALYSIS AND ADDENDUM TO THE CalVTP PROGRAM EIR

Sonoma Land Trust Preserves Vegetation Treatment Project

Prepared for:

Sonoma Land Trust

— and —

Northern Sonoma County Fire Protection District

February 2022

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LIST OF ABBREVIATIONS

BAAQMD	Bay Area Air Quality Management District
Board	California Board of Forestry and Fire Protection
CAAQS	California ambient air quality standards
CAL FIRE	California Department of Forestry and Fire Protection
Cal-IPC	California Invasive Plant Council
CalVTP	California Vegetation Treatment Program
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CNDDB	California Natural Diversity Database
CRHR	California Register of Historical Resources
dbh	diameter at breast height
EPA	U.S. Environmental Protection Agency
GHG	greenhouse gas
IPaC	Information for Planning and Consultation
MMRP	mitigation monitoring and reporting program
NAAQS	national ambient air quality standards
NAHC	Native American Heritage Commission
NoSoCo Air	Northern Sonoma County Air Pollution Control District
NWIC	Northwest Information Center
PEIR	Program Environmental Impact Report
PSA	Project-Specific Analysis
SENL	single event noise levels
SPR	standard project requirements
SR	state route
SRA	State Responsibility Area
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UTV	utility task vehicle
VMT	vehicle miles traveled
WLPZ	Watercourse and Lake Protection Zones

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1 INTRODUCTION

1.1 PROJECT OVERVIEW AND DOCUMENT PURPOSE

The California Vegetation Treatment Program (CalVTP) Program Environmental Impact Report (PEIR) evaluates the potential environmental effects of implementing qualifying vegetation treatments to reduce the risk of wildfire throughout the State Responsibility Area (SRA) in California. It was designed for use by many state, special district, regional, and local agencies to accelerate the approval of vegetation treatment projects found to be within the scope of the PEIR. If needed, supplementing the PEIR is supplemented with minor technical information about a proposed project in the form of an addendum.

To assist with this effort, the California Board of Forestry and Fire Protection (Board) is supporting the preparation of Project-Specific Analysis (PSA) documents to create a library of example projects that help guide state and local agencies in preparing their own PSAs under the CalVTP PEIR, as well as to achieve California Environmental Quality Act (CEQA) compliance for the proposed project. The Board selected Sonoma Land Trust's proposed vegetation treatment project to be one of the PSAs that provides CEQA compliance for project approval and implementation and serves as an example PSA for other agencies seeking to use the CalVTP PEIR to accelerate approval of their own vegetation treatment projects.

1.1.1 Proposed Project

Sonoma Land Trust proposes to implement vegetation treatments on up to 1,350 acres of land (proposed project) in the Pole Mountain Preserve, Little Black Mountain Preserve, and Laufenburg Ranch Preserve in Sonoma County and in the Live Oaks Ranch Preserve in Sonoma County and Napa County (Figure 1-1). The proposed treatment types (i.e., fuel breaks and ecological restoration) and the treatment activities (i.e., prescribed burning, manual and mechanical treatments, and herbicide application) are consistent with those evaluated in the CalVTP PEIR. Ongoing maintenance of initial treatments (referred to as "retreatment/treatment maintenance" or "maintenance" in this PSA/Addendum) would involve the same vegetation treatment types and activities used in the original treatment.

1.1.2 Lead Agency

For the purposes of the CalVTP PEIR and this PSA, a project proponent is a public agency that provides funding for vegetation treatment or has land ownership, land management, or other regulatory responsibility in the treatable landscape and is seeking to fund, authorize, or implement vegetation treatments consistent with the CalVTP. This document is being prepared for Sonoma Land Trust to comply with CEQA for the implementation of vegetation treatments that require a discretionary action by a state or local agency. The CEQA lead agency is the Northern Sonoma County Fire Protection District (District). The District will enter into a partnership with Sonoma Land Trust to implement the proposed treatments. The District Board will approve a resolution establishing the partnership. The partnership may entail the provision of resources to Sonoma Land Trust including equipment, staffing, and technical input. In this PSA, Sonoma Land Trust is referred to as the "implementing entity" reflecting its role as the lead implementer of treatments and landowner and manager of the preserves.

1.1.3 Purpose of This PSA/Addendum

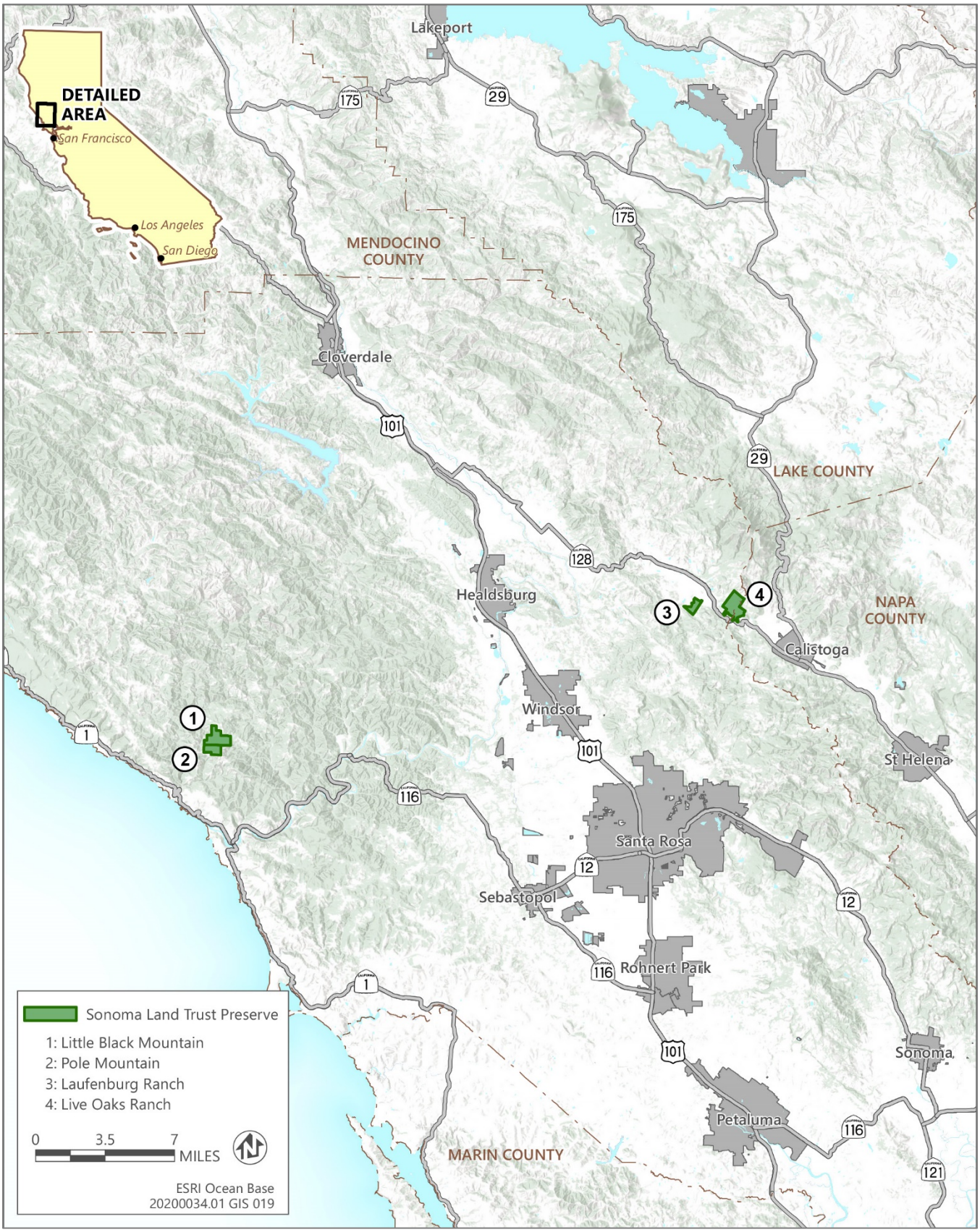
This document serves as a PSA to evaluate whether the proposed treatments would be within the scope of the CalVTP PEIR. As stated above, the treatment types and treatment activities are consistent with the CalVTP. Among the other criteria for determining whether a treatment project is within the scope of the CalVTP PEIR is whether it is within the CalVTP treatable landscape (i.e., the geographic extent of analysis covered in the PEIR). If a proposed vegetation treatment project is covered by the evaluation of environmental effects in the PEIR, it may be approved

using a finding that the project is within the scope of the PEIR for its CEQA compliance, consistent with CEQA Guidelines Section 15168(c)(2). If a proposed project includes substantial SRA treatable landscape, but also extends in part outside the SRA, it may still rely on environmental analysis in the PEIR, if the environmental conditions of the outside landscape and reasonably foreseeable environmental impacts of proposed treatments are consistent with the descriptions in the PEIR, as discussed below. The proposed project is in the SRA but not wholly within the CalVTP treatable landscape.

Portions of the project treatment areas extend outside of the treatable landscape identified in the CalVTP PEIR. In total, these areas outside of the treatable landscape encompass approximately 191 acres; however, they are dispersed in small sections of treatment areas (refer to Chapter 2, "Treatment Description")). The scattered array of acres outside of the CalVTP treatable landscape is due to the method by which the CalVTP treatable landscape was digitally developed and the resultant degree of mapping resolution. Using desktop applications to apply buffers around geographic and topographic features and demarcate jurisdictional boundaries (i.e., SRA and Local Responsibility Area [LRA]), the method resulted in some treatable landscape areas that are shown on maps to be disjoined and scattered and some that are inheld LRA areas surrounded by SRA. If the areas of the proposed project outside of the CalVTP treatable landscape have essentially the same, or at least substantially similar, landscape conditions as the adjacent areas within the treatable landscape, the environmental information in the PEIR would be relevant and applicable.

An addendum to an EIR is appropriate where a previously certified EIR has been prepared and some changes or revisions to the project are proposed, or the circumstances surrounding the project have changed, but none of the changes or revisions would result in new or substantially more severe significant environmental impacts, consistent with CEQA Section 21166 and CEQA Guidelines Sections 15162, 15163, 15164, and 15168. In this case, there are no changed circumstances, but the proposed revision or change in the project, compared to the PEIR, is the inclusion of areas outside of the CalVTP treatable landscape. The PSA checklist (refer to Section 4, "Project-Specific Analysis/Addendum") includes the criteria to support an Addendum to the CalVTP PEIR for the inclusion of treatment areas outside the CalVTP treatable landscape. The checklist evaluates each resource in terms of whether the later treatment project, including the "changed condition" of additional geographic area, would result in significant impacts that would be substantially more severe than those covered in the PEIR and/or would result in any new impacts that were not covered in the PEIR.

This document serves as both a PSA and an addendum to the CalVTP PEIR for review and analysis under CEQA for the proposed Sonoma Land Trust vegetation treatments within and outside the CalVTP treatable landscape. The project-specific mitigation monitoring and reporting program (MMRP), which identifies the CalVTP standard project requirements (SPRs) and mitigation measures applicable to the proposed project, is presented in Attachment A. The SPRs identified in the MMRP have been incorporated into the proposed vegetation treatments as a standard part of treatment design and implementation.



Source: Data received from Sonoma Land Trust and adapted by Ascent in 2021.

Figure 1-1 Regional Location

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2 TREATMENT DESCRIPTION

Proposed treatment types are fuel breaks and ecological restoration. Proposed treatment activities include manual and mechanical treatments, prescribed burning, and herbicide application. Locations of treatment types are shown in Figures 2-1 and 2-2. Tables 2-1 and 2-2 provide summaries of treatments. Proposed vegetation treatments would occur within four preserves. Pole Mountain Preserve and Little Black Mountain Preserve are located in western Sonoma County and are referred to as "coastal preserves" in this PSA/Addendum. Live Oaks Ranch Preserve and Laufenburg Ranch Preserve are located within the Russian River Watershed in eastern Sonoma County and are referred to here as the "Russian River Watershed preserves."

2.1 PRESERVE DESCRIPTIONS

2.1.1 Coastal Preserves

POLE MOUNTAIN PRESERVE

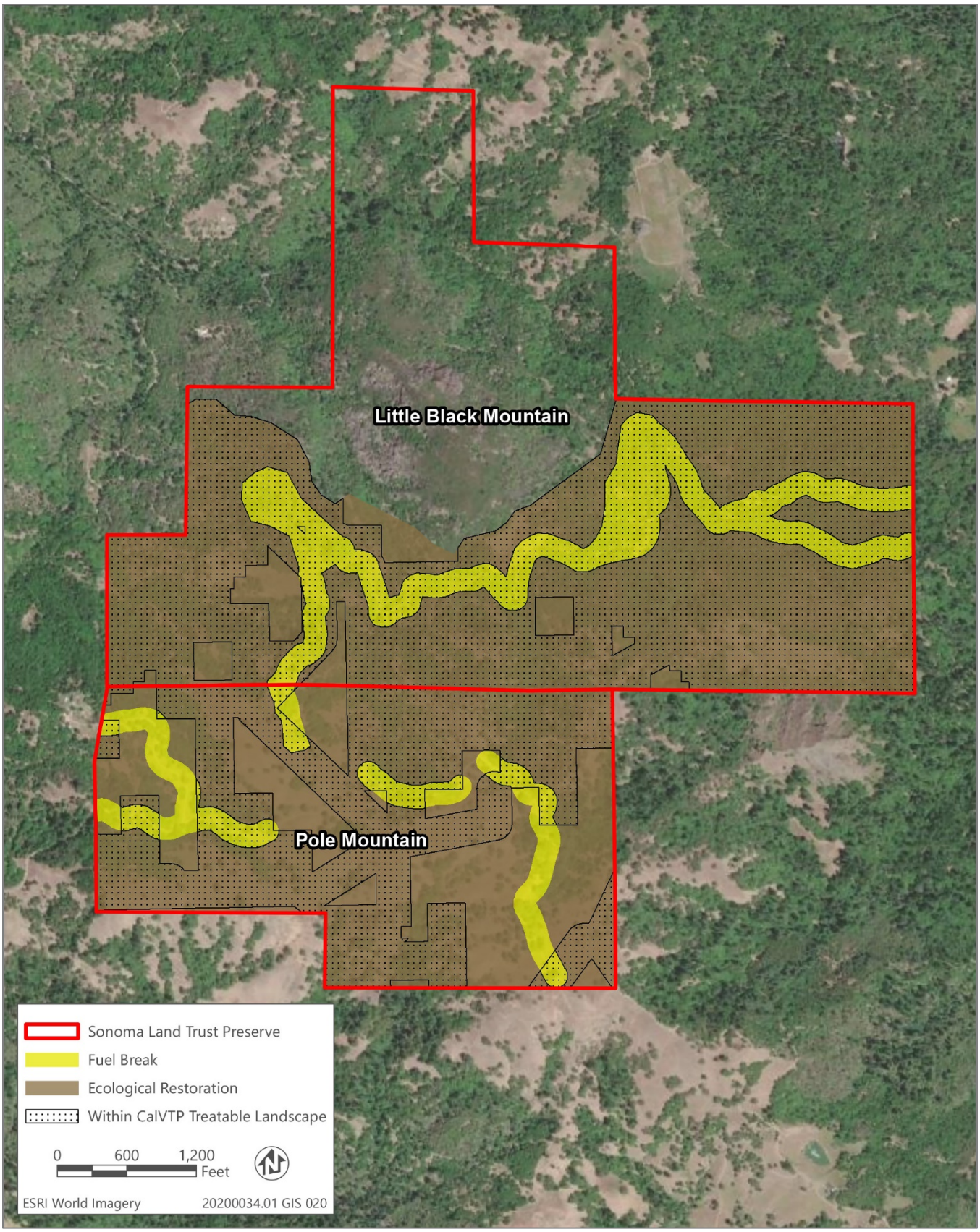
The Pole Mountain Preserve is a 238-acre oak woodland property situated in the rugged hills between the towns of Jenner and Cazadero, located 3.8 miles northwest of the town of Jenner and 2.7 miles southwest of Cazadero, California. The preserve includes Pole Mountain, the highest point along the Sonoma Coast at 2,204 feet with 360-degree views of the Sonoma Coast and interior landscapes. Sonoma Land Trust's acquisition of Pole Mountain created a 6,368-acre contiguous protected area from the shore to the highest point along Sonoma's coast, providing a critical wildlife and recreational connection between two existing preserves: Little Black Mountain and the Jenner Headlands. Conservation work at this magnitude allows for the opportunity to protect and manage natural and cultural resources at a landscape scale as well as allow plants and wildlife room to adapt to a changing climate.

The property has a rich human history and the protection of cultural resources is a primary conservation objective of preserve management. The Pole Mountain Fire Lookout and associated Alert Wildfire camera provides fire detection services for community safety. The summit is also the destination of the Sea to Sky Trail, which starts at State Route (SR) 1, climbs across the Jenner Headlands, and ends atop Pole Mountain. The Sea to Sky Trail in Pole Mountain Preserve is open to the public daily for hiking. The grasslands are grazed by cattle to further biodiversity and wildfire risk reduction goals.

The slopes drain into the headwaters of Pole Mountain Creek, Kidd Creek, and the East Branch Russian Gulch, all above the limit of anadromy. The Pole Mountain Preserve is a mosaic of habitat types, including mature oak savanna with ancient oaks, bays, big-leaf maples and madrones; oak woodlands, open grasslands, mixed hardwood/conifer forests, and serpentine outcroppings; and wetlands, ponds, seeps and streams with associated native riparian habitat.

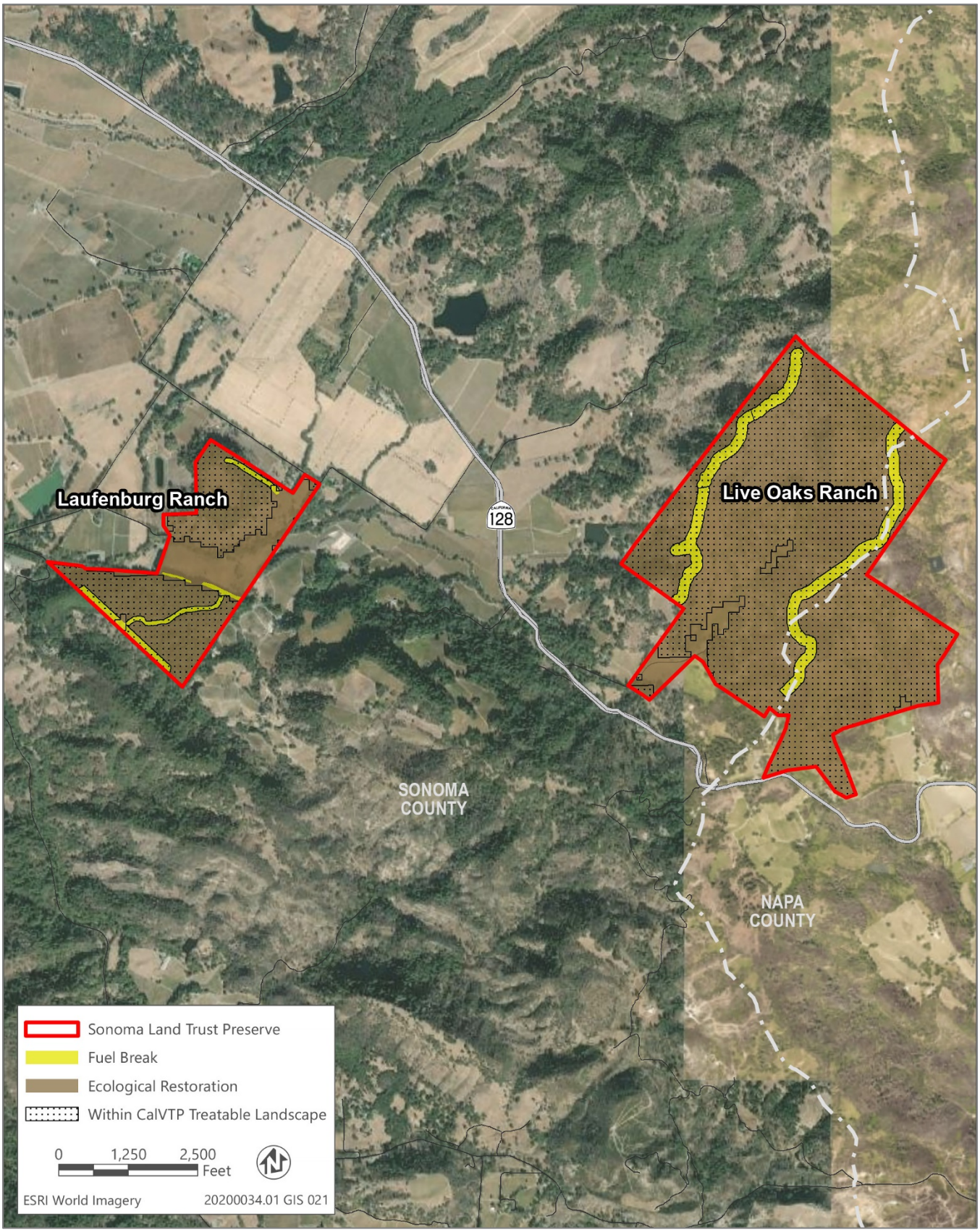
Past forestry practices, the impact of the 1978 Creighton Ridge Fire, post-fire restoration activities and fire suppression have resulted in forest stands that are overstocked with small diameter trees and that contain excess fuel load related to tanoak mortality caused by the Sudden Oak Death pathogen (*Phytophthora ramorum*). Portions of the property burned in the Creighton Ridge Fire were subsequently replanted with non-native conifers, and stump-sprouting species such as tanoak and bay laurel grew back with multiple stems per tree. The oak woodlands of the preserve are further affected by conifer encroachment.

Sonoma Land Trust implemented an initial 9-acre shaded fuel break project along priority roadside areas in 2020. Fuel reduction treatments were aimed to reduce overcrowding, eliminate ladder fuels and create a discontinuous canopy in the densely stocked forest. Native tree species (e.g., true oaks, madrones) were favored, whereas successional tree species like Douglas fir and the planted non-native conifers have been thinned. Dead tanoaks were downed and lopped/scattered to improve forest health. Downed logs and snags were retained to benefit wildlife habitat needs. This fuel reduction project was an important step toward improving forest health on the Pole Mountain Preserve, but more work is needed to promote a healthy native ecosystem and fire resilient landscape in the face of climate change impacts.



Source: Data received from Sonoma Land Trust and adapted by Ascent in 2021.

Figure 2-1 Little Black Mountain Preserve and Pole Mountain Preserve



Source: Data received from Sonoma Land Trust and adapted by Ascent in 2021.

Figure 2-2 Laufenburg Ranch Preserve and Live Oaks Ranch Preserve

LITTLE BLACK MOUNTAIN PRESERVE

Little Black Mountain Preserve is located approximately 5 miles southwest of Cazadero, California. The 500-acre preserve has remnants of a historic homestead site, a small caretaker's cabin, and a variety of habitats, primarily Douglas fir, mixed Douglas fir/hardwood, chaparral/manzanita brush, and mixed Douglas fir/redwood forests. A broad assemblage of native wildlife occupies this landscape. The remote and steep landscape is dominated by the Little Black Mountain feature. The headwaters of Pole Mountain Creek, Saint Elmo's Creek, and Kidd Creek wind down and through the property, but all the creeks on the property are above the point of anadromy. The 1978 Creighton Ridge Fire burned most of the property, including the landowner's home, and the land was subsequently donated to Sonoma Land Trust in 1979.

The combination of the intensive logging in the 1950s and Creighton Ridge Fire in 1978 altered forest composition at Little Black Mountain (and Pole Mountain) in dramatic ways. The industrial logging practices removed the mature old-growth stands and following the fire, stump-sprouting hardwoods such as tanoak and bay laurel put forth multiple stems that grew back in an even-aged thicket. The region was densely replanted with conifers through a California Department of Forestry and Fire Protection (CAL FIRE) Forest Improvement Program, further resulting in overcrowded forest conditions. Most recently, numerous tanoak trees have died as a result of Sudden Oak Death, leaving hillsides of dead and dying trees and adding to the accumulated fuel load.

Forest health and fire fuel reduction treatments were applied following the Creighton Ridge Fire and have been applied more extensively in priority areas since 2004. Previous goals were to break up the even-aged stands and reduce the number of stems per acre for forest health. Fuel reduction treatments were aimed at reducing overcrowding, eliminating ladder fuels, and creating a discontinuous canopy in the densely stocked forest. Native tree species (e.g., true oaks, madrones) were favored, whereas successional species like Douglas fir and the planted nonnative conifers have been thinned. Dead tanoaks were downed and lopped/scattered to improve forest health. Downed logs and snags were retained to benefit wildlife habitat needs. Although sections of shaded fuel break have been implemented, Little Black Mountain needs additional treatments to improve forest health, reduce fuel loads and maintain emergency access. Furthermore, Sonoma Land Trust needs to increase the pace and scale of treatment to promote a healthy native ecosystem and fire-resilient landscape in a changing climate.

2.1.2 Russian River Watershed Preserves

LIVE OAKS RANCH PRESERVE

Live Oaks Ranch Preserve is located approximately 5 miles north of Calistoga, California. The 572-acre ranch, which was bequeathed to Sonoma Land Trust in 2010, offers a diverse display of native inland biodiversity, including madrone forests, oaks woodlands, grasslands, mixed conifer forests, chaparral, and riparian areas. Napa Land Trust holds a conservation easement over the preserve, that allows uses such as ecological restoration, recreation, and cattle grazing.

The preserve is topographically diverse and straddles the Napa-Sonoma County boundary and their respective watersheds: the Russian River Watershed in Sonoma County and the Napa River Watershed in Napa County. Mount St. Helena dominates the landscape, and remnants of volcanic activity are evident.

The headwaters of Bidwell Creek, an anadromous fish-bearing stream, take form in the valley and later flows through Sonoma Land Trust's nearby Laufenburg Ranch Preserve. Sonoma Land Trust has implemented several riparian enhancement projects at the preserve along Bidwell Creek, including a fish stream barrier removal and riparian restoration plantings. Further riparian restoration is needed in the lower sections to mid sections of Bidwell Creek to reduce erosion and increase native riparian diversity. Regardless, the riparian area continues to support a range of terrestrial and aquatic species that rely on this corridor for movement.

