Marin Wildfire Prevention Authority

Marin County Forest Health and Fire Resilience Public Works Plan

July 2025

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PANORAMA ENVIRONMENTAL, INC.

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1 Introduction

This Public Works Plan (PWP) has been designed in consultation with staff from the California Coastal Commission (CCC), Marin Wildfire Prevention Authority (Marin Wildfire) and its member agencies, and major land management agencies including the Department of Parks and Recreation (California State Parks). This PWP is based on the requirements of Public Resources Code (PRC) Section 30605, which enables the CCC to "promote greater efficiency for the planning of any public works or state university or college or private university development projects and as an alternative to project-by-project review." PWPs are meant to provide a single document that establishes a framework for comprehensive planning, reviewing, and permitting, allowing a suite of related activities that would otherwise trigger the need for individual Coastal