In 2017, the Tubbs Fire burned across the preserve. The homes and most of the other buildings on the property were saved. The intensity and severity of the fire were variable across the landscape. The chaparral, madrone forest, and portions of the conifer forest burned very hot during the Tubbs Fire, and the thick, overstocked post-fire regrowth and standing dead wood in these vegetation types are expected to benefit from mechanical and/or manual treatments to improve forest health and wildlife movement. Many large valley oaks were lost on the valley floor because of cavity fires, so oak recruitment and regeneration are of key importance. In general, much of the land and native vegetation has responded positively to the fire.

The preserve has a long history of cattle ranching and has been moderately grazed for decades. With its sunny southwest-facing exposures, abundant creeks and springs, and open grassland, the preserve offers a prime opportunity to use grazing to meet Sonoma Land Trust ecological goals and support local agriculture. Long-time caretakers live on-site, as well as tenants in a rental cottage. A barn and a small corral area provide usable space for the cattle operation.

LAUFENBURG RANCH PRESERVE

Laufenburg Ranch Preserve is located approximately 7 miles north of Calistoga, California. The preserve, an ecologically diverse 174-acre mosaic of natural and working land, was bequeathed to Sonoma Land Trust by Charles Laufenburg in 1988 for protection in perpetuity. The Preserve represents a piece of the past in Knights Valley: rolling oak woodlands bisected by Bidwell Creek; agricultural fields that have supported livestock grazing and grown hay, orchards, and vegetables; and conifer and mixed hardwood forest with a stand of mature redwoods along the trickling tributary.

Bidwell Creek, an anadromous fish–bearing stream, bisects the preserve with a well-established riparian corridor and provides essential habitat for a diverse and consistent array of wildlife, including black bears, bobcats, coyotes, foxes, deer, skunk, raptors, and more. A variety of riparian restoration projects have also taken place along Bidwell Creek, which has increased the width and diversity of the corridor.

The preserve's forests are comprised of conifer and mixed hardwoods as well as oak woodlands. Many mature trees tower in the diverse forest and woodlands, but in the absence of fire, successional tree species like young Douglas fir have become established and increased ladder fuels. Discrete forest management activities have occurred over the years, but more extensive treatments are needed to restore fire resilience and forest health. The lack of wildfire or cultural burning has resulted in overstocking of small diameter trees, as well as the suppression of oak trees and other native hardwoods by the overabundance and shading by mature, sometimes decadent, Douglas firs. Future forest management and the return of more regular prescribed fire to the landscape will help renew and preserve the historically dominant native oak woodlands.

The preserve includes two historic structures: a large redwood barn and a ranch house. These structures provide residence for a caretaker, storage for past agricultural activities, and a unique visitor experience. The preserve has approximately 22 acres of agricultural fields and for decades has been used for cultivation with varying levels of success. The agricultural use of the Preserve over the past century has ranged from annual crop production to livestock grazing to orchards and more. The preserve supports a productive agricultural well in the southern forest and a domestic well near the ranch house.

2.2 PROPOSED TREATMENTS

The proposed project involves two treatment types: fuel breaks and ecological restoration. The vegetation treatment activities proposed to implement each of these treatment types are prescribed burning, mechanical treatment, manual treatment, and targeted ground application of herbicides. The treatment types and treatment activities are described below.

2.2.1 Treatment Types

Proposed treatment types consist of fuel breaks and ecological restoration. Each treatment type is described in more detail below and is consistent with the treatment types described in the CalVTP. Both treatment types would occur on all four preserves. Refer to Figures 2-1 and 2-2 for the location of each treatment type within the preserves. Table 2-1 provides the acres of treatment at each preserve and Table 2-2 provides a summary of treatments.

FUEL BREAKS

In strategic locations, fuel breaks create zones of vegetation removal, often in a linear layout, that reduce wildfire risk and support fire suppression by providing responders with a staging area or access to a remote landscape for fire control actions. They can also provide safe emergency egress during wildfires. Only shaded fuel breaks would be implemented in the treatment areas. In forested areas, the tree canopy would be thinned to reduce the potential for a crown fire to move through the canopy; however, larger trees would remain. The shade of the retained canopy also helps reduce the potential for rapid regrowth of shrubs and sprouting hardwoods and may reduce rill and gully erosion. The shaded fuel breaks also provide important control lines for prescribed fire activities.

Fuel breaks would be established on all four preserves along strategic topographic locations (e.g., on ridge tops); adjacent to roads, skid trails, and existing fuel breaks; and near high-use areas (e.g., cabins, infrastructure, parking areas, ranch roads), as shown in Figures 2-1 and 2-2. All shaded fuel breaks will occur within 100 feet of existing roads, skid trails, existing fuel breaks, and historic bulldozer lines. To create shaded fuel breaks, shrubs and understory trees would be removed to reduce surface and ladder fuels and create safer places for firefighters to stage equipment and fight wildfire. Live trees up to 10 inches diameter at breast height (dbh) would be felled; live trees greater than 10 inches dbh would be limbed up to 10–15 feet; and spaces of 15–20 feet width would be created between trees. In oak woodlands, treatment would focus on removing encroaching conifers and bay trees to promote protection of tree health in native oak woodland.

ECOLOGICAL RESTORATION

Ecological restoration treatments would be implemented outside of the shaded fuel break treatment areas. Treatments would seek to protect and restore native ecological function, including returning fire to a more historical and natural role on the landscape to improve native habitats, recreate healthy forest and woodland conditions, and create a natural landscape more resilient to wildfires. The vegetation treatment program seeks to improve overall forest, woodland, and grassland health and provide watershed benefits by supporting native habitat structure that is resilient to future natural disturbances and climate scenarios. A healthy, functioning natural landscape would help reduce the impacts of climate change by sequestering carbon, protecting aquatic resources, and providing important habitat for native wildlife. A healthy natural landscape also can reduce the wildfire risk to surrounding human communities and protect the rich cultural landscape.

The ecological restoration treatment type is proposed on all four preserves, as shown on Figures 2-1 and 2-2. Ecological restoration treatment would focus on thinning small diameter trees from overstocked forest units and/or post-fire resprouts to promote the continued growth of mature trees and a healthy forest structure and improve wildlife movement and habitat. This treatment type involves removing excessive standing dead wood, retaining three to five snags per acre for wildlife habitat, controlling nonnative trees and shrubs, and removing encroaching conifers and bay saplings in oak woodlands to reduce competition and promote native flora and a healthier forest.

Table 2-1 Proposed Treatment Size by Preserve

Sonoma Land Trust Preserve	CalVTP Treatment Type	Maximum Treatment Area within CalVTP Treatable Landscape (acres)	Maximum Treatment Area Outside CalVTP Treatable Landscape (acres)	Maximum Total Treatment Area (acres)
Little Black Mountain	Fuel breaks	62	<0.1	62
	Ecological restoration	237	22	258
Pole Mountain	Fuel breaks	15	19	33
	Ecological restoration	130	74	204
Laufenburg Ranch	Fuel breaks	11	3	14
	Ecological restoration	114	51	165
Live Oaks Ranch	Fuel breaks	56	0	56
	Ecological restoration	534	24	557
Total acres (approximately)				1,350

Source: Data provided by Sonoma Land Trust in 2021.

2.2.2 Treatment Activities

The proposed vegetation treatment activities are prescribed burning, mechanical treatment, manual treatment, and targeted ground application of herbicides. Each of these treatment activities is described in more detail below and consistent with the treatment activities described in the CalVTP. All treatment activities could occur on all four preserves with one exception. Herbicide application would not occur within Pole Mountain Preserve. Table 2-1 provides the maximum acres of treatment at each preserve and Table 2-2 provides a summary of treatments. Treatment activities could occur during any time of year, although the nesting bird season would be avoided when feasible. Although there is the potential for prescribed burning to occur during nighttime and weekend hours, all treatment activities using equipment would be limited to daytime hours on Monday through Friday

PRESCRIBED BURNING

Prescribed burning consists of two general types, pile burning and broadcast burning (underburning).

- Pile burning: Biomass from manual and mechanical treatment would be piled using equipment (e.g., skid steer, tractor, bulldozer or excavator) or hand crews and burned appropriately. Typically, dozers are equipped with a brush rake to reduce soil displacement and create "clean" piles. Pile burning would occur in an understory or in areas with little to no live overstory, including areas that have experienced previous wildfire.
- Broadcast burning: Broadcast burning would be used to promote forest health and native flora and reduce biomass and fuel loading in grassland, woodland, and forest vegetation. Pretreatment of vegetation using mechanical and manual activities or herbicide application would occur in areas proposed for prescribed burning. Prescribed burning in the grassland areas would help control nonnative plant species and reduce fine fuels. These treatments would also promote a more natural, sustainable, and wildfire resilient native landscape.

Sonoma Land Trust would implement an understory burn to partially remove understory and groundcover vegetation during periods when weather and vegetation conditions allow the desired fire intensity to meet treatment objectives and do not create fire behavior jeopardizing maintaining control of the prescribed (e.g., relatively high humidity and high fuel moisture content). The goal is to conduct a low intensity burn that burns only targeted ground and litter fuels, creating a mosaic of existing habitat types. Prescribed burning may require the construction of new control lines or enhancement of existing control lines using manual or mechanical treatments, primarily through mowing or using hand tools but use of a skid steer may be required.

Prescribed burning would require between 10 and 50 crew members, depending on size and site characteristics of the burn unit. Typically, each burn would last 1 day to 1 week. Equipment could include water trucks, fire engines, and chainsaws. All burning would occur in accordance with regulations regarding the use of prescribed burning. This would include the preparation and implementation of a burn plan that includes a smoke management plan.

MECHANICAL VEGETATION TREATMENT

Mechanical treatments would primarily include masticating target vegetation and chipping biomass from manual and mechanical treatment activities. Equipment would include tractors/skidders, chippers, and masticators. Up to four crews may operate at the same time across the preserves. Typically, treatments would require several days to several months to complete. Equipment would be operated on or within 100 feet of roads or skid trails in fuel break treatment areas and on existing roads or skid trails or on flat to moderate slopes in ecological restoration treatment areas.

Small-diameter trees, downed woody debris, and woody shrubs would be masticated to increase tree spacing and reduce fire fuel loads in targeted areas. The biomass would be disposed of via the process of mastication (which essentially mulches the vegetation). In some areas, prescribed burning may be used to dispose of chipped and masticated materials. Generally, mechanical treatments would:

- masticate target live woody shrubs and trees up to 10 inches dbh;
- remove limbs of large trees up to 15 feet high;
- prune trees with multiple stems (e.g., madrone) to two or three stems per tree;
- masticate standing dead trees/shrubs and downed woody debris up to 24 inches in diameter, while retaining at least three to five snags per acre;
- maintain at least 35 percent relative final density of chaparral vegetation;
- to the extent feasible, retain buckeye, mature madrone, true oaks, redwood, big-leaf maple, native shrubs (e.g., gooseberry and snowberry) and other desirable species as determined by Sonoma Land Trust; and
- target successional tree species, including tanoak, bay laurel, sprouting madrone, and Douglas fir, for thinning.

MANUAL VEGETATION TREATMENT

To implement manual treatments, crews of approximately eight to 20 members would use hand tools and hand-operated power tools, including chainsaws, hand saws, brush cutters, and loppers, to cut, clear, and/or prune trees, herbaceous vegetation, and woody shrubs and increase space between trees. Typically, treatments would require several days to several months to complete, depending on the treatment size, steepness of terrain, and type and density of vegetation. Trees would be removed, thinned, and pruned and woody shrubs would be cut and cleared. In madrone forests, the focus would be on thinning/cutting dense standing dead wood, including dead trees up to 24 inches dbh, while retaining three to five snags per acre for wildlife habitat. In oak woodland habitat, the focus would be on the removal of Douglas fir trees to reduce oak tree shading and therefore promote oak woodland habitat. Where feasible, treatments would focus on removing nonnative and invasive species. Manual treatment activities may occur within 100 feet of Class II or III streams to improve habitat and reduce undesirable wildfire hazards. Manual treatment within 100 feet of Class II or III streams would occur outside of bird nesting season if feasible.

Cut vegetation would be left on site by lopping or chipping with scattering on the landscape. In some areas, removed vegetation would be piled for later pile burning or broadcast burning. The same general guidelines for tree and vegetation removal and retention would be followed as described above for mechanical treatments.

HERBICIDE APPLICATION

Herbicides would be used sparingly to control vegetation that threatens the native biodiversity and/or increases wildfire hazards. Post-wildfire invasive plant and noxious weed infestations may be treated to prevent their establishment. Consistent with the definitions applied in the CalVTP, invasive species are those plant species identified as invasive by the California Invasive Plant Council (Cal-IPC) or defined as noxious weeds under California law by the California Department of Food and Agriculture. The occasional use of herbicides to treat invasive plant species and to control regrowth of native tree species (e.g., resprouting, multiple-stemmed tanoak, bay laurel, and madrone) may be implemented to promote native biodiversity. Herbicide application would not occur in Pole Mountain Preserve, because of organic certifications for this preserve.

The following herbicides, which are consistent with those considered for use in the CalVTP, may be applied:

- glyphosate and
- other species-specific herbicides analyzed and included in the CalVTP PEIR.

Only ground-level application would occur; no aerial spraying of herbicides would occur. The least impactful method would be used at any given site. Several herbicide application methods are available for use by on-the-ground personnel, including paint-on stems and using backpack hand-applicators. For large treatment areas, herbicide treatments would typically use a one- to five-person crew, a 4x4 pickup truck, a porta-potty, a passenger vehicle to transport crew, a utility task vehicle (UTV) with a sprayer/reservoir tank, and backpack sprayers. Treatment would involve removing invasive plant species (e.g., French broom, leafy spurge) and noxious weeds through herbicide application. Herbicide application would comply with the U.S. Environmental Protection Agency label directions, as well as California Environmental Protection Agency and California Department of Pesticide Regulation label standards. All herbicide application would be performed by certified and licensed pesticide applicators in accordance with all local, state, and federal regulations.

BIOMASS DISPOSAL

The proposed vegetation treatments described above would be disposed of primarily by the following means:

- masticating (mulching) vegetative debris and placing it on the ground concurrently with vegetation removal (approximately 10 percent of biomass), and the biomass remaining after mastication would be no more than 6 inches deep;
- chipping (approximately 20 percent of biomass); materials within 100 feet on either side of a road, and chipped biomass would be spread over treatment areas and would not exceed 6 inches in depth;
- lopping and scattering within the treatment boundaries (approximately 20 percent) and would be left within 18 inches of the ground to promote decomposition;
- pile burning (approximately 20 percent of biomass), which may be used to dispose of slash, chipped, and masticated materials; or
- broadcast burning (approximately 30 percent of biomass).

Invasive plant and noxious weed biomass would be treated onsite to eliminate seeds and propagules or would be disposed of off-site at an appropriate waste collection facility to prevent reestablishment or spread of invasive plants and noxious weeds. Invasive plants and noxious weeds would not be chipped and spread, scattered, or mulched on-site.

Table 2-2 Proposed CalVTP Treatments

CalVTP Treatment Type	Treatment Description	CalVTP Treatment Activity	Equipment used for Treatments	Typical Duration of Treatments
Fuel break	Shaded fuel breaks along existing roads and skid trails	Mechanical (mastication, biomass chipping); Manual (cutting, clearing, piling); Broadcast and pile burning; Herbicide (stump application, backpack sprayer, mobile sprayer pulled by UTV)	Tractor/skidder, skid steer, masticators, chippers, chainsaws, loppers, hand saws, fire engines, water tender, backpack sprayer, UTV with sprayer, pickup truck	1 week to 6 months
Ecological restoration	Prescribed burning	Broadcast burning	Fire engines, water tender, chainsaws	1 day to 1 week
	Prescribed burning for biomass disposal	Pile Burning	Chainsaws; pickup truck with water tank and pump; skid steer, tractor, excavator or bulldozer for piling biomass	1 day to 1 week
	Forest habitat improvement/fire resiliency treatments	Mechanical (biomass chipping, mastication); Manual (cutting, piling, clearing)	Chippers, masticators, chainsaws, hand saws, brush cutters	1–6 months
	Herbicide control of invasive species and undesirable resprouting tree species	Herbicide (stump application, backpack sprayer, mobile sprayer pulled by UTV)	Backpack sprayer, UTV with sprayer, pickup truck	Several days to weeks

Source: Data provided by Sonoma Land Trust in 2021.

2.3 RETREATMENT/TREATMENT MAINTENANCE

Retreatment for maintenance of desired vegetation conditions (referred to as "treatment maintenance" in the CalVTP PEIR and referred to as "retreatment/treatment maintenance" or "maintenance" in this PSA/Addendum) in the areas initially treated for the proposed project would follow Sonoma Land Trust's existing general land management practices and would be based on real-time monitoring of site conditions. In forested and woodland areas, retreatment is anticipated to occur every 2-5 years. In brush-dominated areas, retreatment is anticipated to occur every 5 years. In areas where initial treatment included removing multiple stems from stump-sprouting vegetation (e.g., madrone, California bay) retreatment would occur every 2-5 years. Retreatment/treatment maintenance methods would involve the same vegetation treatment activities used in the original treatment; however, Sonoma Land Trust anticipates the use of more hand crews than mechanical equipment in comparison to initial treatments. Retreatment/treatment maintenance would typically be implemented between approximately August and January, outside of the nesting bird season, if feasible. Periodic retreatment/treatment maintenance will occur as needed, determined by qualified staff who would monitor vegetation growth conditions on the preserves.

3 ENVIRONMENTAL CHECKLIST

VEGETATION TREATMENT PROJECT INFORMATION

1. **Project Title:** Sonoma Land Trust Preserves Vegetation Treatment Project
2. **CalVTP I.D. Number:** 2021-15
3. **Implementing Entity's Name and Address:** Sonoma Land Trust
   822 Fifth Street
   Santa Rosa, CA 95404
4. **Contact Person Information and Phone Number:** Bob Neale, Stewardship Director
   (707) 391-3732
   bob@sonomalandtrust.org
5. **Project Proponent Name and Address:** Northern Sonoma County Fire Protection District
6. **Contact Person Information and Phone Number:** Anneke Turbeville (707) 857-4373
7. **Project Location:** Sonoma County, Napa County
8. **Total Area to Be Treated (acres)** Up to 1,350 acres
9. **Description of Project**:

   a. Initial Treatment

   Treatments would involve prescribed burning, mechanical and manual treatments, and herbicide application. See Section 2.2, above for additional details.

   Treatment Types

   ☐ Wildland-Urban Interface Fuel Reduction

   ☒ Fuel Break

   ☒ Ecological Restoration

   Treatment Activities

   ☒ Prescribed Burning (Broadcast), up to 1,350 acres

   ☒ Prescribed Burning (Pile Burning)

   ☒ Mechanical Treatment, up to 1,350 acres

   ☒ Manual Treatment, up to 1,350 acres

   ☐ Prescribed Herbivory, 0 acres

   ☒ Herbicide Application, up to 1,113 acres

   Fuel Type

   ☒ Grass Fuel Type

   ☒ Shrub Fuel Type

   ☒ Tree Fuel Type

   b. Retreatment/Treatment Maintenance

   Treatments would involve prescribed burning, mechanical and manual treatments, and herbicide application. See Section 2.3, above for additional details.

Treatment Types

☐ Wildland-Urban Interface Fuel Reduction

☒ Fuel Break

☒ Ecological Restoration

Treatment Activities

☒ Prescribed Burning (Broadcast), up to 1,350 acres

☒ Prescribed Burning (Pile Burning)

☒ Mechanical Treatment, up to 1,350 acres

☒ Manual Treatment, up to 1,350 acres

☐ Prescribed Herbivory, 0 acres

☒ Herbicide Application, up to 1,113 acres

Fuel Type

☒ Grass Fuel Type

☒ Shrub Fuel Type

☒ Tree Fuel Type

10. Regional Setting and Surrounding Land Uses:

The proposed CalVTP treatments would occur on Sonoma Land Trust's Pole Mountain Preserve, Little Black Mountain Preserve, and Laufenburg Ranch Preserve in Sonoma County, and in the Live Oaks Ranch Preserve in Sonoma County and Napa County. Pole Mountain Preserve and Little Black Mountain Preserve are located in the coastal mountains in western Sonoma County, and the area is primarily undeveloped and mountainous with recreation and grazing land uses. Laufenburg Ranch Preserve and Live Oaks Ranch Preserve are located in the Russian River Watershed near the Napa-Sonoma County boundary; the area has a long history of ranching and agriculture and contains historic buildings and areas of scattered residences.

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

Pesticide application permit would be obtained from the Sonoma County and Napa County Agricultural Commissioner.

Smoke management plans would be prepared for the Bay Area Air Quality Management District and Northern Sonoma County Air Pollution Control District, as required.

Burn permits would be obtained from CAL FIRE and the Bay Area Air Quality Management District and Northern Sonoma County Air Pollution Control District, as required.

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

12. Native American Consultation. *The Board of Forestry and Fire Protection completed consultation pursuant to Public Resources Code Section 21080.3.1 during preparation of the PEIR; however, CalVTP SPR CUL-2 includes for a requirement for further tribal coordination during PSA preparation.*

    As Sonoma Land Trust pursues its mission of conserving land in Sonoma County, we recognize that we stand upon the unceded ancestral lands of many Indigenous peoples. We honor their knowledge, care and stewardship of this special place across the ages and acknowledge the deep and lasting damage that colonization has inflicted on them. We embrace our responsibility to learn from and protect their cultural and traditional connections to the land. Pursuant to CalVTP SPR CUL-2, Native American tribal contacts in Sonoma County and Napa County were contacted on December 22, 2021 and included Chris Wright, Chairperson, Dry Creek Rancheria Band of Pomo Indians; Greg Sarris, Chairperson, Federated Indians of Graton Rancheria; Donald Duncan, Chairperson, Guidiville Indian Rancheria; Dino Franklin, Jr., Chairperson, Kashia Band of Pomo Indians of the Stewarts Point Rancheria; Marjorie Mejia, Chairperson, Lytton Rancheria; Jose Simon III, Chairperson, Middletown Rancheria; Scott Gabaldon, Chairperson, Mishewal-Wappo Tribe of Alexander Valley; Charlene Nijmeh, Chairperson, Muwekma Ohlone Indian Tribe of the SF Bay Area; Leona Williams, Chairperson, Pinoleville Pomo Nation; and Patricia Hermosillo, Chairperson, Cloverdale Rancheria of Pomo Indians. Beniakem Cromwell, Chairperson, Robinson Rancheria Band of Pomo Indians, was contacted on January 23, 2022. No responses were received from any Native American tribes.

DETERMINATION

On the basis of this PSA and Addendum to the PEIR 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 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, an **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 partners 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.

Paul J. Bernier
Signature

March 17 2022
Date

Paul J. Bernier
Printed Name

Board President
Title

No So Co fire
Agency

4 PROJECT-SPECIFIC ANALYSIS/ADDENDUM

4.1 AESTHETICS AND VISUAL RESOURCES

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered in the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	Identify Impact Significance for Treatment Project	Would This Be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is This Impact within the Scope of the PEIR?
Would the project:								
Impact AES-1: Result in Short-Term, Substantial Degradation of a Scenic Vista or Visual Character or Quality of Public Views, or Damage to Scenic Resources in a State Scenic Highway from Treatment Activities	LTS	Impact AES-1, pp. 3.2-16 – 3.2-19	Yes	AD-4 AES-2 AQ-2 AQ-3 REC-1	NA	LTS	No	Yes
Impact AES-2: Result in Long-Term, Substantial Degradation of a Scenic Vista or Visual Character or Quality of Public Views, or Damage to Scenic Resources in a State Scenic Highway from Wildland Urban Interface Fuel Reduction, Ecological Restoration, or Shaded Fuel Break Treatment Types	LTS	Impact AES-2, pp. 3.2-20 – 3.2-25	Yes	None	NA	LTS	No	Yes
Impact AES-3: Result in Long-Term Substantial Degradation of a Scenic Vista or Visual Character or Quality of Public Views, or Damage to Scenic Resources in a State Scenic Highway from the Nonshaded Fuel Break Treatment Type	SU	Impact AES-3, pp. 3.2-25 – 3.2-27	No	--	--	--	--	--

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

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

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

Discussion

IMPACT AES-1

Initial and maintenance treatments would include prescribed burning, mechanical treatment, manual treatment, and targeted ground application of herbicides. The potential for these treatment activities to result in short-term degradation of the visual character of a treatment area was examined in the PEIR. The eligible state scenic highways nearest to the preserves are SR 1 and SR 128 (Caltrans 2021). The proposed treatments would occur on land owned by Sonoma Land Trust, that is not accessible to the public with the exception of the Sea to Sky Trail (open daily for hiking) through a portion of the Pole Mountain Preserve; however, public viewpoints of the preserves are available from public recreation trails, adjacent residences and wineries, and SR 128. SR 1 is more than 3.5 miles from the coastal preserves and views of the preserves from the highway would be obscured by distance and intervening topography and vegetation. Although a portion of the Live Oaks Ranch Preserve is adjacent to SR 128, visibility of treatment areas would be limited from the highway and no vegetation would be removed immediately adjacent to the highway. However, smoke from prescribed burning could be visible from public viewpoints and eligible state scenic highways.

The potential for the project to result in short-term substantial degradation of the visual character of the project area is within the scope of the PEIR because the proposed treatment activities are consistent with those analyzed in the PEIR. The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing scenic resources are essentially the same within and outside of the treatable landscape; therefore, the short-term aesthetic impact is also the same, as described above. SPRs applicable to the proposed treatments are AD-4, AES-2, AQ-2, AQ-3, and REC-1. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT AES-2

Initial and maintenance treatments would include ecological restoration and shaded fuel break treatment types. The potential for these treatment types to result in long-term degradation of the visual character of an area was examined in the PEIR. Public viewpoints of the preserves include public recreation trails, adjacent residences and wineries, and SR 128. The preserves are not visible from SR 1. Although a portion of the Live Oaks Ranch Preserve is adjacent to SR 128, visibility of treatment areas would be limited from the highway and no vegetation would be removed immediately adjacent to the highway.

The potential for the project to result in long-term substantial degradation of the visual character of the project area is within the scope of the PEIR because the proposed treatment activities are consistent with those analyzed in the PEIR. The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing visual character is essentially the same within and outside of the treatable landscape; therefore, the long-term aesthetic impact is also the same, as described above. SPRs AES-1 and AES-3 are not applicable to the proposed treatments because visual access of treatments is limited, and treatment areas that may be seen from public viewpoints would maintain an intact canopy with patches of native shrubs. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT AES-3

This impact does not apply to the proposed project because no nonshaded fuel breaks are proposed.

NEW AESTHETIC AND VISUAL RESOURCE IMPACTS

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

4.2 AGRICULTURE AND FORESTRY RESOURCES

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

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

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

The Live Oaks Ranch Preserve contains areas identified as Farmland of Local Importance and Farmland of Statewide Importance, and the Laufenberg Ranch Preserve contains areas classified as Farmland of Local Importance (DOC 2021). However, consistent with the PEIR, the project would not involve treatment activities on actively used farmland, because the fire risk in these areas is low, and it would not otherwise alter land uses on land that is designated as Important Farmland but does not currently contain agricultural uses. In addition, vegetation removal would not result in any land use change or conversion of farmland. Therefore, consistent with the PEIR, farmland impacts are not addressed further.

IMPACT AG-1

Vegetation treatment activities implemented within the four preserves would include manual, mechanical, prescribed burning, and herbicide treatments to conduct both ecological restoration and fuel break treatment types. The creation of shaded fuel breaks would involve the thinning of the tree canopies in forested areas by removing live trees up to 10 inches dbh. Live trees greater than 10 inches dbh would be limbed up to 10-15 feet high, and spaces of 10-15 feet would be created between trees. All shaded fuel breaks would occur within 100 feet of existing roads, skid trails, existing fuel breaks, or historic bulldozer lines. Ecological restoration treatment would focus on thinning small diameter trees from overstocked forest units and/or post-fire resprouts to promote the establishment of mature trees and a healthy forest structure and improve wildlife movement and habitat.

The potential for both treatment types and treatment activities to result in the loss of forestland or conversion of forestland to nonforest use was examined in the PEIR. The treatment activities described above would occur in forested lands. Consistent with the PEIR, the vegetation remaining after treatments would meet the definition of forestland as defined in Public Resources Code Section 12220(g), which defines "forest land" as land that can support 10-percent native tree cover of any species under natural conditions. The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the composition of forested land as defined in Public Resources Code Section 12220(g) is essentially the same within and outside the treatable landscape; therefore, the impact to forest land is also the same, as described above. No SPRs are applicable to this impact. Therefore, the potential for the project to result in the loss or conversion of forestland is within the scope of the PEIR. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

NEW AGRICULTURE AND FORESTRY RESOURCE IMPACTS

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

4.3 AIR QUALITY

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

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

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

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

Discussion

The portion of Live Oaks Ranch Preserve within Napa County is in the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). The other three preserves and the portion of Live Oaks Ranch Preserve in Sonoma County are within the jurisdiction of the Northern Sonoma County Air Pollution Control District (NoSoCo Air). Pursuant to SPR AQ-2, Sonoma Land Trust will prepare a smoke management plan and submit it to the air district with jurisdiction over the treatment area(s) where prescribed burning is proposed before implementing a prescribed burning treatment, if required. Pursuant to SPR AQ-3, a burn plan will be prepared for broadcast burning, will include fire behavior modeling, and will be implemented by a state-certified burn boss, as required. An Incident Action Plan, which identifies burn dates, burn hours, weather limitations, specific burn prescription, the communication plan, the medical plan, the traffic plan, and other special instructions will also be prepared by Sonoma Land Trust for all proposed prescribed burning treatments. The Incident Action Plans will also identify the contact personnel with the applicable air district to coordinate on-site briefings, posting notifications, and weather monitoring during burning.

IMPACT AQ-1

Use of vehicles, mechanical equipment, and prescribed burning during initial and maintenance treatments would result in emissions of criteria pollutants that could exceed California ambient air quality standard (CAAQS) or national ambient air quality standard (NAAQS) thresholds. The potential for emissions of criteria pollutants to exceed CAAQS or NAAQS thresholds was examined in the PEIR. Emissions of criteria air pollutants related to the proposed treatments are within the scope of the PEIR because the associated equipment and duration of use are consistent with those analyzed in the PEIR. The SPRs applicable to this treatment project are AD-4, AQ-1 through AQ-4, and AQ-6. SPR AQ-5 would not apply because no naturally occurring asbestos is mapped within the treatment area. Emission reduction techniques included in Mitigation Measure AQ-1 would be infeasible for the project proponent to implement. The project proponent is a not-for-profit land trust and would be largely contracting with others to implement the vegetation treatments. It is cost prohibitive for Sonoma Land Trust to procure equipment meeting the latest efficiency standards, including meeting the U.S. Environmental Protection Agency's (EPA) Tier 4 emission standards, using renewable diesel fuel, using electric- and gasoline-powered equipment, and using equipment with Best Available Control Technology. However, Sonoma Land Trust will encourage, but not require, use of these emission reduction techniques by its contractors, including by stating such in its contractor procurement process. In addition, crew sizes would be small, and crews may not all be employed with the same company. Therefore, carpooling may not be feasible to implement for most of the workers or recommended during a pandemic. For these reasons, and as explained in the PEIR, this impact would remain significant and unavoidable.

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

IMPACT AQ-2

Use of vehicles and mechanical equipment during initial and maintenance treatments could expose people, such as hikers in the Pole Mountain Preserve, to diesel particulate matter emissions. However, treatment activities would not take place near the same people for an extended period. The potential to expose people to diesel particulate matter emissions was examined in the PEIR. Diesel particulate matter emissions from the proposed treatments are within the scope of the PEIR because the exposure potential is the same as analyzed in the PEIR, and the types and amount of equipment that would be used, as well as the duration of use, during proposed treatments are consistent with those analyzed in the PEIR. The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the air quality conditions and sensitive receptors (i.e., exposure potential) present in the areas outside

the treatable landscape are essentially the same as those within the treatable landscape; therefore, the air quality impact is also the same, as described above. SPR HAZ-1 is applicable to this treatment. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT AQ-3

This impact does not apply to the treatment project because no naturally occurring asbestos is mapped in the treatment area (NRCS 2014).

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 the prescribed burns are within the scope of the activities addressed in the PEIR, and within the San Francisco Bay Air Basin and North Coast Air Basin, air quality conditions are consistent with those analyzed in the PEIR for Napa and Sonoma counties. Therefore, the potential for exposure to toxic air contaminants is also within the scope the PEIR. SPRs applicable to these treatment activities are AD-4, AQ-2, AQ-3, and AQ-6. All feasible measures to prevent and minimize smoke emissions, as well as exposure to smoke, are included in SPRs. No additional mitigation measures are feasible, and this impact would remain significant and unavoidable, as explained in the PEIR. The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the air quality conditions present and air basins in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the air quality impact is also the same, as described above. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT AQ-5

Use of vehicles and mechanical equipment during initial and maintenance treatments could expose people, such as hikers in Pole Mountain Preserve, to objectionable odors from diesel exhaust. However, treatment activities would not take place near the same people for an extended period of time. The potential to expose people to objectionable odors from diesel exhaust was examined in the PEIR. This impact is within the scope of the PEIR because the exposure potential and the proposed activities, as well as the associated equipment and duration of use, are consistent with those analyzed in the PEIR. The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the air quality conditions and sensitive receptors present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the air quality impact is also the same, as described above. SPR HAZ-1 is applicable to this treatment. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT AQ-6

Prescribed burning during initial and maintenance treatments could expose people to objectionable odors. The potential to expose people to objectionable odors from prescribed burning was examined in the PEIR. The duration and parameters of the prescribed burn and the exposure potential are consistent with the activities addressed in the PEIR. Therefore, the resultant potential for exposure to objectionable odors from smoke is also within the scope of impacts covered in the PEIR. SPRs that are applicable to this treatment project are AD-4, AQ-2, AQ-3, and AQ-6. All feasible measures to prevent and minimize smoke odors, as well as exposure to smoke odors, are included in SPRs. No additional mitigation measures are feasible, and this impact would remain significant and unavoidable, as explained in the PEIR. The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the

project area, the air quality conditions present and sensitive receptors in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the air quality impact is also the same, as described above. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

NEW AIR QUALITY IMPACTS

The proposed treatments are consistent with the treatment types and activities covered in the CalVTP PEIR. The project proponent has considered the site-specific characteristics of the proposed treatments and determined they are consistent with the applicable regulatory and environmental conditions presented in the CalVTP PEIR (refer to Section 3.4.1, "Regulatory Setting," and Section 3.4.2, "Environmental Setting," in Volume II of the Final PEIR). The project proponent has also determined that including land from outside the CalVTP treatable landscape in the proposed treatment areas constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing environmental and regulatory conditions pertinent to air quality that are present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the impacts are the same and, for the reasons described above, impacts of the proposed treatment project are consistent with those covered in the PEIR. No changed circumstances are present, and the inclusion of areas outside of the CalVTP treatable landscape would not give rise to any new significant impact. Therefore, no new impact related to air quality would occur.

4.4 ARCHAEOLOGICAL, HISTORICAL, AND TRIBAL CULTURAL RESOURCES

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

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

New Archaeological, Historical, and Tribal Cultural Resource Impacts: Would the treatment result in other impacts to archaeological, historical, and tribal cultural resources that are not evaluated in the CalVTP PEIR?	☐ 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

Consistent with SPR CUL-1, a records search of the treatment area was performed by the Northwest Information Center (NWIC). According to Sonoma Land Trust, only some portions of Laufenburg Ranch and Live Oaks Ranch preserves had been previously surveyed; therefore, a complete records search was conducted for the treatment areas within those preserves on September 16, 2021 (NWIC File No. 21-0345). The entirety of Little Black Mountain and Pole Mountain preserves were subject to cultural surveys in 2009 and 2015, respectively; therefore, only a summary records search, to confirm no additional resources had since been identified, was conducted on October 7, 2021 (NWIC File No. 21-0424).

The records search for Laufenburg Ranch Preserve revealed three prehistoric and two historic-period archaeological sites, and one historic feature. The prehistoric archaeological sites are lithic scatters and the historic period sites consist of trash scatters, fence remnants, and remains of an orchard. The historic feature is a ranch residence with barn.

The records search for Live Oaks Ranch Preserve revealed one prehistoric and one historic-period archaeological sites, consisting of a lithic scatter with habitation debris and a building foundation with a trash scatter.

The records search for Little Black Mountain Preserve did not reveal any additional resources beyond those identified in the 2009 report. The 2009 report (Smirnoff 2009) identified 20 archaeological sites which are predominantly prehistoric and consist of lithic scatters and petroglyphs. The two historic-period archaeological features contain water conveyance systems and remnants of a ranch with building foundations and trash scatters.

The records search for Pole Mountain Preserve did not reveal any additional resources beyond those identified in the 2015 report. The 2015 report (Anthropological Studies Center 2015) identified six prehistoric and one historic-period archaeological sites, two historic features, and one multi-component site. The prehistoric archaeological sites consist of lithic scatters, habitation sites, and petroglyphs. The historic-period archaeological site is a road remnant; the historic features are a fire look-out and a roadway that is currently in use. The multi-component archaeological site contains a habitation site with cupules, groundstone, lithic artifacts and historic-era artifacts including ceramic, milled wood, and corrugated metal.

Consistent with SPR CUL-2, an updated Native American contact list was obtained from the Native American Heritage Commission (NAHC). On December 22, 2021 and January 23, 2022, letters or emails inviting the tribes to consult were mailed to the 11 tribal representatives indicated by NAHC. No responses were received from any Native American tribes as of February 8, 2022. An October 8, 2021 search of NAHC's sacred lands database returned positive results. The sacred lands search is conducted at a USGS topographic quadrangle section scale. Each section is approximately 250 acres; for this project, the project site touches eight sections. This means the sacred lands search included 2,000 acres, an area that larger than the project site. A positive result indicates that a tribe has provided NAHC documentation stating that there is a site they consider sacred in this 2,000-acre search area.

IMPACT CUL-1

Proposed treatment activities include mechanical treatments and prescribed burning, which could damage historical resources. Although the NWIC records search revealed three historic features, they have not been evaluated for eligibility for listing in the California Register of Historical Resources (CRHR). Therefore, it is not known whether these sites are considered resources under CEQA. Nevertheless, structures (i.e., buildings, bridges, roadways) over 50 years old that have not been evaluated for historical significance and are present in the treatment areas will be avoided pursuant to SPR CUL-7. The potential for these treatment activities to result in disturbance, damage, or destruction of built-environment structures that have not yet been evaluated for historical significance was examined in the PEIR. This impact is within the scope of the PEIR, because treatment activities and the intensity of ground disturbance of the treatment project are consistent with those analyzed in the PEIR. The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the treatment area, the potential to encounter built-environment structures that have not yet been evaluated for historical significance in areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the potential impact to historical resources is also the same, as described above. SPRs applicable to this impact are CUL-1, CUL-7, and CUL-8. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT CUL-2

Vegetation treatment would include mechanical treatments using heavy equipment that could churn up the surface of the ground during treatment as vegetation is removed; this may result in damage to known or previously unknown archaeological resources. The NWIC records search revealed 35 archaeological sites; however, none of these have been evaluated for eligibility for listing in the CRHR. Therefore, it is not known whether these sites are considered resources

under CEQA. A survey will be conducted prior to treatment pursuant to SPR CUL-4 to identify any previously unrecorded archeological resources and identified resources will be avoided according to the provisions of SPR CUL-5.

The potential for these treatment activities to result in inadvertent discovery and subsequent damage of unique archaeological resources or subsurface historical resources during vegetation treatment was examined in the PEIR. This impact was identified as significant and unavoidable in the PEIR because of the large geographic extent of the treatable landscape and the possibility that there could be some rare instances where inadvertent damage of unknown resources may be extensive. For the Sonoma Land Trust Preserves Vegetation Treatment Project, SPRs and Mitigation Measure CUL-2 would require identification and protection of resources, and it is reasonably expected that implementation of these measures would avoid a substantial adverse change in the significance of any unique archaeological resources or subsurface historical resources. Therefore, this impact would be less than significant.

This impact is within the scope of the PEIR, because treatment activities and intensity of ground disturbance of the treatment project are consistent with those analyzed in the PEIR. The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the treatment area, the potential for discovery of archaeological resources is essentially the same within and outside the treatable landscape; therefore, the potential impact to unique archaeological resources or subsurface historical resources is also the same, as described above. SPRs applicable to this treatment include CUL-1 through CUL-5 and CUL-8. Mitigation Measure CUL-2 would also apply to this treatment to protect any inadvertent discovery. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT CUL-3

Native American contacts in Sonoma County and Napa County were contacted on December 22, 2021 and January 23, 2022, and included Patricia Hermosillo, Chairperson, Cloverdale Rancheria of Pomo Indians; Marjorie Mejia, Chairperson, Lytton Rancheria; Chris Wright, Chairperson, Dry Creek Rancheria Band of Pomo Indians; Jose Simon III, Chairperson, Middletown Rancheria; Greg Sarris, Chairperson, Federated Indians of Graton Rancheria; Scott Gabaldon, Chairperson, Mishewal-Wappo Tribe of Alexander Valley; Donald Duncan, Chairperson, Guidiville Indian Rancheria; Charlene Nijmeh, Chairperson, Muwekma Ohlone Indian Tribe of the SF Bay Area; Dino Franklin Jr., Chairperson, Kashia Band of Pomo Indians of the Stewarts Point Rancheria; Leona Williams, Chairperson, Pinoleville Pomo Nation; and Beniakem Cromwell, Chairperson, Robinson Rancheria Band of Pomo Indians. No responses were received from any Native American tribes as of February 8, 2022.

The potential for the proposed treatment activities to cause a substantial adverse change in the significance of a tribal cultural resource during implementation of vegetation treatment was examined in the PEIR. This impact is within the scope of the PEIR, because the intensity of ground disturbance of the treatment project is consistent with that analyzed in the PEIR. As explained in the PEIR, while tribal cultural resources may be identified within the treatable landscape during development of later treatment projects, implementation of SPRs would avoid any substantial adverse change to any tribal cultural resource. The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the tribal cultural affiliations present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the potential impact to tribal cultural resources is also the same, as described above. SPRs applicable to this treatment include CUL-1 through CUL-6 and CUL-8. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT CUL-4

Vegetation treatment activities would include mechanical treatments using heavy equipment; these treatments may use skid steers, excavators, dozers, and masticators, which could uncover human remains. The NWIC records search did not reveal any burials or sites containing human remains. 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 treatment activities and

intensity of ground disturbance are consistent with those analyzed in the PEIR. Additionally, consistent with the PEIR, the project would comply with California Health and Safety Code Section 7050.5 and PRC Section 5097 in the event of a discovery. The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the treatment area, the potential for uncovering human remains during implementation of the treatment project is essentially the same within and outside the treatable landscape and treatment activities; therefore, the impact related to disturbance of human remains is also the same, as described above. No SPRs are applicable to this impact. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

NEW ARCHAEOLOGICAL, HISTORICAL, AND TRIBAL CULTURAL RESOURCE IMPACTS

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

4.5 BIOLOGICAL RESOURCES

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered in the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	Identify Impact Significance for Treatment Project	Would This Be a Substantially More Severe 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	LTSM	Impact BIO-1, pp 3.6-131 – 3.6-138	Yes	BIO-1 BIO-2 BIO-6 BIO-7 BIO-9 GEO-1 GEO-3 GEO-4 GEO-5 GEO-7 HYD-4 HYD-5	BIO-1a BIO-1b	LTSM	No	Yes
Impact BIO-2: Substantially Affect Special-Status Wildlife Species Either Directly or Through Habitat Modifications	LTSM (all wildlife species except bumble bees) SU (bumble bees)	Impact BIO-2, pp 3.6-138 – 3.6-184	Yes	BIO-1 BIO-2 BIO-9 BIO-10 GEO-1 HYD-4	BIO-2a BIO-2b	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	LTSM	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 GEO-1 GEO-3 GEO-4 GEO-5 GEO-7 HAZ-5 HAZ-6 HYD-4 HYD-5	BIO-3a BIO-3b	LTSM	No	Yes
Impact BIO-4: Substantially Affect State or Federally Protected Wetlands	LTSM	Impact BIO-4, pp 3.6-191 – 3.6-192	Yes	BIO-1 BIO-2 BIO-3 BIO-9 GEO-1 GEO-3 GEO-4 GEO-5	BIO-4	LTSM	No	Yes

Environmental Impact Covered in the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	Identify Impact Significance for Treatment Project	Would This Be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is This Impact within the Scope of the PEIR?
				GEO-6 GEO-7 HAZ-5 HAZ-6 HYD-1 HYD-4 HYD-5				
Impact BIO-5: Interfere Substantially with Wildlife Movement Corridors or Impede Use of Nurseries	LTSM	Impact BIO-5, pp 3.6-192 – 3.6-196	Yes	BIO-1 BIO-2 BIO-3 HYD-4	NA	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	Yes	BIO-1 BIO-2 BIO-12	NA	LTS	No	Yes
Impact BIO-7: Conflict with Local Policies or Ordinances Protecting Biological Resources	NI	Impact BIO-7, pp 3.6-198 – 3.6-199	Yes	AD-3	NA	NI	No	Yes
Impact BIO-8: Conflict with the Provisions of an Adopted Natural Community Conservation Plan, Habitat Conservation Plan, or Other Approved Habitat Plan	NI	Impact BIO-8, pp 3.6-199 – 3.6-200	No	--	--	--	--	--

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

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, Ascent biologists conducted a data review of project-specific biological resources, including habitat and vegetation types, and special-status plants, special-status wildlife, and sensitive habitats (i.e., sensitive natural communities, wetlands) with potential to occur in the treatment areas. Habitat and vegetation types in the treatment areas were identified using vegetation mapping provided by Sonoma Land Trust on August 30, 2021 (Sonoma Land Trust 2021). The treatment areas together encompass approximately 1,350 acres.

The coastal preserves and Live Oak Ranch Preserve (one of the Russian River Watershed preserves) are located within the Northern California Coast ecoregion and Laufenburg Ranch Preserve (the other Russian River Watershed preserve) is located within the Northern California Coast Ranges ecoregion. Vegetation types within the coastal preserves include California buckeye groves, madrone forest, annual brome grassland, purple needlegrass grassland, silver lupine scrub, tanoak forest, oak woodland and forest dominated by various species (i.e., canyon live oak, interior live oak, Oregon white oak, California black oak, valley oak), redwood forest and woodland, California bay forest and woodland, chamise chaparral, common manzanita chaparral, and Douglas fir forest and woodland (Sonoma Land Trust 2021). Stream, and freshwater pond habitats are also present (Sonoma Land Trust 2021). Vegetation types within the Russian River Watershed preserves include white alder groves, madrone forest, knobcone pine forest and woodland, foothill pine woodland, Douglas fir forest and woodland, oak woodland and forest (i.e., coast live oak, valley oak, Oregon white oak, blue oak), chamise chaparral, wild oats and annual brome grassland, and pale spike rush marsh (Sonoma Land Trust 2021). Freshwater emergent wetland, seep, and stream habitats, and some agricultural and residential areas are also present (Sonoma Land Trust 2021).

A list of special-status plant and wildlife species with potential to occur in the treatment areas was compiled by completing a review of the California Natural Diversity Database (CNDDB) and California Native Plant Society Inventory of Rare and Endangered Plants of California database records for the nine U.S. Geological Survey (USGS) quadrangles containing and surrounding the treatment areas (CNDDB 2021; CNPS 2021), the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) tool (USFWS 2021); vegetation survey reports for the Live Oak Ranch and Laufenburg Ranch preserves (Warner 2013a; Warner 2013b); a vegetation survey and mapping report for Little Black Mountain Preserve (Warner 2013c); a vegetation map and botanical inventory for the Pole Mountain property (Warner 2015); a report summarizing a focused amphibian survey of the stock pond at the Pole Mountain Preserve (Prunuske Chatham, Inc. 2020); personal communications with Sonoma Land Trust staff regarding documented special-status species occurrences (Edwards, pers. comm., 2021; Hammar pers. comm. 2021); and Appendix BIO-3 (Table 9a, Table 9b, Table 10a, Table 10b, and Table 19) in the CalVTP PEIR (Volume II) for special-status plants and wildlife that could occur in the Northern California Coast and Northern California Coast Ranges ecoregions. A list of sensitive natural communities with potential to occur within the treatment areas was compiled by completing a CNDDB search of the nine USGS quads surrounding the treatment areas (CNDDB 2021) and reviewing Table 3.6-16 (pages 3.6-65 – 3.6-66) in the CalVTP PEIR (Volume II) for sensitive natural communities that could occur in the Northern California Coast and Northern California Coast Ranges ecoregions in the vegetation types mapped in the treatment areas.

Ascent biologists conducted reconnaissance surveys on September 14 and September 15, 2021, to identify and document sensitive resources (e.g., aquatic habitat, riparian habitat, sensitive natural communities) and to assess the suitability of habitat in the treatment areas for special-status plant and wildlife species. Vegetation communities and soil characteristics were identified, and incidental wildlife observations were recorded.

Based on implementation of SPR BIO-1, including review of occurrence data, species ranges, habitat requirements for each species, results of surveys conducted in the preserves, and habitat present within the treatment areas as assessed during reconnaissance surveys, a complete list of all species with potential to occur in the vicinity of the proposed project was assembled (Attachment B). Thirty-six of the special-status plants (including 26 in the coastal preserves and 16 in the Russian River Watershed preserves, some occurring in both) and 32 of the special-status wildlife from the complete list of species were determined to have potential to occur in the treatment areas (Table 4.5-1). If a preserve is not listed under Potential for Occurrence, the species is unlikely to occur in that preserve due to a lack of habitat suitable for the species or other factors. These species are discussed in detail under Impact BIO-1 (special-status plants) and Impact BIO-2 (special-status wildlife).

Table 4.5-1 Special-Status Plant and Wildlife Species That May Occur in the Treatment Areas

Species	Listing Status[1] Federal	Listing Status[1] State	Listing Status[1] CRPR	Habitat	Potential for Occurrence
Special-Status Plants					
Franciscan onion *Allium peninsulare* var. *franciscanum*	–	–	1B.2	Clay soils; often on serpentine; sometimes on volcanics. Dry hillsides. 16–1,148 feet in elevation. Blooms May–June. Perennial geophyte.	**Live Oaks Ranch/Laufenburg Ranch:** May occur. Clay and volcanic soils and dry hillside habitat potentially suitable for this species are present on both preserves.
Sonoma alopecurus *Alopecurus aequalis* var. *sonomensis*	FE	–	1B.1	Wet areas, marshes, and riparian banks, with other wetland species. 15–1,180 feet in elevation. Blooms May–July. Perennial herb.	**Little Black Mountain/Pole Mountain:** May occur. Riparian bank and seep habitat potentially suitable for this species is present on both preserves.
Napa false indigo *Amorpha californica* var. *napensis*	–	–	1B.2	Openings in forest or woodland or in chaparral. 95–2,410 feet in elevation. Blooms April–July. Perennial shrub.	**Little Black Mountain/Pole Mountain:** Known to occur. This species has been documented at Little Black Mountain by Peter Warner in 2013 in three disjunct locations (Warner 2013c). Woodland and forest habitat potentially suitable for this species is present on both preserves. **Live Oaks Ranch/Laufenburg Ranch:** Known to occur. Species was found at Laufenburg Ranch during botanical inventory survey in 2013 in southern Knights Valley, approximately 1 mile northwest of the Live Oaks Ranch Preserve (Warner 2013a). Both preserves have habitat potentially suitable for this species.
Bent-flowered fiddleneck *Amsinckia lunaris*	–	–	1B.2	Cismontane woodland, valley and foothill grassland, coastal bluff scrub. 10–2,608 feet in elevation. Blooms March–June. Annual.	**Live Oaks Ranch/Laufenburg Ranch:** May occur. Woodland and grassland habitat potentially suitable for this species is present on both preserves.
Konocti manzanita *Arctostaphylos manzanita* ssp. *elegans*	–	–	1B.3	Woodland, chaparral, conifer forests. Volcanic soils. 738–6,004 feet in elevation. Blooms January–May. Perennial shrub.	**Live Oaks Ranch/Laufenburg Ranch:** May occur. Woodland and volcanic soil habitat potentially suitable for this species is present on both preserves.
Rincon Ridge manzanita *Arctostaphylos stanfordiana* ssp. *decumbens*	–	–	1B.1	Chaparral and woodland; restricted endemic to red rhyolitic substrates in Sonoma County. 295–1,230 feet in elevation. Blooms February–April. Perennial shrub.	**Live Oaks Ranch/Laufenburg Ranch:** May occur. Red rhyolite outcrop habitat potentially suitable for this species occurs sporadically on the Live Oaks Ranch Preserve and may be present along the western ridge on the Laufenburg Ranch Preserve.
Clara Hunt's milk-vetch *Astragalus claranus*	FE	ST	1B.1	Open grassy hillsides, especially on exposed shoulders in thin, clay soil that is moist in spring. Sometimes on volcanics. 246–902 feet in elevation. Blooms March–May. Annual.	**Live Oaks Ranch/Laufenburg Ranch:** May occur. Open grassy hillsides with clay and volcanic soil habitat potentially suitable for this species is present on both preserves.
Narrow-anthered brodiaea *Brodiaea leptandra*	–	–	1B.2	Broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland. Volcanic substrates. 98–1,936 feet in elevation. Blooms May–July. Perennial geophyte.	**Little Black Mountain/Pole Mountain:** May occur. Woodland and grassland with volcanic substrate and open rocky habitat potentially suitable for this species is present on both preserves. **Live Oaks Ranch/Laufenburg Ranch:** May occur. Volcanic soil habitat potentially suitable for this species is present on both preserves.

Species	Listing Status[1] Federal	Listing Status[1] State	Listing Status[1] CRPR	Habitat	Potential for Occurrence
Coastal bluff morning-glory *Calystegia purpurata* ssp. *saxicola*	–	–	1B.2	Coastal dunes, coastal scrub, coastal bluff scrub, North Coast coniferous forest. 33–345 feet in elevation. Blooms April–September. Perennial herb.	**Little Black Mountain/Pole Mountain:** May occur. Scrub and North Coast coniferous forest habitat potentially suitable for this species is present on both preserves.
Swamp harebell *Campanula californica*	–	–	1B.2	Bogs and marshes in a variety of habitats; uncommon where it occurs. 3–1,330 feet in elevation. Blooms June–October. Perennial geophyte.	**Little Black Mountain/Pole Mountain:** May occur. Mesic habitat potentially suitable for this species is present on both preserves.
Bristly sedge *Carex comosa*	–	–	2B.1	Lake margins, wet places; site below sea level is on a Delta island. -16–3,345 feet in elevation. Blooms May–September. Perennial geophyte.	**Little Black Mountain/Pole Mountain:** May occur. Mesic habitat potentially suitable for this species is present on both preserves.
Deceiving sedge *Carex saliniformis*	–	–	1B.2	Coastal prairie, coastal scrub, meadows and seeps, marshes and swamps (coastal salt). Mesic sites. 10–820 feet in elevation. Blooms June. Perennial geophyte.	**Little Black Mountain/Pole Mountain:** May occur. Mesic habitat potentially suitable for this species is present on both preserves.
Rincon Ridge ceanothus *Ceanothus confusus*	–	–	1B.1	Volcanic slopes, chaparral, pine/oak woodland. Known usually from volcanic or serpentine soils. 246–3,494 feet in elevation. Blooms February–June. Perennial shrub.	**Little Black Mountain/Pole Mountain:** May occur. Woodland habitat potentially suitable for this species is present on both preserves. Chaparral habitat potentially suitable for this species is present on the Little Black Mountain Preserve. **Live Oaks Ranch/Laufenburg Ranch:** May occur. Volcanic soils and dry slopes in woodland habitat potentially suitable for this species is present on both preserves.
Calistoga ceanothus *Ceanothus divergens*	–	–	1B.2	Chaparral, pine/oak woodland. Rocky, serpentine, or volcanic sites. 558–3,117 feet in elevation. Blooms February–April. Perennial shrub.	**Live Oaks Ranch/Laufenburg Ranch:** May occur. Volcanic soils and oak woodland habitat potentially suitable for this species is present on both preserves.
Holly-leaved ceanothus *Ceanothus purpureus*	–	–	1B.2	Chaparral, cismontane woodland. Rocky, volcanic slopes. 476–2,559 feet in elevation. Blooms February–June. Perennial shrub.	**Little Black Mountain/Pole Mountain:** May occur. Woodland with rocky, volcanic slope habitat potentially suitable for this species is present on both preserves. The species has been documented approximately 2 miles west of the Little Black Mountain Preserve (CNDDB 2021). **Live Oaks Ranch/Laufenburg Ranch:** May occur. Volcanic soils potentially suitable for this species is present on both preserves.
Sonoma ceanothus *Ceanothus sonomensis*	–	–	1B.2	Sandy, serpentine or volcanic soils. Chaparral. 459–2,608 feet in elevation. Blooms February–April. Perennial shrub.	**Live Oaks Ranch/Laufenburg Ranch:** May occur. Volcanic soil and chaparral habitat potentially suitable for this species is present on both preserves.
Pappose tarplant *Centromadia parryi* ssp. *parryi*	–	–	1B.2	Grassland, coastal salt marshes, alkaline springs, seeps. Vernally mesic, often alkaline sites. 7–1,378	**Live Oaks Ranch/Laufenburg Ranch:** May occur. Seeps or springs in grassland habitat potentially suitable for this species may be present on the preserves.

Species	Listing Status[1] Federal	Listing Status[1] State	Listing Status[1] CRPR	Habitat	Potential for Occurrence
				feet in elevation. Blooms May–November. Annual.	
Baker's larkspur *Delphinium bakeri*	FE	SE	1B.1	Broadleafed upland forest, coastal scrub, valley and foothill grassland. Only site occurs on northwest-facing slope, on decomposed shale. Often on mesic sites. Also historically known from grassy areas along fence lines. 260–1,000 feet in elevation. Blooms March–May. Perennial herb.	**Little Black Mountain/Pole Mountain:** May occur. Broadleafed upland forest, decomposed shale soil, and mesic habitat potentially suitable for this species is present on both preserves.
Greene's narrow-leaved daisy *Erigeron greenei*	–	–	1B.2	Chaparral, woodland, conifer forest. Serpentine and volcanic substrates, generally in shrubby vegetation. 295–2,740 feet in elevation. Blooms May–September. Perennial herb.	**Little Black Mountain/Pole Mountain:** May occur. Woodland, scrub, and volcanic substrate habitat potentially suitable for this species is present on both preserves.
Coast fawn lily *Erythronium revolutum*	–	–	2B.2	Bogs and fens, broadleafed upland forest, North Coast coniferous forest. Streambanks, wet places in woodlands. 0–605 feet in elevation. Blooms March–August. Perennial geophyte.	**Little Black Mountain/Pole Mountain:** May occur. Mesic areas in broadleafed upland forest habitat potentially suitable for this species is present on both preserves. Mesic areas in North Coast coniferous forest potentially suitable for this species is present on the Little Black Mountain Preserve.
Minute pocket moss *Fissidens pauperculus*	–	–	1B.2	Moss growing on damp soil along the coast. In dry streambeds and stream banks. 33–3,360 feet in elevation. Perennial herb.	**Little Black Mountain/Pole Mountain:** May occur. Damp soil and streambed habitat potentially suitable for this species is present on both preserves.
Fragrant fritillary *Fritillaria liliacea*	–	–	1B.2	Cismonte woodland, coastal prairie, coastal scrub, valley and foothill grassland. Often on serpentine; various soils reported though usually on clay. 10–1,312 feet in elevation. Blooms February–April. Perennial geophyte.	**Little Black Mountain/Pole Mountain:** May occur. Woodland, grassland, and scrub habitat potentially suitable for this species is present on both preserves. Peter Warner reports that from his observations this species will most likely be on seasonally moist grassland (Warner 2013a).
Pacific gilia *Gilia capitata* ssp. *pacifica*	–	–	1B.2	Coastal bluff scrub, chaparral, coastal prairie, valley and foothill grassland. 16–4,413 feet in elevation. Blooms April–August. Annual.	**Pole Mountain:** May occur on the Pole Mountain Preserve. Foothill grassland habitat potentially suitable for this species is present on the Pole Mountain Preserve.
Congested-headed hayfield tarplant *Hemizonia congesta* ssp. *congesta*	–	–	1B.2	Grassy valleys and hills, often in fallow fields; sometimes along roadsides. 66–2,133 feet in elevation. Blooms April–November. Annual.	**Little Black Mountain/Pole Mountain:** May occur. Grassland and roadside habitat potentially suitable for this species is present on both preserves. **Laufenburg Ranch:** May occur at the Laufenburg Ranch Preserve. Grassland habitat potentially suitable for this species is present on the Laufenburg Ranch Preserve.
Thin-lobed horkelia *Horkelia tenuiloba*	–	–	1B.2	Sandy soils; mesic openings. 164–1640 feet in elevation. Blooms May–July. Perennial herb.	**Little Black Mountain/Pole Mountain:** May occur. Mesic and sandy soil habitat potentially suitable for this species is present on both preserves.
Small groundcone *Kopsiopsis hookeri*	–	–	2B.3	North coast coniferous forest. Open woods, shrubby places, generally on	**Pole Mountain:** May occur on the Pole Mountain Preserve. Forest and open woodland habitat

Species	Listing Status[1] Federal	Listing Status[1] State	Listing Status[1] CRPR	Habitat	Potential for Occurrence
				Gaultheria shallon. 394–4,708 feet in elevation. Blooms April–August. Perennial geophyte.	potentially suitable for this species is present on the Pole Mountain Preserve.
Jepson's leptosiphon *Leptosiphon jepsonii*	–	–	1B.2	Open to partially shaded grassy slopes. On volcanics or the periphery of serpentine substrates. 180–2,805 feet in elevation. Blooms March–May. Annual.	**Little Black Mountain/Pole Mountain:** May occur. Grassy slope and volcanic soil habitat potentially suitable for this species is present on both preserves. **Live Oaks Ranch/Laufenburg Ranch:** May occur. Grassy slope habitat potentially suitable for this species is present on both preserves.
Cobb Mountain lupine *Lupinus sericatus*	–	–	1B.2	In stands of knobcone pine-oak woodland, on open wooded slopes in gravelly soils; sometimes on serpentine. 902–5,003 feet in elevation. Blooms March–June. Perennial herb.	**Live Oaks Ranch/Laufenburg Ranch:** May occur. Open oak woodland slope habitat potentially suitable for this species is present on both preserves.
White-flowered rein orchid *Piperia candida*	–	–	1B.2	Open to shady sites, conifer and mixed-evergreen forest, broadleafed upland forest. Sometimes on serpentine. Forest duff, mossy banks, rock outcrops, and muskeg. 148–5,299 feet in elevation. Blooms May–September. Perennial herb.	**Little Black Mountain/Pole Mountain:** May occur. Open to shady forest habitat potentially suitable for this species is present on both preserves.
North Coast semaphore grass *Pleuropogon hooverianus*	–	ST	1B.1	Wet grassy, usually shady areas, sometimes freshwater marsh; associated with forest environments. 148–3,806 feet in elevation. Blooms April–June. Perennial geophyte.	**Little Black Mountain/Pole Mountain:** May occur. Mesic grassland associated with forest habitat potentially suitable for this species is present on both preserves.
Angel's hair lichen *Ramalina thrausta*	–	–	2B.1	North coast coniferous forest. On dead twigs and other lichens. 246–1,411 feet in elevation. Perennial.	**Little Black Mountain/Pole Mountain:** May occur. Coniferous forest habitat potentially suitable for this species is present on the preserves.
Purple-stemmed checkerbloom *Sidalcea malviflora* ssp. *purpurea*	–	–	1B.2	Broadleafed upland forest, coastal prairie, meadows. 49–279 feet in elevation. Blooms May–June. Perennial geophyte.	**Little Black Mountain/Pole Mountain:** May occur. Broadleafed upland forest habitat potentially suitable for this species is present on both preserves.
Hoffman's bristly jewelflower *Streptanthus glandulosus* ssp. *hoffmanii*	–	–	1B.3	Chaparral, cismonte woodland, valley and foothill grassland. Moist, steep rocky banks, in serpentine and non-serpentine soil. 475–1,560 feet in elevation. Blooms March–July. Annual.	**Little Black Mountain/Pole Mountain:** May occur. Rocky open woodland and grassland habitat potentially suitable for this species is present on both preserves.
Two-fork clover *Trifolium amoenum*	FE	–	1B.1	Coastal bluff scrub, valley and foothill grassland. Sometimes on serpentine soil, open sunny sites, swales. Most recently cited on roadside and eroding cliff face. 16–1,017 feet in elevation. Blooms April–June. Annual.	**Little Black Mountain/Pole Mountain:** May occur. Grassland habitat potentially suitable for this species is present on both preserves.

Species	Listing Status[1] Federal	Listing Status[1] State	Listing Status[1] CRPR	Habitat	Potential for Occurrence
Santa Cruz clover *Trifolium buckwestiorum*	–	–	1B.1	Broadleafed upland forest, woodland, coastal prairie. Grassy or disturbed areas. Gravelly margins. 344–2,001 feet in elevation. Blooms April–October. Annual.	**Little Black Mountain/Pole Mountain:** May occur. Woodland and grassland habitat potentially suitable for this species is present on both preserves.
Oval-leaved viburnum *Viburnum ellipticum*	–	–	2B.3	Chaparral, cismontane woodland, lower montane coniferous forest. 705–4,593 feet in elevation. Blooms May–June. Perennial shrub.	**Live Oaks Ranch/Laufenburg Ranch:** May occur. Woodland habitat potentially suitable for this species is present on both preserves.
Special-Status Wildlife					
California giant salamander *Dicamptodon ensatus*	–	SSC	–	Known from wet coastal forests near streams and seeps from Mendocino County south to Monterey County and east to Napa County. Aquatic larvae found in cold, clear streams, and occasionally in lakes and ponds. Adults known from wet forests under rocks and logs near streams and lakes and are typically found within approximately 165 feet (i.e., 50 meters) of streams.	**Little Black Mountain/Pole Mountain:** May occur. Both preserves contain streams that may provide aquatic breeding habitat potentially suitable for California giant salamander. **Live Oaks Ranch/Laufenburg Ranch:** May occur. Both preserves contain streams that may provide aquatic breeding habitat potentially suitable for California giant salamander.
California red-legged frog *Rana draytonii*	FT	SSC	–	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	**Little Black Mountain/Pole Mountain:** May occur. The nearest documented California red-legged frog occurrence is approximately 3.1 miles south of the treatment areas within Sheephouse Creek (CNDDB 2021). A recent survey of a stock pond on the Pole Mountain Preserve was conducted, and no adult frogs or tadpoles were observed; however, the pond would provide habitat suitable for California red-legged frogs if present (Prunuske Chatham, Inc. 2020). Potentially limiting the likelihood of future California red-legged frog occupation in this pond is the presence of introduced mosquitofish, which are potential predators of tadpoles (Prunuske Chatham, Inc. 2020; USFWS 2002). Stream habitat on the preserves likely does not contain deep water long enough for California red-legged frog larval development; all streams were dry during the September 14, 2021 reconnaissance-level survey. However, these streams could be used by California red-legged frogs while dispersing. **Live Oaks Ranch/Laufenburg Ranch:** May occur. The nearest modern, presumed extant California red-legged frog occurrence is approximately 13.5 miles south of the treatment areas in Trione Annadel State Park (CNDDB 2021). The treatment areas do not contain pond habitat; however, there are multiple stock ponds present on private property surrounding the treatment areas.

Species	Listing Status[1] Federal	Listing Status[1] State	Listing Status[1] CRPR	Habitat	Potential for Occurrence
					Stream habitat on the preserves likely does not contain deep water long enough for California red-legged frog larval development; all streams were dry during the September 15, 2021, reconnaissance-level survey. However, these streams could be used by California red-legged frogs while dispersing.
Foothill yellow-legged frog *Rana boylii*	–	SSC	–	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Need at least some cobble-sized substrate for egg-laying. Need at least 15 weeks to attain metamorphosis. Treatment areas are within the northwest/north coast clade, which is not listed under the California Endangered Species Act.	**Little Black Mountain/Pole Mountain:** May occur. Foothill yellow-legged frogs have been documented within Pole Creek approximately 1 mile northwest and Kidd Creek approximately 2 miles east of the treatment areas (CNDDB 2021). Stream habitat in the treatment areas may provide habitat suitable for this species. **Live Oaks Ranch/Laufenburg Ranch:** May occur. The nearest documented occurrence of foothill yellow-legged frogs is approximately 2 miles north of the treatment areas near Kellogg Creek (CNDDB 2021). Stream habitat in the treatment areas may provide habitat suitable for this species.
Red-bellied newt *Taricha rivularis*	–	SSC	–	Coastal drainages from Humboldt County south to Sonoma County, inland to Lake County. Isolated population of uncertain origin in Santa Clara County. Lives in moist terrestrial habitats, juveniles generally underground, adults active at surface in moist environments. Spends dry season underground within root channels. Will migrate over 0.6 mile to breed, typically in streams with moderate flow and clean rocky substrate. Primarily active at night.	**Little Black Mountain/Pole Mountain:** May occur. Stream habitat and associated upland forest habitat in the treatment areas may provide habitat suitable for red-bellied newts. **Live Oaks Ranch/Laufenburg Ranch:** May occur. Stream habitat and associated upland forest habitat in the treatment areas may provide habitat suitable for red-bellied newts.
Western pond turtle *Actinemys marmorata*	–	SSC	–	Aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6,000 feet elevation. Need basking sites and suitable (sandy banks or grassy open fields) upland habitat up to approximately 1,500 feet from water for egg-laying.	**Little Black Mountain/Pole Mountain:** May occur. Stream habitat and associated uplands (e.g., stream banks, grassy areas adjacent to streams, open woodlands and forests adjacent to streams) potentially suitable for western pond turtles is present in the treatment areas. **Live Oaks Ranch/Laufenburg Ranch:** May occur. Stream habitat and associated uplands (e.g., stream banks, grassy areas adjacent to streams, open woodlands and forests adjacent to streams) potentially suitable for western pond turtles is present in the treatment areas.
American peregrine falcon *Falco peregrinus anatum*	FD	SD FP	–	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures. Nest consists of a scrape or a depression or ledge in an open site.	**Little Black Mountain/Pole Mountain:** Known to occur. American peregrine falcon is known to nest in cliff habitat on Little Black Mountain (Edwards, pers. comm., 2021).

Species	Listing Status[1] Federal	Listing Status[1] State	Listing Status[1] CRPR	Habitat	Potential for Occurrence
Burrowing owl *Athene cunicularia*	–	SSC	–	Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	**Little Black Mountain/Pole Mountain:** May occur. The treatment areas are outside of the known burrowing owl breeding range and are near the boundary of the currently known extent of the species' wintering range. Open grassy areas within the treatment areas may provide overwintering habitat suitable for burrowing owls. **Live Oaks Ranch/Laufenburg Ranch:** May occur. The treatment areas are outside of the known burrowing owl breeding range and are near the boundary of or just within the currently known extent of the species' wintering range. Grasslands and open grassy woodland habitats within the treatment areas may provide overwintering habitat suitable for burrowing owls.
Golden eagle *Aquila chrysaetos*	–	FP	–	Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	**Little Black Mountain/Pole Mountain:** Known to occur. Golden eagle is known to nest in cliff habitat on Little Black Mountain (Edwards, pers. comm., 2021). **Live Oaks Ranch/Laufenburg Ranch:** May occur. The treatment areas contain large trees that may provide nesting habitat suitable for golden eagles.
Grasshopper sparrow *Ammodramus savannarum*	–	SSC	–	Dense grasslands on rolling hills, lowland plains, in valleys and on hillsides on lower mountain slopes. Favors native grasslands with a mix of grasses, forbs and scattered shrubs. Loosely colonial when nesting.	**Little Black Mountain/Pole Mountain:** May occur. Open grassy areas within the treatment areas may provide habitat suitable for grasshopper sparrow. **Live Oaks Ranch/Laufenburg Ranch:** May occur. Open grassy areas within the treatment areas may provide habitat suitable for grasshopper sparrow.
Loggerhead shrike *Lanius ludovicianus*	–	SSC	–	Broken woodlands, savannah, pinyon-juniper, Joshua tree, and riparian woodlands, desert oases, scrub and washes. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.	**Little Black Mountain/Pole Mountain:** May occur. The treatment areas contain open woodlands and shrub habitats potentially suitable for nesting loggerhead shrikes. **Live Oaks Ranch/Laufenburg Ranch:** May occur. The treatment areas contain open woodlands and shrub habitats potentially suitable for nesting loggerhead shrikes.
Long-eared owl *Asio otus*	–	SSC	–	Riparian bottomlands including tall willows and cottonwoods; also, belts of live oak paralleling stream courses. Require adjacent open land productive of mice and the presence of old nests of crows, hawks, or magpies for breeding.	**Little Black Mountain/Pole Mountain:** May occur. The treatment areas contain riparian and forest habitat adjacent to streams that may provide nesting habitat suitable for long-eared owls. **Live Oaks Ranch/Laufenburg Ranch:** May occur. The treatment areas contain riparian and forest habitat adjacent to streams that may provide nesting habitat suitable for long-eared owls.
Purple martin *Progne subis*	–	SSC	–	Inhabits woodlands, low elevation coniferous forest of Douglas fir, ponderosa pine, and Monterey pine. Nests in old woodpecker cavities mostly, also in human-made structures. Nest often located in tall, isolated tree/snag.	**Little Black Mountain/Pole Mountain:** May occur. The treatment areas contain large trees and snags that may provide nesting habitat suitable for purple martin. **Live Oaks Ranch/Laufenburg Ranch:** May occur. The treatment areas contain large trees and snags that

Species	Listing Status[1] Federal	Listing Status[1] State	Listing Status[1] CRPR	Habitat	Potential for Occurrence
					may provide nesting habitat suitable for purple martin.
Tricolored blackbird *Agelaius tricolor*	–	ST	–	Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony.	**Live Oaks Ranch/Laufenburg Ranch:** May occur. The treatment areas contain streams and seeps with associated vegetation (e.g., Himalayan blackberry) which may provide nesting habitat suitable for tricolored blackbirds.
Vaux's swift *Chaetura vauxi*	–	SSC	–	Redwood, Douglas fir, and other coniferous forests. Nests in large hollow trees and snags. Often nests in flocks. Forages over most terrains and habitats but shows a preference for foraging over rivers and lakes.	**Little Black Mountain/Pole Mountain:** May occur. The treatment areas contain large trees and snags that may provide nesting habitat suitable for Vaux's swift. **Live Oaks Ranch/Laufenburg Ranch:** May occur. The treatment areas contain large trees and snags that may provide nesting habitat suitable for Vaux's swift.
White-tailed kite *Elanus leucurus*	–	FP	–	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	**Little Black Mountain/Pole Mountain:** May occur. The treatment areas contain woodland habitat that may provide nesting habitat suitable for white-tailed kites. **Live Oaks Ranch/Laufenburg Ranch:** May occur. The treatment areas contain woodland habitat that may provide nesting habitat suitable for white-tailed kites.
Yellow warbler *Setophaga petechia*	–	SSC	–	Riparian plant associations in close proximity to water. Also nests in montane shrubbery in open conifer forests in Cascades and Sierra Nevada. Frequently found nesting and foraging in willow shrubs and thickets, and in other riparian plants including cottonwoods, sycamores, ash, and alders.	**Little Black Mountain/Pole Mountain:** May occur. The treatment areas contain riparian habitat associated with streams that may provide nesting habitat suitable for yellow warbler. **Live Oaks Ranch/Laufenburg Ranch:** May occur. The treatment areas contain riparian habitat associated with streams that may provide nesting habitat suitable for yellow warbler.
Yellow-breasted chat *Icteria virens*	–	SSC	–	Summer resident; inhabits riparian thickets of willow and other brushy tangles near watercourses. Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 feet of ground.	**Little Black Mountain/Pole Mountain:** May occur. The treatment areas contain riparian habitat associated with streams that may provide nesting habitat suitable for yellow-breasted chat. **Live Oaks Ranch/Laufenburg Ranch:** May occur. The treatment areas contain riparian habitat associated with streams that may provide nesting habitat suitable for yellow-breasted chat.
Chinook salmon - California coastal ESU *Oncorhynchus tshawytscha* pop. 17	FT	–	–	Federal listing refers to wild spawned, coastal, spring and fall runs between Redwood Creek, Humboldt County and Russian River, Sonoma County.	**Little Black Mountain/Pole Mountain:** May occur. The segments of Pole Mountain Creek, Saint Elmo Creek, and Kidd Creek within the treatment area may provide habitat suitable for Chinook salmon. **Live Oaks Ranch/Laufenburg Ranch:** May occur. The segment of Bidwell Creek within the treatment areas may provide stream habitat suitable for Chinook salmon.

Species	Listing Status[1] Federal	Listing Status[1] State	Listing Status[1] CRPR	Habitat	Potential for Occurrence
Clear Lake - Russian River roach *Lavinia symmetricus* ssp. 4	–	SSC	–	Found in a wide variety of habitats in the Russian River, including the main river where there is cover (e.g., fallen trees) to protect them from predators. They are most abundant, however, in tributaries.	**Little Black Mountain/Pole Mountain:** May occur. The segments of Pole Mountain Creek, Saint Elmo Creek, and Kidd Creek within the treatment area may provide habitat suitable for Clear Lake – Russian River roach. **Live Oaks Ranch/Laufenburg Ranch:** May occur. The segment of Bidwell Creek within the treatment areas may provide stream habitat suitable for Clear Lake – Russian River roach.
Coho salmon - central California coast ESU *Oncorhynchus kisutch* pop. 4	FE	SE	–	Federal listing includes populations between Punta Gorda and San Lorenzo River. State listing includes populations south of Punta Gorda. Require beds of loose, silt-free, coarse gravel for spawning. Also need cover, cool water and sufficient dissolved oxygen.	**Little Black Mountain/Pole Mountain:** May occur. Coho salmon have been documented in Austin Creek, from which several tributary creeks (i.e., Saint Elmo Creek, Kidd Creek) flow into the treatment areas (CNDDB 2021). These streams may provide habitat suitable for Coho salmon. **Live Oaks Ranch/Laufenburg Ranch:** May occur. The segment of Bidwell Creek within the treatment areas may provide stream habitat suitable for Coho salmon.
Hardhead *Mylopharodon conocephalus*	–	SSC	–	Low to mid-elevation streams in the Sacramento-San Joaquin drainage. Also present in the Russian River. Clear, deep pools with sand-gravel-boulder bottoms and slow water velocity.	**Little Black Mountain/Pole Mountain:** May occur. The segments of Pole Mountain Creek, Saint Elmo Creek, and Kidd Creek within the treatment area may provide habitat suitable for hardhead. **Live Oaks Ranch/Laufenburg Ranch:** May occur. The segment of Bidwell Creek within the treatment areas may provide stream habitat suitable for hardhead.
Pacific lamprey *Entosphenus tridentatus*	–	SSC	–	Found in Pacific Coast streams north of San Luis Obispo County; however, regular runs in Santa Clara River. Size of runs is declining. Swift-current gravel-bottomed areas for spawning with water temperatures between 12-18 degrees Celsius.	**Little Black Mountain/Pole Mountain:** May occur. The segments of Pole Mountain Creek, Saint Elmo Creek, and Kidd Creek within the treatment area may provide habitat suitable for Pacific lamprey. **Live Oaks Ranch/Laufenburg Ranch:** May occur. The segment of Bidwell Creek within the treatment areas may provide stream habitat suitable for Pacific lamprey.
Riffle sculpin *Cottus gulosus*	–	SSC	–	Found in headwater streams with cold water and rocky or gravelly substrate. Prefer permanent streams where the water does not exceed 25-26 degrees Celsius, and where ample flow keeps the dissolved oxygen level near saturation.	**Little Black Mountain/Pole Mountain:** May occur. The segments of Pole Mountain Creek, Saint Elmo Creek, and Kidd Creek within the treatment area may provide habitat suitable for riffle sculpin.
Sacramento hitch *Lavinia exilicauda exilicauda*	–	SSC	–	Found in cool, clear, low-gradient streams, hiding among aquatic vegetation in sandy runs or pools. Can withstand water temperatures greater than 30 degrees Celsius under some conditions.	**Live Oaks Ranch/Laufenburg Ranch:** May occur. The segment of Bidwell Creek within the treatment areas may provide stream habitat suitable for this species.
Steelhead - central California coast DPS	FT	–	–	From Russian River, south to Soquel Creek and to, but not including	**Little Black Mountain/Pole Mountain:** May occur. The nearest documented occurrence of steelhead is

Species	Listing Status[1] Federal	Listing Status[1] State	Listing Status[1] CRPR	Habitat	Potential for Occurrence
Oncorhynchus mykiss irideus pop. 8				Pajaro River. Also San Francisco and San Pablo Bay basins.	within Austin Creek approximately 4.5 miles north of the treatment areas (CNDDB 2021). The segments of Pole Mountain Creek, Saint Elmo Creek, and Kidd Creek within the treatment area may provide habitat suitable for steelhead. **Live Oaks Ranch/Laufenburg Ranch:** May occur. Steelhead have been documented previously in the segment of Bidwell Creek within the treatment area during snorkel surveys and may provide habitat suitable for the species (Hammar, pers. comm., 2021).
California freshwater shrimp *Syncaris pacifica*	FE	SE	–	Endemic to Marin, Napa, and Sonoma counties. Found in low-elevation, low-gradient streams where riparian cover is moderate to heavy. Shallow pools away from main streamflow. In winter, found in streams with undercut banks with exposed roots. In summer, found in streams with leafy branches touching water.	**Little Black Mountain/Pole Mountain:** May occur. The treatment areas contain stream habitat that may provide habitat suitable for California freshwater shrimp. **Live Oaks Ranch/Laufenburg Ranch:** May occur. The treatment areas contain stream habitat that may provide habitat suitable for California freshwater shrimp.
American badger *Taxidea taxus*	–	SSC	–	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	**Little Black Mountain/Pole Mountain:** May occur. Grassland and open woodland habitat within the treatment areas may provide habitat suitable for this species. **Live Oaks Ranch/Laufenburg Ranch:** May occur. Grassland and open woodland habitat within the treatment areas may provide habitat suitable for this species. Additionally, several large, inactive burrows potentially associated with American badgers were observed on the Laufenburg Ranch site during the reconnaissance-level survey for biological resources.
Pallid bat *Antrozous pallidus*	–	SSC	–	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	**Little Black Mountain/Pole Mountain:** May occur. The treatment areas contain large trees with cavities, snags, and rocky areas, which may provide roosting habitat suitable for pallid bat. **Live Oaks Ranch/Laufenburg Ranch:** May occur. The treatment areas contain large trees with cavities, snags, and rocky areas, which may provide roosting habitat suitable for pallid bat.
Ringtail *Bassariscus astutus*	–	FP	–	Riparian habitats, forest habitats, and shrub habitats in lower to middle elevations.	**Little Black Mountain/Pole Mountain:** May occur. The treatment areas contain riparian, forest, and shrub habitat suitable for ringtail. The treatment areas contain large trees with cavities and rocky areas which may provide den habitat suitable for this species. **Live Oaks Ranch/Laufenburg Ranch:** May occur. The treatment areas contain riparian, forest, and shrub habitat suitable for ringtail. The treatment areas contain large trees with cavities and rocky areas which may provide den habitat suitable for this species.

Species	Listing Status[1] Federal	Listing Status[1] State	Listing Status[1] CRPR	Habitat	Potential for Occurrence
Sonoma tree vole *Arborimus pomo*	–	SSC	–	North coast fog belt from Oregon border to Somona County. In Douglas fir, redwood, and montane hardwood-conifer forests. Favors old growth and mature forests. Feeds almost exclusively on Douglas fir needles. Will occasionally take needles of grand fir, hemlock, or spruce.	**Little Black Mountain/Pole Mountain:** May occur. While the treatment areas do not contain old growth habitat, some large trees are present, including Douglas fir, which may provide nesting habitat suitable for this species.
Townsend's big-eared bat *Corynorhinus townsendii*	–	SSC	–	Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.	**Little Black Mountain/Pole Mountain:** May occur. Rocky areas in the treatment area may provide cavities large enough to be used as roost habitat by Townsend's big-eared bats. **Live Oaks Ranch/Laufenburg Ranch:** May occur. Potential roost habitat is present within human-made structures (e.g., barns) in the treatment areas.
Western red bat *Lasiurus blossevillii*	–	SSC	–	Roosts primarily in trees, 2–40 feet above ground, from sea level up through mixed conifer forests. Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging.	**Little Black Mountain/Pole Mountain:** May occur. The treatment areas contain broadleaf tree species that may provide roosting habitat suitable for this species. **Live Oaks Ranch/Laufenburg Ranch:** May occur. The treatment areas contain broadleaf tree species that may provide roosting habitat suitable for this species.

1. Legal Status Definitions:

California Rare Plant Ranks (CRPR):

1B Plant species considered rare or endangered in California and elsewhere (protected under CEQA, but not legally protected under ESA or CESA).
2B Plant species considered rare or endangered in California but more common elsewhere (protected under CEQA, but not legally protected under ESA or CESA).

CRPR Threat Ranks:

0.1 Seriously threatened in California (over 80% of occurrences threatened; high degree and immediacy of threat)
0.2 Moderately threatened in California (20-80% occurrences threatened; moderate degree and immediacy of threat)
0.3 Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

State: FP Fully Protected (legally protected)
SSC Species of Special Concern (no formal protection other than CEQA consideration)
SE State Listed as Endangered (legally protected)
ST State Listed as Threatened (legally protected)
SD State Delisted

Federal: FE Federally Listed as Endangered (legally protected)
FT Federally Listed as Threatened (legally protected)
FD Federally Delisted

CESA = California Endangered Species Act; CEQA = California Environmental Quality Act; CRPR = California Rare Plant Rank; DPS=distinct population segment; ESA = Endangered Species Act; ESU=evolutionarily significant unit

Sources: CNDDB 2021; CNPS 2021; Edwards, pers. comm. 2021; Hammar, pers. comm. 2021; Sonoma Land Trust 2021; Prunuske Chatham, Inc. 2020; USFWS 2021; Warner 2013a; Warner 2013b; Warner 2013c; Warner 2015

IMPACT BIO-1

Initial vegetation treatments and maintenance treatments could result in direct or indirect adverse effects on the thirty-six special-status plant species with suitable habitat in treatment areas, as described in the following section. Potential impacts resulting from maintenance activities would be similar to those resulting from initial vegetation treatments, because the same treatment activities would occur. However, treatment frequency and intensity can determine whether effects on certain plant species are beneficial or adverse. Initial treatment that reduces

overgrowth, opens the tree canopy to allow more light penetration, or removes invasive competitors can be beneficial for special-status plant populations; however, repeated treatments at too frequent intervals can have adverse effects on those same special-status plants.

Eleven of the special-status plant species with suitable habitat in the treatment areas—Sonoma alopecurus, swamp harebell, bristly sedge, deceiving sedge, pappose tarplant, Baker's larkspur, coast fawn lily, minute pocket moss, thin-lobed horkelia, North Coast semaphore grass, and two-fork clover—are typically associated with wet areas (e.g., wetlands, mesic areas in forest or grassland, springs, seeps). Pursuant to SPR HYD-4, Watercourse and Lake Protection Zones (WLPZs) ranging from 50 to 150 feet adjacent to all aquatic habitat within the treatment areas would be implemented for manual, mechanical, herbicide, and pile burning treatments, which would minimize some adverse effects on these species. In addition, SPR HYD-4 will be refined for specific application to this project to include 1) the implementation of no-disturbance buffers of 300 feet around all ponds (including ponds on adjacent private property where the buffer extends into a treatment area) and 2) the requirement that no pile burning within 300 feet from any aquatic habitat (i.e., streams, ponds, wetlands, seeps) would occur. There may be additional onsite wetland, spring, and seep habitat suitable for special-status plants outside of a WLPZ. Wetland delineations will be conducted to determine if other wetland, spring, and seep habitats are located on the properties; where aquatic habitats are delineated, no-disturbance buffers of at least 25 feet around them will be implemented (refer to Impact BIO-4 below). Although these measures would avoid and minimize some adverse effects on special-status plants typically associated with wet areas, all habitat potentially suitable for these 11 species cannot be avoided and establishing WLPZs and protective buffers would not fully prevent impacts on the species. As a result, SPR BIO-7 would be implemented.

SPR BIO-7 would apply to all treatment activities, including maintenance treatments; it requires protocol-level surveys for special-status plants to be conducted prior to implementation of mechanical, manual, prescribed burning, and herbicide treatments. Pursuant to SPR BIO-7, surveys would not be required for those special-status plants not listed under CESA or ESA, if the target special-status plant species is an herbaceous annual species, stump-sprouting species, or geophyte species, and the treatment may be carried out during the dormant season for that species or when the species has completed its annual life cycle provided the treatment would not alter habitat in a way that would make it unsuitable for the special-status plants to reestablish following treatment, or destroy seeds, stumps, or roots, rhizomes, bulbs and other underground parts of special-status plants.

Nineteen of the 36 special-status plant species that may occur within the treatment areas are herbaceous annual species or geophytes, as indicated in Table 4.5-1. Impacts on these species would be avoided by implementing non-ground-disturbing treatment activities (e.g., manual treatment activities) during the dormant season (i.e., when the plant has no aboveground parts), which would generally occur during the winter. Ground-disturbing treatment activities (e.g., mechanical treatments, construction of control lines for broadcast burning) may result in impacts on these plant species even when dormant, and would not be conducted without prior implementation of SPR BIO-7. If non-ground-disturbing treatments cannot be completed in the dormant season and would be implemented during the growing period of these annual and geophyte species, protocol surveys (per SPR BIO-7) and avoidance of any identified plants (per Mitigation Measures BIO-1a and BIO-1b) must be implemented, as described below. The remaining 17 of the 36 special-status plant species that have potential to occur within the treatment areas are perennial species, which could not be avoided in the same manner as herbaceous annual species or geophytes; therefore, protocol-level surveys under SPR BIO-7 would be necessary to identify them prior to implementing treatment activities regardless of the timing of treatments.

Botanical inventories were conducted by Peter Warner in 2013 for Live Oaks Ranch, Laufenburg Ranch, and Little Black Mountain preserves (Warner 2013a; Warner 2013b; Warner 2013c). During these inventories, properties were visited three times throughout the growing season. Vegetation was identified at the alliance level and when possible, acreage of each alliance on the property was estimated. All plants observed during site visits were recorded, and a list of rare plants that may occur on site and suitable rare plant habitats were also included. Vegetation mapping was completed for all three properties. Napa false indigo populations were observed on the Laufenburg Ranch and Little Black Mountain preserves (Warner 2013b; Warner 2013c). Napa false indigo has a rare plant rank of 1B.2. In 2015, a biological inventory was conducted for Pole Mountain Preserve as well. Methods mirrored biological inventories

conducted in 2013, including vegetation mapping, except no rare plant habitat map or list of rare plants that may occur were provided (Warner 2015). Although these botanical inventories were comprehensive, the treatment areas were not surveyed completely. In addition, these botanical inventories are more than five years old, so additional botanical protocol-level surveys would still be required prior to implementing treatments, according to SPR BIO-7 and pursuant to *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities* (CDFW 2018a).

Where protocol-level surveys are required (per SPR BIO-7) and special-status plants are identified during these surveys, Mitigation Measures BIO-1a and BIO-1b would be implemented to avoid loss of identified special-status plants. Per Mitigation Measures BIO-1a and BIO-1b, if special-status plants are identified during protocol-level surveys, a no-disturbance buffer of at least 50 feet would be established around the area occupied by the species within which prescribed fire, herbicide application, and mechanical and manual treatment, would not occur unless a qualified RPF or biologist determines, based on substantial evidence, that the species would benefit from treatment in the occupied habitat area. In the case of plants listed pursuant to CESA or ESA, the determination of beneficial effects would need to be made in consultation with the California Department of Fish and Wildlife (CDFW) and/or USFWS. If treatments are determined to be beneficial and would be implemented in areas occupied by special-status plants, under the specific conditions described under Mitigation Measures BIO-1a and BIO-1b, additional impact minimization and avoidance measures or design alternatives to reduce impacts would be identified. An evaluation of the appropriate treatment design and frequency to maintain habitat function for special-status plants will be carried out by a qualified RPF or botanist. Therefore, habitat function for special-status plants would be maintained because treatment activities and maintenance treatments would be designed to ensure that treatments, including follow-up maintenance, maintain habitat function for the special-status plant species present.

Napa false indigo (a perennial shrub) has been identified previously and known to occur within treatment areas at Little Black Mountain and Laufenburg Ranch preserves. If surveys for SPR BIO-7 determine the species is still present, implementation of Mitigation Measure BIO-1b would be required to avoid loss of individual plants by establishing a no-disturbance buffer around the area occupied by the species and marking the buffer boundary with high-visibility flagging, fencing, stakes, or clear, existing landscape demarcations (e.g., edge of a roadway). The no-disturbance buffers will generally be a minimum of 50 feet from special-status plants, but the size and shape of the buffer zone may be adjusted if a qualified RPF or botanist determines that a smaller buffer will be sufficient to avoid loss of or damage to special-status plants or that a larger buffer is necessary to sufficiently protect plants from the treatment activity.

The potential for treatment activities to result in adverse effects on special-status plants was examined in the PEIR. This impact on special-status plants is within the scope of the PEIR, because, within the boundary of the project area, habitat characteristics are essentially the same within and outside the treatable landscape (e.g., no resource is affected on land outside the treatable landscape that would not also be similarly affected within the treatable landscape), and the treatment activities and intensity of disturbance as a result of implementing treatment activities are consistent with those analyzed in the PEIR. The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing environmental conditions present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the potential impact on special-status plants is also the same, as described above. Biological resource SPRs that apply to project impacts under Impact BIO-1 are SPRs BIO-1, SPR BIO-2, SPR BIO-6, SPR BIO-7, SPR BIO-9, SPR GEO-1, SPR GEO-3, SPR GEO-4, SPR GEO-5, SPR GEO-7, SPR HYD-4, and SPR HYD-5. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT BIO-2

Initial vegetation treatments and follow-up maintenance treatments could result in direct or indirect adverse effects on special-status wildlife species and habitat suitable for these species within a treatment area, as described in the following sections. Potential impacts resulting from maintenance activities would be similar to those resulting from initial vegetation treatments because the same treatment activities would occur.

California Giant Salamander and Red-Bellied Newt

California giant salamander and red-bellied newt have potential to occur in all of the treatment areas (Table 4.5-1). Habitat potentially suitable for these species includes perennial and intermittent streams and associated uplands, including forest habitat under leaf litter and logs. California giant salamanders are typically found within approximately 165 feet of stream habitat. Red-bellied newts spend dry summer months in moist habitats (e.g., under woody debris, rocks, animal burrows), which, based on dry conditions in the treatment areas observed during the September 14 and 15 reconnaissance surveys, would limit the species to areas relatively close to streams, ponds, and seeps (i.e., approximately 100 feet). WLPZs ranging from 50 to 150 feet adjacent to all Class I and Class II streams within the treatment areas would be implemented per SPR HYD-4, also including its project-specific refinement to include the implementation of no-disturbance buffers of 300 feet around all ponds (including ponds on adjacent private property where the buffer extends into a treatment area). However, these measures may not result in full avoidance of California giant salamanders and red-bellied newts if these species are present further than 150 feet from stream habitat or 300 feet from ponds, or if manual activities implemented within the WLPZ resulted in injury or mortality of these species. The potential for treatment activities and maintenance treatments to result in adverse effects on special-status salamanders was examined in the PEIR.

Per SPR BIO-1, if it is determined that adverse effects on California giant salamander and red-bellied newt can be clearly avoided by physically avoiding the habitat suitable for these species, then no mitigation would be required. However, because California giant salamander and red-bellied newts may be present relatively large distances (i.e., greater than 200 feet) from aquatic habitat throughout the forest habitat in the treatment areas, it is unlikely that all habitat potentially suitable for these species can be avoided. As a result, SPR BIO-10 would apply, and focused surveys for California giant salamander and red-bellied newt would be conducted within habitat suitable for these species prior to implementation of mechanical, manual, prescribed burning, and herbicide treatments.

If California giant salamanders and red-bellied newts are not detected within the treatment areas during focused surveys, then no mitigation for the species would be required. If these species are detected during focused surveys, then Mitigation Measure BIO-2b would be implemented. Under Mitigation Measure BIO-2b, Sonoma Land Trust would require flagging areas for avoidance, relocation of individual animals by a qualified RPF or biologist with a valid CDFW scientific collecting permit, and/or other measures recommended by CDFW as necessary to avoid injury to or mortality of these species.

Habitat function for California giant salamander and red-bellied newt would be maintained because treatment activities and maintenance treatments would not occur within aquatic habitat, and treatments within WLPZs adjacent to treatment areas would be limited pursuant to SPR HYD-4 (e.g., no mechanical treatment, retention of at least 75 percent surface cover, no treatment within 300 feet of ponds). This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

California Red-Legged Frog

Potential breeding habitat suitable for California red-legged frog within the treatment areas is limited to a stock pond on the Pole Mountain Preserve and an approximately 0.85-acre portion of a larger stock pond along the southern boundary of the Live Oak Ranch Preserve. An amphibian survey was conducted within the stock pond on June 25, 2020, and no adult frogs or tadpoles were observed (Prunuske Chatham, Inc. 2020). Introduced mosquitofish, which are potential tadpole predators, were observed in the stock pond, potentially limiting the likelihood of future California red-legged frog occupation in the pond (Prunuske Chatham, Inc. 2020; USFWS 2002). While potential breeding habitat for California red-legged frogs is not present within the Russian River Watershed preserves, there are multiple stock ponds present on private property surrounding the treatment areas. Streams within the treatment areas at all preserves do not contain deep water long enough for California red-legged larval development and do not provide breeding habitat suitable for the species. The potential for initial treatment activities and maintenance treatments to result in adverse effects on California red-legged frogs was examined in the PEIR.

Adult and juvenile California red-legged frogs are known to travel through upland habitat (e.g., riparian, woodland, grassland) to move between breeding and nonbreeding sites (e.g., other ponds, deep pools in streams, moist and cool riparian understory, burrows) for access to refugia and foraging habitat, or to disperse to new breeding locations.

Movements through upland habitat are typically up to approximately 1.6 kilometers (1 mile) over the course of a wet season (Bulger et al. 2003). During migration, California red-legged frogs may travel long distances from aquatic habitat and typically travel in straight lines irrespective of vegetation types and have been documented to move over 1.7 miles between aquatic habitat sites (Bulger et al. 2003). The distance between the nearest documented California red-legged frog occurrences and the treatment areas is greater than the typical dispersal distance of the species.

The nearest documented California red-legged frog occurrence to the coastal preserves is approximately 3.1 miles south of the treatment areas within Sheephouse Creek (CNDDB 2021). The nearest modern, presumed extant California red-legged frog occurrence to the Russian River Watershed preserves is approximately 13.5 miles south of the treatment areas in Trione Annadel State Park (CNDDB 2021). There is one historic (1915) occurrence in Calistoga that is presumed to be extirpated due to extensive urban and agricultural development in the Calistoga area.

There are few human-made barriers to movement (e.g., roads, residential development, urban development) between the coastal preserves and the known California red-legged frog occurrence in Sheephouse Creek; however, Sheephouse Creek is not hydrologically connected with any creeks in the treatment area. Additionally, there are many documented occurrences of California red-legged frogs south of the occurrence in Sheephouse Creek, with ample known population in Sheephouse Creek to the stock pond on the Pole Mountain Preserve is low.

There are substantial human-made barriers to movement between the Russian River Watershed preserves and the known California red-legged frog occurrence in Trione Annadel State Park, including SR-12 and SR-128 (busy, two-lane highways), several smaller roads (e.g., St. Helena Rd., Calistoga Rd., Petrified Forest Rd., Franz Valley School Rd.), extensive urban and residential development in eastern Santa Rosa, agricultural development (e.g., vineyards), and dispersed rural residential development, as well as potential natural barriers to movement, including burned landscapes resulting from the 2017 Tubbs Fire. Despite the presence of stock ponds on private property adjacent to the Russian River Watershed preserves that may provide breeding habitat suitable for California red-legged frogs, the likelihood of frogs dispersing from the known population in Trione Annadel State Park, or other populations greater distances from the treatment areas, is low.

Further, treatment activities would be limited to upland areas, and WLPZs ranging from 50 to 150 feet adjacent to all Class I and Class II streams within the treatment areas would be implemented per SPR HYD-4, including its project-specific refinement to include the implementation of no-disturbance buffers of 300 feet around all ponds (including ponds on adjacent private property where the buffer extends into a treatment area). Also, pursuant to SPR HYD-4 including its project-specific refinement, no pile burning would occur within WLPZs, and no pile burning within 300 feet from any aquatic habitat (i.e., streams, ponds, wetlands, seeps) would occur. SPR GEO-1 would be implemented, which would limit mechanical and herbicide treatments before, during, or after precipitation events.

Habitat function for California red-legged frogs would be maintained because treatment activities and maintenance treatments would not occur within aquatic habitat, and pursuant to SPR HYD-4 no treatment would occur within 300 feet of ponds and treatments within stream WLPZs adjacent to treatment areas would be limited (e.g., no mechanical treatment, retention of at least 75 percent surface cover). This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Foothill Yellow-Legged Frog

Habitat potentially suitable for foothill yellow-legged frog includes perennial streams within treatment areas and associated uplands. Foothill yellow-legged frog is known to occur within upland habitat up to approximately 200 feet away, but typically no more than 50 to 70 feet away, from aquatic habitat (CDFW 2018b). WLPZs ranging from 50 to 150 feet adjacent to all Class I and Class II streams within the treatment areas would be implemented per SPR HYD-4, including its project-specific refinement to include the implementation of no-disturbance buffers of 300 feet around all ponds (including ponds on adjacent private property where the buffer extends into a treatment area). However, these measures may not result in full avoidance of foothill yellow-legged frogs if frogs are present further than 150 feet from stream habitat, or if manual activities implemented within the WLPZ resulted in injury or mortality of this species. The potential for treatment activities, including maintenance treatments, to result in adverse effects on foothill yellow-legged frog was examined in the PEIR.

Per SPR BIO-1, to fully avoid habitat potentially suitable for foothill yellow-legged frog, a 200-foot no-disturbance buffer would be implemented prior to commencement of treatment activities by flagging along perennial streams (Class I and Class II) adjacent to the treatment areas. If the 200-foot no-disturbance buffer is determined to be infeasible for certain treatments, then SPR BIO-10 would apply, and focused visual encounter surveys for foothill yellow-legged frog would be conducted within suitable habitat areas prior to treatment activities. If foothill yellow-legged frogs are identified during focused surveys, Mitigation Measure BIO-2b for this species would be implemented.

Under Mitigation Measure BIO-2b, Sonoma Land Trust would require flagging areas for avoidance, relocation of individual animals by a qualified RPF or biologist with a valid CDFW scientific collecting permit, and/or other measures recommended by CDFW as necessary to avoid injury to or mortality of foothill yellow-legged frogs.

Habitat function for foothill yellow-legged frog would be maintained because treatment activities and maintenance treatments would not occur within aquatic habitat, and pursuant to SPR HYD-4 no treatment would occur within 300 feet of ponds and treatments within stream WLPZs adjacent to treatment areas would be limited (e.g., no mechanical treatment, retention of at least 75 percent surface cover). This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Western Pond Turtle

Aquatic habitat potentially suitable for western pond turtle is present within ponds and streams in and adjacent to the treatment areas, and this species could use upland habitat within treatment areas in the vicinity of these features. WLPZs ranging from 50 to 150 feet adjacent to all Class I and Class II streams within the treatment areas would be implemented per SPR HYD-4, including its project-specific refinement to include the implementation of no-disturbance buffers of 300 feet around all ponds (including ponds on adjacent private property where the buffer extends into a treatment area). However, these measures may not avoid impacts on western pond turtles, if turtles are present further than 150 feet from stream habitat or 300 feet from ponds, or if manual activities implemented within the WLPZ resulted in injury or mortality of this species. The potential for treatment activities and maintenance treatments to result in adverse effects on western pond turtle was examined in the PEIR.

Western pond turtles may be present within upland habitat up to approximately 1,500 feet from water. Thus, existing WLPZs and protective buffers would not fully prevent impacts on the species. SPR BIO-10 would apply, and focused visual encounter surveys for western pond turtle would be conducted within upland habitat areas suitable for the species prior to ground-disturbing treatment activities (i.e., mechanical treatments) and prescribed burning. If western pond turtles are identified during focused surveys, Mitigation Measure BIO-2b for this species would be implemented.

Under Mitigation Measure BIO-2b, Sonoma Land Trust would require flagging areas for avoidance, relocation of individual animals by a qualified RPF or biologist with a valid CDFW scientific collecting permit, and/or other measures recommended by CDFW as necessary to avoid injury to or mortality of western pond turtles.

Habitat function for western pond turtle would be maintained because treatment activities and maintenance treatments would not occur within aquatic habitat, and pursuant to SPR HYD-4 no treatment would occur within 300 feet of ponds and treatments within stream WLPZs adjacent to treatment areas would be limited (e.g., no mechanical treatment, retention of at least 75 percent surface cover). This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Special-Status Birds

Twelve special-status bird species may occur within the treatment area: American peregrine falcon (coastal preserves only), burrowing owl, golden eagle, grasshopper sparrow, loggerhead shrike, long-eared owl, purple martin, tricolored blackbird (Russian River Watershed preserves only), Vaux's swift, white-tailed kite, yellow warbler, and yellow-breasted chat (Table 4.5-1). American peregrine falcon and golden eagle are known to nest within cliff habitat on Little Black Mountain (Edwards, pers. comm., 2021).

Treatment activities, including mechanical treatments, manual treatments, and prescribed burning conducted during the nesting bird season (February 1–August 31) could result in direct loss of active nests if trees or shrubs containing nests are removed or burned. For nests within vegetation that would not be removed, treatment activities including mechanical treatments, manual treatments, prescribed burning, and herbicide application, could result in disturbance to active nests from auditory and visual stimulus (e.g., heavy equipment, chain saws, vehicles, personnel) potentially resulting in abandonment and loss of eggs or chicks. The potential for treatment activities to result in adverse effects on special-status birds was examined in the PEIR.

Per SPR BIO-1, if it is determined that adverse effects on habitat suitable for nesting special-status birds can be clearly avoided by physically avoiding habitat suitable the species or conducting treatments outside of the season of sensitivity (i.e., nesting bird season), then no mitigation would be required. Impacts on existing American peregrine falcon and golden eagle nests would be completely avoided because the treatment area boundary in the Little Black Mountain Preserve is approximately 500 feet south of the cliff habitat on Little Black Mountain, which is a sufficient buffer to avoid disturbance to these species. Additionally, nesting habitat for American peregrine falcon (i.e., cliffs) and golden eagle (i.e., cliffs, large solitary trees) would not be targeted for treatment or removed. Adverse effects on nesting special-status birds would be clearly avoided for treatments that would occur outside of the nesting bird season (February 1–August 31).

If conducting some treatments outside of the nesting bird season is determined to be infeasible for certain treatments, then SPR BIO-10 would apply, and focused nesting bird surveys for American peregrine falcon (coastal preserves only), burrowing owl, golden eagle, grasshopper sparrow, loggerhead shrike, long-eared owl, purple martin, tricolored blackbird (Russian River Watershed preserves only), Vaux's swift, white-tailed kite, yellow warbler, and yellow-breasted chat would be conducted prior to implementation of treatment activities.

If no active bird nests are observed during focused surveys, then additional avoidance measures for these species would not be required. If active special-status bird nests are observed during focused surveys, then Mitigation Measures BIO-2a (for American peregrine falcon, golden eagle, tricolored blackbird, and white-tailed kite) and BIO-2b (for burrowing owl, grasshopper sparrow, loggerhead shrike, long-eared owl, purple martin, Vaux's swift, yellow warbler, and yellow-breasted chat) would be implemented.

Under Mitigation Measures BIO-2a and BIO-2b, a no-disturbance buffer of at least 0.5 mile would be established around active American peregrine falcon and golden eagle nests, 0.25 mile for white-tailed kite nests, and at least 100 feet around the nests of other special-status birds, and no treatment activities would occur within this buffer until the chicks have fledged as determined by a qualified biologist. Additionally, trees containing golden eagle nests would not be removed pursuant to the Bald and Golden Eagle Protection Act.

Habitat function for special-status birds would be maintained because treatment activities would not result in removal of trees (i.e., conifers, hardwoods) or snags greater than 10 inches dbh, which would be the most likely features to be used by these species due to the cover provided by larger trees and three to five snags would be retained per acre to provide wildlife habitat. Additionally, treatments within riparian habitat (which provides nesting habitat for several of the special-status bird species that may occur in the treatment areas [e.g., tricolored blackbird, yellow warbler, yellow-breasted chat]) that is included within a WLPZ would be limited pursuant to SPR HYD-4 (e.g., no mechanical treatment, retention of at least 75 percent surface cover). Pursuant to Mitigation Measure BIO-2a, this determination for American peregrine falcon, golden eagle, tricolored blackbird, and white-tailed kite must be made by Sonoma Land Trust in consultation with CDFW. Therefore, if Mitigation Measure BIO-2a is required for treatment activities, Sonoma Land Trust would contact CDFW to seek technical input on the determination that habitat function would be maintained for American peregrine falcon, golden eagle, tricolored blackbird and white-tailed kite. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Special-Status Fish and California Freshwater Shrimp

Eight special-status fish species may occur within the treatment area: Chinook salmon – California coastal ESU, Clear Lake-Russian River roach, Coho salmon – Central California coast ESU, hardhead, Pacific lamprey, riffle sculpin (coastal preserves only), Sacramento hitch (Russian River Watershed preserves only), and steelhead – Central California coast

DPS (Table 4.5-1). Additionally, one aquatic invertebrate, California freshwater shrimp, may be present within stream habitat in the treatment areas (Table 4.5-1). The potential for treatment activities and maintenance treatments to result in adverse effects on special-status fish and California freshwater shrimp was examined in the PEIR.

Per SPR BIO-1, if it is determined that adverse effects on special-status fish and California freshwater shrimp can be clearly avoided by physically avoiding habitat for these species, then mitigation would not be required. WLPZs ranging from 50 to 150 feet adjacent to all Class I and Class II streams within the treatment areas would be implemented per SPR HYD-4 and its project-specific refinement to include the implementation of no-disturbance buffers of 300 feet around all ponds (including ponds on adjacent private property where the buffer extends into a treatment area). Adverse effects on special-status fish and California freshwater shrimp would be clearly avoided through implementation of these SPRs and further mitigation would not be required.

Habitat function for special-status fish and California freshwater shrimp would be maintained because treatment activities and maintenance treatments would not occur within aquatic habitat and treatments within WLPZs adjacent to treatment areas would be limited pursuant to SPR HYD-4 (e.g., no mechanical treatment, retention of at least 75 percent surface cover, no treatment within 300 feet of ponds). This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

American Badger

Habitat potentially suitable for American badger is present within grassland and open woodlands in the treatment areas. Treatment activities, including mechanical treatments, prescribed burning, and herbicide treatments using UTVs could result in direct loss of active dens and potential loss of young. Manual treatments and some herbicide application treatments are not expected to result in adverse effects on American badger dens because these treatments would typically occur within habitats where American badger dens are unlikely to occur (e.g., forest habitat), and because personnel would conduct these activities on foot, and the likelihood of a den being inadvertently crushed or otherwise destroyed would be very low. The potential for treatment activities to result in adverse effects on American badger was examined in the PEIR.

Per SPR BIO-1, if it is determined that adverse effects on American badger can be clearly avoided by conducting treatments outside of the season of sensitivity or physically avoiding habitat for these species, then mitigation would not be required. However, because American badgers may use a den year-round, and because focused surveys for American badgers have not been conducted, implementation of SPR BIO-10 would be required prior to mechanical treatments, prescribed burning, and herbicide treatments using UTVs. Under SPR BIO-10, focused surveys would be conducted for American badger dens within habitat suitable for the species (i.e., grasslands, open woodland) by a qualified RPF or biologist. If American badger dens are not detected during focused surveys, then further mitigation for the species would not be required. If American badger dens are detected during focused surveys, Mitigation Measure BIO-2b would be implemented. Under Mitigation Measure BIO-2b, a no-disturbance buffer would be established around the den, the size of which would be determined by the qualified RPF or biologist and no treatment activities would occur within this buffer.

Habitat function for American badger would be maintained because habitat suitable for the species (i.e., grasslands, open woodlands) would be maintained and additional open woodland habitat would likely be restored through thinning and removal of ladder fuels. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Ringtail

Ringtail is primarily nocturnal, and typically occurs in riparian areas, forests (including stands of various ages), and shrub habitats. Potential denning habitat includes rock outcrops, crevices, snags, large hardwoods, large conifers, and brush. Most of these habitats would be avoided, as live trees larger than 10 inches dbh would not be removed during treatment or maintenance activities and because rocky areas would not be targeted for vegetation treatment; however, standing dead (i.e., burned) trees and downed woody debris up to 24 inches dbh would be targeted for treatment in some treatment areas and would not be avoided through implementation of other measures. The

potential for treatment activities, including maintenance treatments, to result in adverse effects on ringtail was examined in the PEIR.

Per SPR BIO-1, if it is determined that adverse effects on ringtail can be clearly avoided by conducting treatments outside of the season of sensitivity (i.e., maternity season), then mitigation would not be required. Outside of the breeding season, resting ringtails would likely flee due to the presence of equipment, vehicles, or personnel, and injury or mortality would not be expected. Manual treatments and herbicide application treatments are not expected to result in adverse effects on ringtail dens because personnel would conduct these activities on foot, and the likelihood of a den being inadvertently crushed or otherwise destroyed would be very low. Adverse effects on ringtail would be clearly avoided for mechanical treatments and prescribed burning that would occur outside of the ringtail maternity season (April 15–June 30).

If conducting some mechanical treatments or prescribed burning outside of the ringtail maternity season is determined to be infeasible for certain treatments, then SPR BIO-10 would apply, and presence of ringtail would be assumed, or focused surveys for ringtail would be conducted within the treatment areas prior to implementation of treatment activities. Surveys for ringtail will include the use of trail cameras, track plates, and other non-invasive survey methods to determine whether ringtails are present within the treatment area and would be conducted by a qualified RPF or biologist with a valid CDFW Scientific Collecting Permit. If ringtails are not detected during focused surveys, then further mitigation for the species would not be required. If ringtails are detected during focused surveys, then additional surveys would be required to determine whether an active ringtail den is present within the treatment area. If an active den is identified by a qualified RPF or biologist, Mitigation Measure BIO-2a would be implemented. Under Mitigation Measure BIO-2a, a no-disturbance buffer would be established around the den, the size of which would be determined through consultation with California Department of Fish and Wildlife. No treatment activities would occur within this buffer.

If the presence of ringtail within the treatment areas is assumed, then implementation of avoidance and minimization measures would be required pursuant to Mitigation Measure BIO-2a prior to and during implementation of mechanical treatments and prescribed burning between April 15 and June 30. Avoidance and minimization measures would include but not be limited to den surveys, daily sweeps of treatment areas, and biological monitoring.

Habitat function for ringtail would be maintained because treatment activities and maintenance treatments would not result in removal of living trees (i.e., conifers, hardwoods) greater than 10 inches dbh which would be the most likely features to be used by this species due to the cover provided by larger trees, three to five snags would be retained per acre to provide wildlife habitat, and rocky areas would not be targeted for vegetation treatment. Pursuant to Mitigation Measure BIO-2a, this determination must be made by Sonoma Land Trust in consultation with CDFW. Therefore, if Mitigation Measure BIO-2a is required for treatment activities, Sonoma Land Trust would contact CDFW to seek technical input on the determination that habitat function would be maintained for ringtail. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Sonoma Tree Vole

Habitat potentially suitable for Sonoma tree vole is present in the coastal preserves, including Douglas fir forest. Sonoma tree voles prefer old growth or mixed old growth and mature forest habitat; however, the species can occur in other types of forests. While it is possible that this species could nest in large trees (especially Douglas fir) on the project site, treatment activities would not result in removal of any living trees greater than 10 inches dbh. While standing dead (i.e., burned) trees with dbh up to 24 inches will be removed during treatments, burned trees would not provide sufficient cover and likely would not be used by Sonoma tree voles for nesting. Adverse effects on Sonoma tree voles are unlikely to occur and mitigation would not be required.

Habitat function for Sonoma tree vole would be maintained because treatment activities and maintenance treatments would not result in removal of living trees (i.e., conifers, hardwoods) greater than 10 inches dbh which would be the most likely features to be used by this species due to the cover provided by larger trees and three to five snags would be retained per acre to provide wildlife habitat. The potential for treatment activities and maintenance treatments to result in adverse effects on Sonoma tree vole was examined in the PEIR. This impact of the proposed

project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Special-Status Bats

Habitat potentially suitable for three special-status bat species—pallid bat, Townsend's big-eared bat, and western red bat—is present within forest habitat, rocky areas, and human-made structures (e.g., barns, bridges) in the treatment areas. Per SPR BIO-1, if it is determined that adverse effects on special-status bats can be clearly avoided by conducting treatments outside of the season of sensitivity (i.e., maternity season), then mitigation would not be required. Adverse effects on special-status bat maternity roosts would be clearly avoided by conducting initial and maintenance treatments outside of the bat maternity season (April 1–August 31; California Department of Transportation 2004).

Treatment activities, including mechanical treatments, manual treatments, prescribed burning, and herbicide treatments using UTVs, conducted within habitat suitable for bats during the bat maternity season (April 1–August 31) could disturb active bat roosts from auditory and visual stimuli (e.g., heavy equipment, chain saws, vehicles, personnel) or smoke (e.g., prescribed burning) potentially resulting in abandonment of the roost and loss of young. Some herbicide treatments would be limited to ground-based methods, such as using a backpack sprayer or painting herbicide onto cut stems and would be conducted by crews of one to five people; thus, these treatments would not be expected to result in substantial disturbance to special-status bat roosts. The potential for treatment activities to result in adverse effects on special-status bats was examined in the PEIR.

If conducting some mechanical or manual treatments, prescribed burning, or herbicide treatments using UTVs would occur during the bat maternity season, then SPR BIO-10 would apply, and focused surveys for these species would be conducted within suitable habitat areas prior to initiation of manual, mechanical, and prescribed burning treatments. If special-status bat roosts are identified during focused surveys, Mitigation Measure BIO-2b for special-status bats would be implemented.

Under Mitigation Measure BIO-2b, a no-disturbance buffer of 250 feet would be established around active pallid bat, Townsend's big-eared bat, or western red bat roosts and mechanical treatments, manual treatments, and herbicide treatments using UTVs would not occur within this buffer. A no-disturbance buffer of 250 feet is necessary to protect sensitive roosts; this buffer size was adjusted to be larger than the general no-disturbance buffer of 100 feet provided in Mitigation Measure BIO-2b in order to provide adequate protection such that impacts would be less than significant under CEQA. If special-status bat roosts are identified in a treatment area where prescribed burning is planned, prescribed burning activities would be implemented outside of the bat breeding season, which is April 1–August 31 (California Department of Transportation 2004).

Habitat function for special-status bats would be maintained because treatment activities and maintenance treatments would not result in removal of living trees (i.e., conifers, hardwoods) greater than 10 inches dbh which would be the most likely features to be used by this species due to the cover provided by larger trees, and three to five snags would be retained per acre to provide wildlife habitat. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Conclusion

The potential for treatment activities to result in adverse effects on special-status wildlife was examined in the PEIR. This proposed project's impact on special-status wildlife is within the scope of the PEIR, because within the boundary of the project area habitat characteristics are essentially the same within and outside the treatable landscape (e.g., no resource is affected on land outside the treatable landscape that would not also be similarly affected within the treatable landscape), and the treatment activities and intensity of disturbance as a result of implementing treatment activities are consistent with those analyzed in the PEIR. The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing environmental conditions present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the potential

impact on special-status wildlife is also the same, as described above. Biological resource SPRs that apply to project impacts under Impact BIO-2 are SPR BIO-1, SPR BIO-2, SPR BIO-9, SPR BIO-10, SPR GEO-1, and SPR HYD-4. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT BIO-3

Initial vegetation treatments and maintenance treatments could result in direct or indirect adverse effects on sensitive habitats, including designated sensitive natural communities. Potential impacts resulting from maintenance activities would be similar to those resulting from initial vegetation treatments because the same treatment activities are proposed; however, retreatment at too great a frequency could result in additional adverse effects. The potential for treatment activities, including maintenance treatments, to result in adverse effects on sensitive habitats was examined in the PEIR.

Sonoma Land Trust had vegetation mapped to the alliance level using the Manual of California Vegetation (Sawyer 2009 et.al.; Sonoma Land Trust 2021; Warner 2013a; Warner 2013b; Warner 2013c; Warner 2015). This vegetation mapping largely satisfied requirements under SPR BIO-3, which require a qualified biologist to identify potential sensitive natural communities using the most current edition of *A Manual of California Vegetation*. Based on this vegetation mapping and the reconnaissance-level survey conducted pursuant to SPR BIO-1, the following sensitive natural communities (i.e., natural communities with a rarity rank of S1, S2, or S3) are present in the treatment areas: madrone forest, California bay forest, Douglas fir–tanoak forest, California buckeye grove, tanoak forest, Oregon white oak forest, redwood forest, valley oak woodland, common manzanita chaparral, and needlegrass grassland (Table 4.5-2). In addition, several oak woodland and forest types (i.e., canyon live oak, interior live oak, coast live oak, Oregon white oak, California black oak, valley oak, blue oak), which are sensitive habitats pursuant to the Oak Woodlands Conservation Act and Public Resources Code Section 21083.4, have been mapped in treatment areas.

Table 4.5-2 Sensitive Natural Communities Documented or with Potential to Occur in the Treatment Areas

Sensitive Natural Community[1]	Rarity Rank[2]	CWHR Type	Occurrence Potential	Preserves
Madrone Forest	S3.2	Coastal Oak Woodland	Known to Occur	Coastal preserves and Russian River Watershed preserves
California Bay Forest	S3	Coastal Oak Woodland	Known to Occur	Coastal preserves
Douglas Fir–Tanoak Forest	S3	Douglas Fir	Known to Occur	Coastal preserves and Russian River Watershed preserves
California Buckeye Grove	S3	Montane Hardwood	Known to Occur	Coastal preserves
Tanoak Forest	S3.2	Montane Hardwood	Known to Occur	Coastal preserves
Oregon White Oak Forest	S3	Montane Hardwood	Known to Occur	Coastal preserves and Russian River Watershed preserves
Redwood Forest	S3.2	Redwood	Known to Occur	Coastal preserves
Valley Oak Woodland	S3	Valley Oak Woodland	Known to Occur	Coastal preserves and Russian River Watershed preserves
Common Manzanita Chaparral	S3	Mixed Chaparral	Known to Occur	Coastal preserves
Needlegrass Grassland	S3	Perennial Grassland	Known to Occur	Coastal preserves

Sensitive Natural Community[1]	Rarity Rank[2]	CWHR Type	Occurrence Potential	Preserves
Goldenaster Patch	S3	Annual Grassland	May Occur	Coastal preserves and Russian River Watershed preserves
White-tip Clover Swales	S3	Annual Grassland	May Occur	Coastal preserves and Russian River Watershed preserves
Water Foxtail Meadow	S3	Perennial Grassland	May Occur	Coastal preserves and Russian River Watershed preserves
California Brome–Blue Wildrye Prairie	S3	Perennial Grassland	May Occur	Coastal preserves and Russian River Watershed preserves
California Oat Grass Prairie	S3	Perennial Grassland	May Occur	Coastal preserves and Russian River Watershed preserves
Idaho Fescue Grassland	S3	Perennial Grassland	May Occur	Coastal preserves and Russian River Watershed preserves
Red Fescue Grassland	S3	Perennial Grassland	May Occur	Coastal preserves and Russian River Watershed preserves
Gum Plant Patch	S2	Perennial Grassland	May Occur	Coastal preserves and Russian River Watershed preserves
Small-fruited Sedge Meadow	S2	Perennial Grassland	May Occur	Coastal preserves and Russian River Watershed preserves
Ashy Ryegrass–Creeping Ryegrass Turf	S3	Perennial Grassland	May Occur	Coastal preserves and Russian River Watershed preserves

1 These are designated sensitive natural communities with a state rarity rank of S1 (critically imperiled), S2 (imperiled), or S3 (vulnerable)

2 Older ranks, which need to be updated, may still contain a decimal "threat" rank of .1, .2, or .3, where .1 indicates very threatened status, .2 indicates moderate threat, and .3 indicates few or no current known threats

Source: Sawyer et al. 2009, Compiled by Ascent Environmental in 2021

The following additional sensitive natural communities may be present in association with grasslands mapped as annual brome grassland: goldenaster patch, white-tip clover swales, water foxtail meadow, California brome–blue wildrye prairie, California oat grass prairie, Idaho fescue grassland, red fescue grassland, gum plant patch, small-fruited sedge meadow, and ashy ryegrass–creeping ryegrass turf (Table 4.5-2). As noted in the vegetation survey reports for the treatment areas, the annual brome grassland habitat in the treatment areas contain complex vegetation with high spatial, compositional, and temporal diversity; thus, this habitat was not mapped to a scale that would have identified these sensitive natural communities (Warner 2013a; Warner 2013b; Warner 2013c; Warner 2015). As a result, prior to implementation of treatment activities within habitats mapped as annual brome grassland, SPR BIO-3 would need to be implemented to identify sensitive natural communities associated with grasslands pursuant to *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities* (CDFW 2018a). Treatment activities within grassland habitats would be limited to prescribed burning (i.e., broadcast burning, pile burning) and herbicide application.

Riparian habitat is present adjacent to streams in all of the treatment areas as well as the stock pond in the Pole Mountain Preserve. Under SPR HYD-4, WLPZs ranging from 50 to 150 feet would be established adjacent to all Class I and Class II streams for manual, mechanical, herbicide, and pile burning treatments, which would limit the extent of treatment activities within riparian habitat. Additionally, SPR HYD-4 will be refined to also include the implementation of no-disturbance buffers of 300 feet around all ponds (including ponds on adjacent private property where the buffer extends into a treatment area). While these SPRs would reduce potential impacts on riparian habitat, the extent of riparian habitat within the treatment areas has not been mapped and riparian habitat may be present outside of the areas incorporated within WLPZs. As a result, prior to implementation of treatment activities, SPR BIO-3 would need to be implemented to identify and map the extent of riparian habitat within the treatment areas. As required under SPR BIO-4, treatments in riparian habitats would retain at least 75 percent of the overstory and 50 percent of the understory

canopy of native riparian vegetation and would largely be limited to removal of uncharacteristic fuel loads (e.g., dead or dying vegetation, invasive plants). Additionally, prior to any treatments in riparian habitat, Sonoma Land Trust would notify CDFW pursuant to California Fish and Game Code 1602, when required, as explained in SPR BIO-4.

As described above, chaparral habitat (i.e., chamise chaparral, common manzanita chaparral) is present in the treatment areas. As required under SPR BIO-5, treatments implemented in chaparral will be designed to avoid type conversion of chaparral vegetation and to maintain chaparral habitat function. This will include determining appropriate treatment based on current fire return interval departure and condition class of the chaparral vegetation onsite, retaining at least 35 percent relative final density of mature chaparral vegetation, and retaining a mix of middle to older aged shrubs to maintain heterogeneity. Sonoma Land Trust will demonstrate with substantial evidence that the habitat function of chaparral and coastal sage scrub would be maintained or enhanced by the treatments applied. Ecological restoration treatments will not be implemented in stands of chaparral vegetation that are within their natural fire return interval unless Sonoma Land Trust demonstrates with substantial evidence that the habitat function of the chaparral vegetation would be improved.

Sonoma Land Trust would, to the extent feasible, retain buckeye, mature madrone, true oaks, redwood, big-leaf maple, native shrubs (e.g., gooseberry and snowberry) and other desirable species (e.g., California rose, native wildflowers). Sonoma Land Trust would retain vegetation types with characteristics qualifying as sensitive natural communities to the extent possible; however, if treatment activities within identified sensitive natural communities or oak woodlands cannot be avoided, then Mitigation Measure BIO-3a would apply in these areas. Under Mitigation Measure BIO-3a, a qualified RPF or biologist would determine the natural fire regime, condition class, and fire return interval for each sensitive natural community and oak woodland type. Initial and maintenance treatment activities in sensitive natural communities and oak woodlands would be designed to restore the natural fire regime and return vegetation composition and structure to their natural condition to maintain or improve habitat function. If habitat function of sensitive natural communities or oak woodlands would not be maintained through implementation of Mitigation Measure BIO-3a, then Mitigation Measure BIO-3b would apply, and unavoidable losses of these resources would be compensated through restoration or preservation of these vegetation types within or outside of the treatment areas.

The potential for treatment activities to result in adverse effects on sensitive habitats, as described above, was examined in the PEIR. This impact on sensitive habitats is within the scope of the PEIR, because, within the boundary of the project area, habitat characteristics are essentially the same within and outside the treatable landscape (e.g., no resource is affected on land outside the treatable landscape that would not also be similarly affected within the treatable landscape), and the treatment activities and intensity of disturbance as a result of implementing treatment activities are consistent with those analyzed in the PEIR. The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing environmental conditions present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the potential impact on sensitive habitats is also the same, as described above. Biological resource SPRs that apply to project impacts under Impact BIO-3 are SPR BIO-1, SPR BIO-2, SPR BIO-3, SPR BIO-4, SPR BIO-5, SPR BIO-6, SPR BIO-9, SPR GEO-1, SPR GEO-3, SPR GEO-4, SPR GEO-5, SPR GEO-7, SPR HAZ-5, SPR HAZ-6, SPR HYD-4, and SPR HYD-5. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT BIO-4

Initial vegetation treatments and maintenance treatments could result in direct or indirect adverse effects on state or federally protected wetlands. Potential impacts resulting from maintenance activities would be similar to those resulting from initial vegetation treatments because the same treatment activities are proposed. The potential for treatment activities to result in adverse effects on state or federally protected wetlands was examined in the PEIR.

Based on review and survey of project-specific biological resources (SPR BIO-1), some portions of the treatment areas contain small segments of perennial, intermittent, and ephemeral streams that could be protected under federal and/or state government jurisdiction. Streams within the Pole Mountain and Little Black Mountain preserves are Pole

Mountain Creek, Kidd Creek, and St. Elmo Creek and smaller tributaries associated with these creeks. An approximately 0.06-acre pond is also present in the Pole Mountain Preserve and an approximately 0.85-acre portion of a larger stock pond that extends outside of the preserve is present along the southern boundary of the Live Oak Ranch Preserve. Streams within the Live Oak Ranch and Laufenburg Ranch preserves are Bidwell Creek and smaller ephemeral tributaries associated with Bidwell Creek. The Laufenburg Ranch Preserve also contains a seasonal freshwater emergent wetland. All of the preserves contain natural spring and seep habitat.

Under SPR HYD-4, WLPZs ranging from 50 to 150 feet would be established adjacent to all Class I and Class II streams within the treatment areas, and WLPZs of sufficient size to avoid degradation of downstream beneficial uses of water would be established adjacent to all Class III streams within the treatment areas for manual, mechanical, herbicide, and pile burning treatments. Additionally, SPR HYD-4 will be refined to also include the implementation of no-disturbance buffers of 300 feet around all ponds (including ponds on adjacent private property where the buffer extends into a treatment area). Establishment of WLPZs and buffers would result in avoidance of all stream and pond habitat for manual, mechanical, herbicide, and pile burning treatments.

The locations of seasonal wetlands, springs, and seeps on the project site are generally known; however, these features have not been mapped or demarcated. Mitigation Measure BIO-4 would apply, and a qualified RPF or biologist would delineate the boundaries of these features, establish an appropriate buffer (with a minimum of 25 feet) around seasonal wetlands, springs, and seeps, and mark the buffer boundary with high-visibility flagging, fencing, stakes, or clear, existing landscape demarcations (e.g., edge of a roadway).

Broadcast burning would be implemented in all treatment areas and may occur within areas that contain seasonal freshwater emergent wetlands, springs, seeps, or stream habitat. Mitigation Measure BIO-4 would apply in treatment areas that contain state or federally protected wetlands where broadcast burning would occur. Under Mitigation Measure BIO-4, the boundary of jurisdictional features would be delineated, and broadcast burning may be implemented in wetland habitats if a qualified RPF or biologist determines that the wetland habitat does not support special-status plants (i.e., through implementation of SPR BIO-7) or wildlife species (i.e., through implementation of SPR BIO-10), that wetland habitat function would be maintained, and that the broadcast burn is within the normal fire return interval for the wetland vegetation types present. Additionally, no fire ignition (and associated use of accelerants) will occur within wetland habitat or within WLPZs surrounding wetland habitats.

The potential for treatment activities to result in adverse effects on state or federally protected wetlands was examined in the PEIR. This impact on wetlands is within the scope of the PEIR, because, within the boundary of the project area, habitat characteristics are essentially the same within and outside the treatable landscape (e.g., no resource is affected on land outside the treatable landscape that would not also be similarly affected within the treatable landscape), and the treatment activities and intensity of disturbance as a result of implementing treatment activities are consistent with those analyzed in the PEIR. The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing environmental conditions present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the potential impact on wetlands is also the same, as described above. Biological resource SPRs that apply to project impacts under Impact BIO-4 are SPR BIO-1, SPR BIO-2, SPR BIO-3, SPR BIO-9, SPR GEO-1, SPR GEO-3, SPR GEO-4, SPR GEO-5, SPR GEO-6, SPR GEO-7, SPR HAZ-5, SPR HAZ-6, SPR HYD-1, SPR HYD-4, and SPR HYD-5. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT BIO-5

Initial vegetation treatments and maintenance treatments could result in direct or indirect adverse effects on wildlife movement corridors and nurseries because habitat suitable for wildlife is present in treatment areas. Potential impacts resulting from maintenance activities would be similar to those resulting from initial vegetation treatments because the same treatment activities are proposed. The potential for treatment activities to result in adverse effects on wildlife movement corridors and nurseries was examined in the PEIR.

Based on review and survey of project-specific biological resources (SPR BIO-1), the Live Oaks Ranch Preserve is entirely within the Blue Ridge-Marin Coast critical habitat linkage (Conservation Lands Network 2021). The Laufenburg Ranch Preserve is not located within but is surrounded by the Blue Ridge-Marin Coast critical habitat linkage to the west and east (Conservation Lands Network 2021). Pole Mountain and Little Black Mountain are not located within a critical habitat linkage, but the Coast Range-Marin Coast critical habitat linkage is located to the west and east of these preserves (Conservation Lands Network 2021). Portions of the treatment area not included in identified critical habitat linkages contain natural habitat and are likely used as wildlife movement corridors to some degree, especially streams and associated riparian corridors. Due to the nature of the proposed treatment activities, implementation of these treatment activities would not result in a substantial change in the existing conditions that facilitate wildlife movement through treatment areas. Ecological restoration treatments would seek to protect and restore native ecological function by thinning small diameter trees, removing excessive standing dead wood, controlling nonnative trees and shrubs, and removing encroaching conifers and California bay saplings in oak woodlands. These treatments would promote the establishment of mature trees and a healthy forest structure resulting in improved habitat for wildlife that would function better for wildlife movement posttreatment. Additionally, no known wildlife nursery sites or indications of nursery sites, such as deer fawning habitat or potential rookery trees with whitewash, were identified within any treatment areas during implementation of SPR BIO-1.

The potential for treatment activities to result in adverse effects on wildlife movement corridors and nurseries was examined in the PEIR. This impact is within the scope of the PEIR, because, within the boundary of the project area, habitat characteristics are essentially the same within and outside the treatable landscape (e.g., no resource is affected on land outside the treatable landscape that would not also be similarly affected within the treatable landscape), and the treatment activities and extent of expected disturbance as a result of implementing treatment activities are consistent with those analyzed in the PEIR. The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing environmental conditions present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the potential impact on wildlife movement corridors is also the same, as described above. Habitat function within treatment areas would be maintained because treatment activities, including maintenance treatments, would not result in removal of living trees (i.e., conifers, hardwoods) greater than 10 inches dbh and 3–5 snags would be retained per acre to provide wildlife habitat, which would promote connectivity. Additionally, WLPZs ranging from 50 to 150 feet would be implemented adjacent to all Class I and Class II streams in treatment areas, which could function as wildlife movement corridors, pursuant to SPR HYD-4. Biological resource SPRs that apply to project impacts under Impact BIO-5 are SPR BIO-1, SPR BIO-2, SPR BIO-3, and SPR HYD-4. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT BIO-6

Initial vegetation treatments and maintenance treatments could result in direct or indirect adverse effects resulting in reduction of habitat or abundance of common wildlife, including nesting birds, because habitat suitable for these species is present throughout treatment areas. Treatment activities, including mechanical treatments, manual treatments, prescribed burning, and herbicide application, conducted during the nesting bird season (February 1–August 31) could result in direct loss of active nests or disturbance to active nests from auditory and visual stimulus (e.g., heavy equipment, chain saws, vehicles, personnel) potentially resulting in abandonment and loss of eggs or chicks. The potential for treatment activities, including maintenance treatments, to result in adverse effects on these resources was examined in the PEIR.

SPR BIO-12 would apply, and for treatments implemented during the nesting bird season, a survey for common nesting birds will be conducted within the treatment area by a qualified RPF or biologist prior to treatment activities. If no active bird nests are observed during focused surveys, then additional avoidance measures would not be required. If active nests of common birds or raptors are observed during focused surveys, disturbance to the nests will be avoided by establishing an appropriate buffer around the nests, modifying treatments to avoid disturbance to the nests, or deferring treatment until the nests are no longer active as determined by a qualified RPF or biologist.

The potential for treatment activities to result in adverse effects on these resources was examined in the PEIR. The potential for adverse effects on common wildlife, including nesting birds, is within the scope of the PEIR, because, within the boundary of the project area, habitat characteristics are essentially the same within and outside the treatable landscape (e.g., no resource is affected on land outside the treatable landscape that would not also be similarly affected within the treatable landscape), and the treatment activities and extent of expected disturbance as a result of implementing treatment activities are consistent with those analyzed in the PEIR. The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing environmental conditions present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the potential impact on common wildlife, including nesting birds is also the same, as described above. Biological resource SPRs that apply to project impacts under Impact BIO-6 are SPR BIO-1, SPR BIO-2, and SPR BIO-12. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT BIO-7

The potential for treatment activities to result in conflicts with local policies or ordinances was examined in the PEIR. Applicable local ordinances relevant to biological resources are the Sonoma County Tree Protection Ordinance, the Sonoma County Heritage or Landmark Tree Ordinance, and the Napa County Water Quality and Tree Protection Ordinance (for the portion of Live Oaks Ranch Preserve in Napa County) (Sonoma County 1986; Sonoma County 1989; Napa County 2019). The Sonoma County Tree Protection Ordinance applies to development projects in the unincorporated County and requires submission of a site plan with the development permit depicting all protected trees (i.e., trees greater than 9 inches dbh) that would be removed (Sonoma County 1989). The project is not a development project and would not be required to submit a development permit. The Sonoma County Heritage and Landmark Tree Ordinance requires a tree permit for removal of a designated heritage or landmark tree (i.e., a tree or grove of trees so designated by the Sonoma County board of supervisors due to historical interest, significance, or outstanding characteristics in terms of size, age, rarity, shape, or location) in the unincorporated County (Sonoma County 1986). It is unlikely that any trees that would be removed during implementation of treatment activities would qualify as a Heritage or Landmark Tree. Further, this ordinance grants exemptions for removal of trees when such removal is authorized by CAL FIRE or where a tree is in a hazardous, dangerous, or unhealthy condition so as to endanger life, property, or other trees (Sonoma County 1989). The Napa County Water Quality and Tree Protection Ordinance requires retention of 70 percent of canopy cover for oak woodlands, riparian oak woodlands, and conifer forests (Napa County 2019). However, this ordinance specifically exempts landowners who are creating or maintaining defensible space or fire management practices that are consistent with the adopted Napa County Defensible Space Guidelines (Napa County 2019; Napa County 2021). The Defensible Space Guidelines were designed in consultation with CAL FIRE and generally discourage removing vegetation associated with wet areas or water, removing all trees and shrubs, or creating areas with bare soils (Napa County 2021). Treatment objectives would be consistent with these guidelines. Thus, there would be no conflict with local ordinances as a result of implementation of treatment activities.

The potential for the proposed treatments to conflict with local policies is within the scope of the PEIR because vegetation treatment locations, types, and activities are consistent with those analyzed in the PEIR. In addition, all projects implemented under the CalVTP that are subject to local policies or ordinances would be required to comply with them, per SPR AD-3. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR. The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing regulatory conditions present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the potential for conflicts with local policies or ordinances is also the same, as described above. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT BIO-8

This impact does not apply to the proposed project because the treatment areas are not within the plan area of any adopted habitat conservation plan or natural community conservation plan. Therefore, this impact does not apply to the proposed project. The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing regulatory conditions present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the potential for conflicts with an adopted HCP or NCCP is also the same, as described above. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

NEW BIOLOGICAL RESOURCE IMPACTS

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

4.6 GEOLOGY, SOILS, PALEONTOLOGY, AND MINERAL RESOURCES

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered in the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	Identify Impact Significance for Treatment Project	Would This Be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is This Impact within the Scope of the PEIR?
Would the project:								
Impact GEO-1: Result in Substantial Erosion or Loss of Topsoil	LTS	Impact GEO-1, pp. 3.7-26 – 3.7-29	Yes	AQ-3 AQ-4 GEO-1 through GEO-8	NA	LTS	No	Yes
Impact GEO-2: Increase Risk of Landslide	LTS	Impact GEO-2, pp. 3.7-29 – 3.7-30	Yes	AQ-3 GEO-1 GEO-3 GEO-4 GEO-7 GEO-8	NA	LTS	No	Yes

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

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

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

Discussion

The Laufenberg and Live Oak Reserves are located within approximately 2 miles of each other in the central eastern portion of Sonoma County. Soil associations in this area include alluvial associations such as the Yolo-Cortina Pleasanton association (well drained to excessively drained, on level to moderately sloping gravely loams to clay loams), and upland, mountain, and foothill associations such as the Yorkville-Suther association (moderately well drained, moderate to very steep loams and clay loams), and the Goulding-Toomes-Guenoc association (well drained, gently sloping to very steep clay loams) (USDA 1971). The Pole Mountain and Little Black Mountain Preserve are located along central western Sonoma County, approximately 3.5 miles from the coast. Soil associations in this area include Goulding-Toomes-Guenoc associations, and the Hugo-Josephine-Lughlin association (well drained, gently sloping to steep sloping gravely loams and loams on mountains) (USDA 1971). Generally, soils within the treatment areas are well drained, and include gently sloping to steeply sloping loams.

IMPACT GEO-1

Vegetation treatments would include manual and mechanical treatments, prescribed burning, and burn piles to remove biomass, which could result in varying levels of soil disturbance and have the potential to increase rates of erosion and loss of topsoil. The potential for these treatment activities to cause substantial erosion or loss of topsoil

was examined in the PEIR. Mechanical treatments using heavy machinery are the most likely to cause soil disturbance that could lead to substantial erosion or loss of topsoil, especially in areas which have previously burned in wildfires, and in areas containing steep slopes. Equipment used to create piles for burning may also increase the risk of soil disturbance. This impact is within the scope of the PEIR because the use of and type of equipment, extent of vegetation removal, and intensity of prescribed burning are consistent with those analyzed in the PEIR. The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, the soil characteristics of the project area are essentially the same within and outside the treatable landscape; therefore, the potential impact related to soil erosion is also the same, as described above. SPRs applicable to this treatment project are GEO-1 through GEO-8, AQ-3, and AQ-4. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT GEO-2

Treatment activities would include manual and mechanical vegetation removal, prescribed burning, as well as the creation of burn piles, in varied topography, which could decrease the stability of slopes and increase the risk of landslides. No areas with known landslide activity are identified within the treatment areas (USGS 2021). However, given the variable topography and prior wildfires in some of the treatment areas, risk of landslide activity remains. The potential for treatment activities to increase landslide risk was examined in the PEIR. This impact is within the scope of the PEIR because the extent of vegetation removal, intensity of prescribed burning, and characteristics of the geographical terrain are consistent with those analyzed in the PEIR. The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the range of slopes and landslide conditions present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape. Therefore, the potential impact related to landslide risk is also the same, as described above. SPRs applicable to the proposed project are GEO-1, GEO-3, GEO-4, GEO-7, GEO-8, and AQ-3. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

NEW GEOLOGY, SOILS, PALEONTOLOGY, AND MINERAL RESOURCE IMPACTS

The proposed treatments are consistent with the treatment types and activities considered in the CalVTP PEIR. The project proponent has considered the site-specific characteristics of the proposed treatment project and determined they are consistent with the applicable environmental and regulatory conditions presented in the CalVTP PEIR (refer to Section 3.7.1, "Environmental Setting," and Section 3.7.2, "Regulatory Setting," in Volume II of the Final PEIR). The project proponent has also determined that including land from outside the CalVTP treatable landscape in the proposed treatment areas constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing environmental and regulatory conditions pertinent to geology and soils that are present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the impacts of the proposed treatment project are also consistent with those covered in the PEIR. No changed circumstances are present, and the inclusion of areas outside of the CalVTP treatable landscape would not give rise to any new significant impacts. Therefore, no new impact related to geology and soils would occur.

4.7 GREENHOUSE GAS EMISSIONS

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered in the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	Identify Impact Significance for Treatment Project	Would This Be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is This Impact within the Scope of the PEIR?
Would the project:								
Impact GHG-1: Conflict with Applicable Plan, Policy, or Regulation of an Agency Adopted for the Purpose of Reducing the Emissions of GHGs	LTS	Impact GHG-1, pp. 3.8-10 – 3.8-11	Yes	None	NA	LTS	No	Yes
Impact GHG-2: Generate GHG Emissions through Treatment Activities	SU	Impact GHG-2, pp. 3.8-11 – 3.8-17	Yes	AQ-3	GHG-2	SU	No	Yes

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

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

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

Discussion

IMPACT GHG-1

Use of vehicles and mechanical equipment and prescribed burning during initial and maintenance treatments would result in greenhouse gas (GHG) emissions. Consistency of treatments under the CalVTP with applicable plans, policies, and regulations aimed at reducing GHG emissions was examined in the PEIR. Consistent with the PEIR, although GHG emissions would occur from equipment and vehicles used to implement treatments, the purpose of the proposed project is to reduce wildfire risk, which could reduce GHG emissions and increase carbon sequestration over the long term. This impact is within the scope of the PEIR because the proposed activities, as well as the associated equipment, duration of use, and resultant GHG emissions, are consistent with those analyzed in the PEIR. The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the same plans, policies, and regulations adopted to reduce GHG emissions apply in the areas outside the treatable landscape, as well as areas within the treatable landscape; therefore, the GHG impact is also the same, as described above. SPR GHG-1 is not applicable to the proposed project because this project is not a registered offset project under the Board's Assembly Bill 1504 Carbon Inventory Process. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT GHG-2

Use of vehicles and mechanical equipment and prescribed burning during initial and maintenance treatments would result in GHG emissions. The potential for treatments under the CalVTP to generate GHG emissions was examined in the PEIR. This impact is within the scope of the PEIR because the proposed activities, as well as the associated equipment and duration of use, and the intent of the treatments to reduce wildfire risk and GHG emissions related to wildfire are consistent with those analyzed in the PEIR. Mitigation Measure GHG-2 would be implemented and would reduce GHG emissions associated with the prescribed burning. However, emissions generated by the treatments would still contribute to the annual emissions generated by the CalVTP, and this impact would remain significant and unavoidable, consistent with, and for the same reasons described in, the PEIR. SPR AQ-3 is also applicable to this treatment and will contain the description of feasible GHG reduction techniques implemented per Mitigation Measure GHG-2. The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the climate conditions present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the GHG impact is also the same, as described above. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

NEW IMPACTS RELATED TO GHG EMISSIONS

The proposed treatments are consistent with the treatment types and activities considered in the CalVTP PEIR. The project proponent has considered the site-specific characteristics of the proposed treatments and determined they are consistent with the applicable regulatory and environmental conditions presented in the CalVTP PEIR (refer to Section 3.8.1, "Regulatory Setting," and Section 3.8.2, "Environmental Setting," in Volume II of the Final PEIR). The project proponent has also determined that including land from outside the CalVTP treatable landscape in the proposed treatment areas constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing environmental conditions pertinent to the climate conditions that are present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the impacts are the same and, for the reasons described above, impacts of the proposed treatment project are also consistent with those covered in the PEIR. No changed circumstances are present, and the inclusion of areas outside of the CalVTP treatable landscape would not give rise to any new significant impacts. Therefore, no new impact related to GHG emissions would occur.

4.8 ENERGY RESOURCES

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

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

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

Use of vehicles and mechanical equipment during initial treatment and treatment maintenance activities would result in the consumption of energy through the use of fossil fuels. The use of fossil fuels for equipment and vehicles was examined in the PEIR. The consumption of energy during implementation of the treatment project is within the scope of the PEIR because the types of activities, as well as the associated equipment and duration of proposed use, are consistent with those analyzed in the PEIR. The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, the existing energy consumption is essentially the same within and outside the treatable landscape; therefore, the energy impact is also the same, as described above. No SPRs are applicable to this impact. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than covered in the PEIR.

NEW ENERGY RESOURCE IMPACTS

The proposed treatments are consistent with the treatment types and activities considered in the CalVTP PEIR. The project proponent has considered the site-specific characteristics of the proposed treatment project and determined they are consistent with the applicable regulatory and environmental conditions presented in the CalVTP PEIR (refer to Section 3.9.1, "Regulatory Setting," and Section 3.9.2, "Environmental Setting," in Volume II of the Final PEIR). The project proponent has also determined that including land from outside the CalVTP treatable landscape in the proposed treatment areas constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing environmental and regulatory conditions present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the impacts of the proposed treatment project are also consistent with those considered in the PEIR. No changed circumstances are present, and the inclusion of areas outside of the CalVTP treatable landscape would not give rise to any new significant impacts. Therefore, no new impact related to energy resources would occur.

4.9 HAZARDOUS MATERIALS, PUBLIC HEALTH AND SAFETY

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	Identify Impact Significance for Treatment Project	Would This Be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is This Impact within the Scope of the PEIR?
Would the project:								
Impact HAZ-1: Create a Significant Health Hazard from the Use of Hazardous Materials	LTS	Impact HAZ-1, pp. 3.10-14 – 3.10-15	Yes	HAZ-1	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 (Little Black Mountain & Russian River Watershed Preserves)	HAZ-5 through HAZ-7	NA	LTS	No	Yes
Impact HAZ-3: Expose the Public or Environment to Significant Hazards from Disturbance to Known Hazardous Material Sites	LTSM	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.

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

Initial and maintenance treatments would include mechanical treatments, manual treatments, herbicide application, and prescribed burning. These treatment activities would require the use of fuels and related accelerants, which are hazardous materials**.** The potential for treatment activities to cause a significant health hazard from the use of hazardous materials was examined in the PEIR. This impact is within the scope of the PEIR because the types of treatments and associated equipment and types of hazardous materials that would be used are consistent with those analyzed in the PEIR. The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, the exposure potential and regulatory conditions are essentially the same within and outside the treatable landscape; therefore, the hazardous material impact is also the same, as described above. SPR HAZ-1 is applicable to this treatment. This determination is

consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT HAZ-2

Little Black Mountain Preserve and Russian River Watershed Preserves

Initial and maintenance treatments within the Little Black Mountain Preserve and the Russian River Watershed preserves would include herbicide application to target plant species using ground-based methods, such as using a UTV or backpack sprayer or painting herbicide onto cut stems. No aerial spraying of herbicides would occur. The potential for treatment activities to cause a significant health hazard from the use of herbicides was examined in the PEIR. This impact is within the scope of the PEIR because the types of herbicides (e.g., glyphosate) and application methods that would be used, which are limited to ground-based applications, are consistent with those analyzed in the PEIR. In addition, herbicides would be applied by licensed applicators in compliance with all laws, regulations, and herbicide label instructions, consistent with herbicide use described in the PEIR. The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the exposure potential is essentially the same within and outside the treatable landscape; therefore, the hazardous materials impact is also the same, as described above. SPRs HAZ-5 through HAZ-7 are applicable to this treatment. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Pole Mountain Preserve

This impact does not apply to treatments within the Pole Mountain Preserve because no herbicides would be used at this treatment location due to organic certifications for this preserve.

IMPACT HAZ-3

Initial and maintenance treatments would include soil disturbance and prescribed burning, which could expose workers, the public, or the environment to hazardous materials if a contaminated site is present within the project area. The potential for workers participating in treatment activities to encounter contamination that could expose them, the public, or the environment to hazardous materials was examined in the PEIR. This impact was identified as potentially significant in the PEIR because hazardous materials sites could be present within treatment sites throughout the large geographic extent of the treatable landscape, and the feasibility of implementing mitigation for exposure of people or the environment to hazards resulting from soil disturbance or burning in a hazardous materials site was uncertain.

As directed by Mitigation Measure HAZ-3, database searches for hazardous materials sites within the project area have been conducted. Two leaking underground storage tank sites (Storybrook Mountain Vineyard [T0605591448] and a private residence [T10000002558]) are located within 0.25 mile of the Russian River Watershed preserves; however, both sites have been remediated and closed. No hazardous materials sites were identified within 0.25 mile of the coastal preserves (DTSC 2021; CalEPA 2021; SWRCB 2021) (Attachment C). Therefore, after the implementation of Mitigation Measure HAZ-3, it was determined that no hazardous materials sites would be disturbed by treatments and this impact would be less than significant.

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the potential to encounter hazardous materials and the regulatory conditions present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the hazardous materials impact is also the same, as described above. No SPRs are applicable to this impact, and no additional mitigation is required. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

NEW HAZARDOUS MATERIALS, PUBLIC HEALTH AND SAFETY IMPACTS

The proposed treatments are consistent with the treatment types and activities considered in the CalVTP PEIR. The project proponent has considered the site-specific characteristics of the proposed treatments and determined they are consistent with the applicable environmental and regulatory conditions presented in the CalVTP PEIR (refer to Section 3.10.1, "Environmental Setting," and Section 3.10.2, "Regulatory Setting," in Volume II of the Final PEIR). The project proponent has also determined that including land from outside the CalVTP treatable landscape in the proposed treatment areas constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing environmental and regulatory conditions pertinent to hazardous materials that are present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the impacts are the same and, for the reasons described above, impacts of the proposed treatment project are also consistent with those covered in the PEIR. No changed circumstances are present, and the inclusion of areas outside of the CalVTP treatable landscape would not give rise to any new significant impacts. Therefore, no new impact related to hazardous materials, public health, or safety would occur.

4.10 HYDROLOGY AND WATER QUALITY

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered in the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	Identify Impact Significance for Treatment Project	Would This Be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is This Impact within the Scope of the PEIR?
Would the project:								
Impact HYD-1: Violate Water Quality Standards or Waste Discharge Requirements, Substantially Degrade Surface or Ground Water Quality, or Conflict with or Obstruct the Implementation of a Water Quality Control Plan Through the Implementation of Prescribed Burning	LTS	Impact HYD-1, pp. 3.11-25 – 3.11-27	Yes	HYD-1 HYD-4 BIO-4 GEO-4 GEO-6 AQ-3	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 through 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	No	--	--	--	--	--
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 (Little Black Mountain & Russian River Watershed Preserves)	HYD-1 HYD-5 BIO-4 HAZ-5 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?
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.

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

Pole Mountain Preserve, Little Black Mountain Preserve, and Laufenburg Ranch Preserve are within the Russian River Watershed. Live Oaks Ranch Preserve is divided between the Russian River Watershed and the Napa River Watershed. Hydrologic features in the project vicinity include Pole Mountain Creek, Kidd Creek, East Brach Russian Gulch, Saint Elmo's Creek, and Bidwell Creek. Slopes within Pole Mountain Preserve drain into the headwaters of Pole Mountain Creek, Kidd Creek, and the East Branch Russian Gulch. The headwaters of Pole Mountain Creek, Saint Elmo's Creek, and Kidd Creek drain through the Little Black Mountain Preserve. The headwaters of Bidwell Creek form within the Live Oaks Ranch Preserve and then flow through Laufenburg Ranch Preserve where Bidwell Creek bisects the property.

Several of the impacts below (i.e., HYD-1 through 4) evaluate compliance with water quality standards or waste discharge requirements. All include implementation of SPR HYD-1, which requires compliance with such water quality regulations. The State Water Resources Control Board is requiring all projects utilizing the CalVTP PEIR to follow the requirements of their Vegetation Treatment General Order, which would meet the requirements of SPR HYD-1. Users of the CalVTP PSA process are automatically enrolled in the General Order and are required to implement all applicable SPRs and mitigation measures from the PEIR. In addition, the General Order requires project proponents to comply with any applicable Basin Plan prohibitions.

IMPACT HYD-1

Initial and maintenance treatments would include prescribed burning. Ash and debris from treatment areas could be washed by runoff into adjacent drainages and streams. Although most treatment areas have been designed to avoid streams and watercourses, WLPZs ranging from 50 to 150 feet will be implemented for Class I and Class II streams that are within treatment areas pursuant to SPR HYD-4. The potential for prescribed burning activities to cause runoff and violate water quality regulations or degrade water quality was examined in the PEIR. This impact is within the scope of the PEIR because the use of low-intensity prescribed burns and associated impacts to water quality are consistent with those analyzed in the PEIR. The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the surface water conditions are essentially the same within and outside the treatable

landscape; therefore, the water quality impact from prescribed burning is also the same, as described above. SPRs applicable to this treatment are HYD-1, HYD-4, BIO-4, GEO-4, GEO-6, and AQ-3. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT HYD-2

Initial treatment would include mechanical and manual treatments. Although most treatment areas have been designed to avoid streams and watercourses, WLPZs ranging from 50 to 150 feet will be implemented for any watercourses that are within treatment areas pursuant to SPR HYD-4. The potential for mechanical and manual treatment activities to violate water quality regulations or degrade water quality was examined in the PEIR. This impact is within the scope of the PEIR because the use of heavy equipment and hand-held tools to remove vegetation and associated impacts to water quality are consistent with those analyzed in the PEIR. The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the surface water conditions are essentially the same within and outside the treatable landscape; therefore, the water quality impact from manual and mechanical treatments is also the same, as described above. SPRs applicable to this treatment are HYD-1, HYD-2, HYD-4 through HYD-6, GEO-1 through GEO-5, GEO-7, GEO-8, BIO-1, HAZ-1, and HAZ-5. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT HYD-3

This impact does not apply to the proposed project because prescribed herbivory is not a proposed treatment activity.

IMPACT HYD-4

Little Black Mountain Preserve and Russian River Watershed Preserves

Initial and maintenance treatments would include the use of herbicides to manage invasive plant species and resprouting native tree species within the Little Black Mountain Preserve and the Russian River Watershed preserves. Herbicide application would be limited to ground-based methods, such as a using targeted spray from a backpack or reservoir carried by a UTV, or painting herbicide onto cut stems. All herbicide application would comply with EPA and California Department of Pesticide Regulation label standards. The potential for the use of herbicides to violate water quality regulations or degrade water quality was examined in the PEIR. This impact is within the scope of the PEIR because the use of herbicides to remove vegetation and associated impacts to water quality are consistent with those analyzed in the PEIR. The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, surface water conditions are essentially the same within and outside the treatable landscape; therefore, the water quality impact from use of herbicides is also the same, as described above. SPRs applicable to this treatment are HYD-1, HYD-5, BIO-4, HAZ-5, and HAZ-7. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Pole Mountain Preserve

This impact does not apply to treatments within the Pole Mountain Preserve because no herbicides would be used at this treatment location due to organic certifications for this preserve.

IMPACT HYD-5

Initial and maintenance treatments could cause ground disturbance and erosion, which could directly or indirectly modify existing drainage patterns. The potential for treatment activities to substantially alter the existing drainage pattern of a project site was examined in the PEIR. This impact to site drainage is within the scope of the PEIR because the types of treatments and treatment intensity are consistent with those analyzed in the PEIR. The inclusion

of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, surface water conditions are essentially the same within and outside the treatable landscape; therefore, the impact related to alteration of site drainage patterns is also the same, as described above. SPRs applicable to this treatment are HYD-4, HYD-6, GEO-1, GEO-2, and GEO-5. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

NEW HYDROLOGY AND WATER QUALITY IMPACTS

The proposed treatment is consistent with the treatment types and activities considered in the CalVTP PEIR. The project proponent has considered the site-specific characteristics of the proposed treatment project and determined they are consistent with the applicable environmental and regulatory conditions presented in the CalVTP PEIR (refer to Section 3.11.1, "Environmental Setting," and Section 3.11.2, "Regulatory Setting," in Volume II of the Final PEIR). The project proponent has also determined that including land from outside the CalVTP treatable landscape in the proposed treatment areas constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing environmental and regulatory conditions pertinent to hydrology and water quality that are present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the impacts of the proposed treatment project are also consistent with those covered in the PEIR. No changed circumstances are present, and the inclusion of areas outside of the CalVTP treatable landscape would not give rise to any new significant impacts. Therefore, no new impact related to hydrology and water quality would occur.

4.11 LAND USE AND PLANNING, POPULATION AND HOUSING

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

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

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

Little Black Mountain Preserve is located within Sonoma County, is within the Resources and Rural Development (RRD) and Riparian Corridor Combining Zone (RC) zoning districts per the Sonoma County General Plan (County of Sonoma 2020). Conservation uses are allowed for these zoning districts. Pole Mountain Preserve is located south of Little Black Mountain Preserve and is within the RRD and Combining-6 (B-6) zoning districts of Sonoma County's General Plan. Laufenberg Ranch Preserve is Located within Sonoma County, within the Diverse Agriculture and B-6 zoning districts. Live Oaks Ranch Preserve is located along the border of Sonoma and Napa County. The southwestern portion of this preserve is located within Napa County. Portions within Napa County are within the DA zoning district and is within the Agricultural Watershed (AW) zoning per the County's General Plan.

IMPACT LU-1

Vegetation treatment activities would occur primarily within Sonoma County; however, treatment activities would also occur within Napa County, where a part of Live Oaks Ranch Preserve is located. Each preserve is owned and operated by Sonoma Land Trust. The potential for vegetation treatment activities to cause a significant environmental impact due to a conflict with a land use plan, policy, or regulation was examined in the PEIR. SPR AD-3 requires the Sonoma Land Trust to comply with applicable Sonoma and Napa county plans, policies, and ordinances, such as those pertaining to noise, biological resources, and water resources. This impact is within the scope of the PEIR because proposed treatment types and activities are consistent with those examined in the PEIR. The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic

extent considered in the PEIR. However, land uses in the project area are essentially the same within and outside the treatable landscape; therefore, the land use impact is also the same, as described above. No conflict would occur because the project proponent would adhere to SPR AD-3. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than covered in the PEIR.

IMPACT LU-2

The potential for initial treatments and maintenance treatments to result in substantial population growth as a result of increases in demand for employees was examined in the PEIR. Prescribed burning treatment activities would require between 10 and 50 crew members, depending on size of the burn unit. Mechanical treatment activities may be conducted by up to four crews across each of the preserves. Herbicide treatments would typically use a one- to five-person crew, and manual treatments would be implemented by crews of approximately 8-20 members. Crew sizes would be consistent with those analyzed in the PEIR. Impacts associated with short-term increases in the demand for workers during implementation of the treatment project are within the scope of the PEIR because the number of workers required for implementation of the treatments is consistent with the crew sizes analyzed in the PEIR for the types of treatments proposed. In addition, the proposed project would not require the hiring of new employees. 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 population and housing characteristics of the project area are essentially the same within and outside the treatable landscape; therefore, the population and housing impact is also the same, as described above. No SPRs apply to this impact. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than covered in the PEIR.

NEW LAND USE AND PLANNING, POPULATION AND HOUSING IMPACTS

The proposed treatments are consistent with the treatment types and activities considered in the CalVTP PEIR. The project proponent has considered the site-specific characteristics of the proposed treatment project and determined they are consistent with the applicable environmental and regulatory conditions presented in the CalVTP PEIR (refer to Section 3.3.1, "Environmental Setting," and Section 3.3.2, "Regulatory Setting," in Volume II of the Final PEIR). The project proponent has also determined that including land from outside the CalVTP treatable landscape in the proposed treatment areas constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing environmental and regulatory conditions present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the impacts of the proposed treatment project are also consistent with those covered in the PEIR. No changed circumstances are present, and the inclusion of areas outside of the CalVTP treatable landscape would not give rise to new significant impacts not addressed in the PEIR. Therefore, no new impact related to land use and planning would occur that is not covered in the PEIR.

4.12 NOISE

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

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

Initial and maintenance treatments would require heavy, noise-generating equipment. The potential for a substantial short-term increase in ambient noise levels from use of heavy equipment was examined in the PEIR. This impact is within the scope of the PEIR because the number and types of equipment proposed, and the duration of equipment use, are consistent with those analyzed in the PEIR. The proposed treatments would not require the use of helicopters, which was the loudest type of equipment evaluated in the PEIR. While there is the potential for some prescribed burning to occur during nighttime and weekend hours, all treatment activities using equipment would be limited to daytime hours Monday through Friday, which would avoid the potential to cause sleep disturbance to residents during the more noise-sensitive evening and nighttime hours. In addition, treatments would be dispersed among the four preserves so that noise increases at any one sensitive receptor would be limited. Treatments would be within the preserves, which contain very few sensitive receptors, and use of equipment would be temporary and sporadic. Although Pole Mountain Preserve is open to the public for hiking, treatment activities would not take place near the same people for an extended period of time. SPR AD-1 is applicable to this treatment. The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the exposure potential to any sensitive receptors present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the noise impact is also the same,

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

IMPACT NOI-2

Initial and maintenance treatments would involve large trucks hauling heavy equipment to the project area. These haul truck trips would be dispersed on area roadways providing access to the four preserves including SR 128, SR 1, Cazadero Highway, Pole Mountain Road, Muniz Ranch Road, and Franz Valley Road. Vehicle traffic on area highways is not expected to generate a noticeable increase in traffic-related noise. Haul truck trips on the local roadways would pass by residential receptors and the event of each truck passing by could increase the single event noise levels (SENL). The potential for a substantial short-term increase in Single-Event Noise Levels was examined in the PEIR. This impact is within the scope of the PEIR because the number and types of equipment proposed are consistent with those analyzed in the PEIR. The haul trips associated with the treatment would occur during daytime hours, which would avoid the potential to cause sleep disturbance to residents during the more noise-sensitive evening and nighttime hours. The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the exposure potential is essentially the same within and outside the treatable landscape; therefore, the noise impact is also the same, as described above. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

NEW NOISE IMPACTS

The proposed treatments are consistent with the treatment types and activities considered in the CalVTP PEIR. The project proponent has considered the site-specific characteristics of the proposed treatments and determined they are consistent with the applicable environmental and regulatory conditions presented in the CalVTP PEIR (refer to Section 3.13.1, "Environmental Setting," and Section 3.13.2, "Regulatory Setting," in Volume II of the Final PEIR). The project proponent has also determined that including land from outside the CalVTP treatable landscape in the proposed treatment areas constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing environmental and regulatory conditions pertinent to noise that are present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the impacts are the same and, for the reasons described above, impacts of the proposed treatment project are also consistent with those covered in the PEIR. No changed circumstances are present, and the inclusion of areas outside of the CalVTP treatable landscape would not give rise to any new significant impacts. Therefore, no new impact related to noise would occur.

4.13 PUBLIC SERVICES, UTILITIES AND SERVICE SYSTEMS

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

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

New Public Services, Utilities and Service System Impacts: Would the treatment result in other impacts to public services, utilities and service systems that are not evaluated in the CalVTP PEIR?	☐ 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

Initial and maintenance treatments would include prescribed burning, which may require an on-site water supply if the burn goes out of prescription. If needed, water would be supplied from water trucks. The potential increased demand for water was examined in the PEIR. This impact is within the scope of the activities and impacts addressed in the PEIR because the size of the area proposed for prescribed burn treatments, amount of water required for prescribed burning, and water source type are consistent with those analyzed in the PEIR. The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the water supplies present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the

water supply impact is also the same, as described above. No SPRs are applicable to this impact. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT UTIL-2

Initial and maintenance treatments would generate biomass as a result of vegetation removal within the treatment areas. Biomass generated by mechanical and manual treatments would be disposed of with pile burning or mulching or lopping and scattering biomass in areas where material cannot safely be burned. Invasive plant and noxious weed biomass would also be treated onsite (e.g., prescribed burning), when possible, to eliminate seed and propagules; however, invasive plants and noxious weeds will not be chipped and spread, scattered, or mulched onsite. If invasive plant biomass cannot be treated onsite, there is the potential for a small amount to be disposed of offsite at an appropriate waste collection facility. This impact was identified as potentially significant and unavoidable in the PEIR because biomass hauled off-site could exceed the capacity of existing infrastructure for handling biomass. For the proposed treatment project, little to no biomass would be hauled off-site; therefore, the amount of biomass generated is not expected to exceed the capacity of existing infrastructure. SPR UTIL-1 would be applicable to the proposed treatments if biomass is hauled off-site. Implementation of this SPR would maintain impacts at less than significant, and mitigation is not required. The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, conditions related to biomass in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, impacts related to biomass are also the same, as described above.

IMPACT UTIL-3

As discussed above, initial and maintenance treatments would generate biomass as a result of vegetation removal within the treatment areas. Biomass generated by mechanical and manual treatments would be disposed of with pile burning or mulching or lopping and scattering biomass in areas where material cannot safely be burned. Invasive plant and noxious weed biomass would also be treated onsite, when possible. If invasive plant biomass cannot be treated onsite, there is the potential for a small amount to be disposed of offsite at an appropriate waste collection facility. If offsite disposal is required, Sonoma Land Trust would comply with all federal, state, and local management and reduction goals, statutes, and regulations related to solid waste. Compliance with reduction goals, statutes, and regulations related to solid waste was examined in the PEIR. This impact is within the scope of the activities and impacts addressed in the PEIR because the type and amount of biomass that may need to be hauled off-site are consistent with those analyzed in the PEIR. The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the biomass conditions in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, impacts related to biomass are also the same, as described above. SPR UTIL-1 would be applicable to the proposed treatments if biomass is hauled off-site. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

NEW IMPACTS ON PUBLIC SERVICES, UTILITIES AND SERVICE SYSTEMS

The proposed treatments are consistent with the treatment types and activities considered in the CalVTP PEIR. The project proponent has considered the site-specific characteristics of the proposed treatments and determined they are consistent with the applicable environmental and regulatory conditions presented in the CalVTP PEIR (refer to Section 3.16.1, "Environmental Setting," and Section 3.16.2, "Regulatory Setting," in Volume II of the Final PEIR). The project proponent has also determined that including land from outside the CalVTP treatable landscape in the proposed treatment areas constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing environmental and regulatory conditions pertinent to public services and

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

4.14 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	Yes (Pole Mountain Preserve)	REC-1	NA	LTS	No	Yes

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

New Recreation Impacts: Would the treatment result in other impacts to recreation that are not evaluated in the CalVTP PEIR?	☐ 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

Little Black Mountain Preserve and Russian River Watershed Preserves

This impact does not apply to treatments within Little Black Mountain Preserve or the Russian Watershed preserves because these preserves are not open to the public and public recreation is only allowed via occasional, pre-planned guided activities led by Sonoma Land Trust. Recreational activities would not be scheduled in treatment areas concurrent with treatment activities.

Pole Mountain Preserve

Pole Mountain Preserve is open to the public for hiking. Treatment activities could result in temporary closure of or limit access to the public trail within this Preserve if treatment activities are occurring in the vicinity of the trail. Initial and maintenance treatments would not restrict access to or otherwise affect the other adjacent recreation sites or facilities. The potential for vegetation treatment and maintenance activities to disrupt recreation activities was examined in the PEIR. The potential for the proposed treatment project to impact recreation is within the scope of the PEIR because the treatment activities and intensity are consistent with those analyzed in the PEIR. The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, the availability of recreational resources within the project area is essentially the same within and outside the treatable landscape; therefore, the impact to recreation is also the same, as described above. The SPR applicable to this treatment is REC-1. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than covered in the PEIR.

NEW RECREATION IMPACTS

The proposed project is consistent with the treatment types and activities considered in the CalVTP PEIR. The project proponent has considered the site-specific characteristics of the proposed treatment project and determined they are consistent with the applicable environmental and regulatory conditions presented in the CalVTP PEIR (refer to Section 3.14.1, "Environmental Setting," and Section 3.14.2, "Regulatory Setting," in Volume II of the Final PEIR). The project proponent has also determined that including land from outside the CalVTP treatable landscape in the proposed treatment areas constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing environmental conditions pertinent to recreation that are present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the impacts of the proposed treatment project are also consistent with those covered in the PEIR. No changed circumstances are present, and the inclusion of areas outside of the CalVTP treatable landscape would not give rise to any new significant impacts. Therefore, no new impact related to recreation would occur.

4.15 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	Impact TRAN-1, pp. 3.15-9 – 3.15-10	Yes	AD-3 TRAN-1	NA	LTS	No	Yes
Impact TRAN-2: Substantially Increase Hazards due to a Design Feature or Incompatible Uses	LTS	Impact TRAN-2, pp. 3.15-10 – 3.15-11	Yes	AD-3 HYD-2 TRAN-1	NA	LTS	No	Yes
Impact TRAN-3: Result in a Net Increase in VMT for the Proposed CalVTP	SU	Impact TRAN-3, pp. 3.15-11 – 3.15-13	Yes	NA	NA (No feasible mitigation available)	SU	No	Yes

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

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

Initial and maintenance treatments would temporarily increase vehicular traffic along several roads in the project area, including SR 128, SR 1, Cazadero Highway, Pole Mountain Road, Muniz Ranch Road, and Franz Valley Road. The potential for a temporary increase in traffic to conflict with a program, plan, ordinance, or policy addressing roadway facilities or prolonged road closures was examined in the PEIR. The proposed treatments would be short term, and temporary increases in traffic related to treatments are within the scope of the PEIR because the treatment duration and limited number of vehicles (i.e., heavy equipment transport, crew vehicles for crew members) associated with the proposed treatments are consistent with those analyzed in the PEIR. In addition, the proposed treatments would not all occur concurrently, and increases in vehicle trips associated with the treatments would be dispersed on multiple roadways in two different geographic areas (i.e., coastal preserves and Russian River Watershed preserves). The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing

transportation conditions (e.g., roadways and road use) present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the transportation impact is also the same, as described above. SPRs applicable to this treatment are AD-3 and TRAN-1. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT TRAN-2

Initial and maintenance treatments would not require the construction or alteration of any roadways. However, the proposed treatments would include prescribed burning, which would produce smoke and could potentially affect visibility along nearby roadways such that a transportation hazard could occur. The potential for smoke to affect visibility along roadways during implementation of the treatment project was examined in the PEIR. This impact is within the scope of the activities and impacts addressed in the PEIR because the burn duration is consistent with that analyzed in the PEIR. The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing transportation conditions (e.g., roadways and road use) present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the transportation impact is also the same, as described above. SPRs applicable to this treatment are AD-3, HYD-2, and TRAN-1. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT TRAN-3

Initial and maintenance treatments could temporarily increase vehicle miles traveled (VMT) above baseline conditions because the treatment areas are in remote locations and would require vehicle trips to access the treatment areas. This impact was identified as potentially significant and unavoidable in the PEIR because implementation of the CalVTP would result in a net increase in VMT. However, as noted under Impact TRAN-3 in the PEIR, individual vegetation treatment projects under the CalVTP are reasonably expected to generate fewer than 110 trips per day, which would cause a less-than-significant transportation impact for specific later activities, as described in the *Technical Advisory on Evaluating Transportation Impacts*, published by the Governor's Office of Planning and Research (OPR 2018). Initial treatments are expected to require up to 50 crew members, which would not exceed 110 trips per day. However, if multiple treatments occur simultaneously at more than one preserve there is the potential for VMT attributable to the project to exceed 110 trips per day. Emission reduction techniques included in Mitigation Measure AQ-1 would be infeasible for the project proponent to implement. Sonoma Land Trust will encourage, but not require, use of these emission reduction techniques by its contractors, including by stating such in its contractor procurement process. In addition, crew sizes would be small and may not all be employed with the same company. Therefore, carpooling may not be feasible to implement for most of the workers or recommended during a pandemic. For these reasons, and as explained in the PEIR, this impact would remain significant and unavoidable.

Temporary increases in VMT are within the scope of the activities and impacts addressed in the PEIR because the number and duration of increased vehicle trips is consistent with that analyzed in the PEIR. The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing transportation conditions (e.g., roadways and road use) present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the transportation impact is also the same, as described above. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

NEW IMPACTS TO TRANSPORTATION

The proposed treatments are consistent with the treatment types and activities considered in the CalVTP PEIR. The project proponent has considered the site-specific characteristics of the proposed treatments and determined they are consistent with the applicable environmental and regulatory conditions presented in the CalVTP PEIR (refer to Section 3.15.1, "Environmental Setting," and Section 3.15.2, "Regulatory Setting," in Volume II of the Final PEIR). The project proponent has also determined that including land from outside the CalVTP treatable landscape in the proposed treatment areas constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing environmental and regulatory conditions pertinent to transportation that are present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the impacts are the same and, for the reasons described above, impacts of the proposed treatment project are also consistent with those covered in the PEIR. No changed circumstances are present, and the inclusion of areas outside of the CalVTP treatable landscape would not give rise to any new significant impacts. Therefore, no new impact related to transportation would occur.

4.16 WILDFIRE

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

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

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

Vegetation treatment activities proposed would include mechanical, manual, herbicide application, and prescribed burn treatments. Vegetation treatment involving motorized equipment could pose a risk of accidental ignition. Temporary increases in risk associated with uncontrolled fire from prescribed burnings could also occur. As discussed in Section 3.17.1, "Environmental Setting," in Volume II of the Final PEIR, under "Prescribed Burn Planning and Implementation," implementing a prescribed burn requires extensive planning, including the preparation of prescription burn plans, smoke management plans, site-specific weather forecasting, public notifications, safety considerations, and ultimately favorable weather conditions so a burn can occur on a given day. Prior to implementing a prescribed burn, fire containment lines would be established by clearing vegetation surrounding the designated burn area to help prevent the accidental escape of fire. Water containers and safety equipment would be staged on site as necessary.

The potential increase in exposure to wildfire during implementation of treatments was examined in the PEIR. Increased wildfire risk associated with the use of heavy equipment in vegetated areas and with prescribed burns is within the scope of the PEIR because the types of equipment and treatment duration and the types of prescribed burn methods proposed as part of the project are consistent with those analyzed in the PEIR. The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the wildfire risk of the project area is

essentially the same within and outside the treatable landscape; therefore, the wildfire impact is also the same, as described above. SPRs HAZ-2, HAZ-3, and HAZ-4, pertaining to preparation of burn plans in accordance with CAL FIRE requirements, equipment safety requirements, keeping fire extinguishers, and prohibiting smoking in vegetated areas, apply to the proposed treatments. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT WIL-2

Vegetation treatment types would include mechanical and manual vegetation treatment, herbicide application, and prescribed burning, which could exacerbate fire risk as described in Impact WIL-1 above. The potential for post-fire landslides and flooding was evaluated in the PEIR. The potential exposure of people or structures to post-fire landslides and flooding are within the scope of the activities and impacts covered in the PEIR because the equipment types and duration, and methods of prescribed burn implementation are consistent with those analyzed in the PEIR. The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the wildfire risk of the project area is essentially the same within and outside the treatable landscape; therefore, the wildfire impact is also the same, as described above. SPRs applicable to this impact are AQ-3 GEO-3 through GEO-5, and GEO-8. Although most mechanical treatment would occur from existing roads or skid trails or on flat to moderate slopes, SPR GEO-8 would apply if a treatment area contains steep slopes. Furthermore, because the treatments reduce wildfire risk, they would also decrease post wildfire landslide and flooding risk in areas that could otherwise burn in a high-severity wildfire without treatment. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

NEW IMPACTS ON WILDFIRE

The proposed treatments are consistent with the treatment types and activities considered in the CalVTP PEIR. The project proponent has considered the site-specific characteristics of the proposed treatment project and determined they are consistent with the applicable environmental and regulatory conditions presented in the CalVTP PEIR (refer to Section 3.17.1, "Environmental Setting," and Section 3.17.2, "Regulatory Setting," in Volume II of the Final PEIR). The project proponent has also determined that including land from outside the CalVTP treatable landscape in the proposed treatment areas constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing environmental and regulatory conditions pertinent to wildfire that are present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the impacts of the proposed treatment project are also consistent with those covered in the PEIR. No changed circumstances would give rise to new significant impacts not addressed in the PEIR. Therefore, no new impact related to wildfire would occur that is not covered in the PEIR.

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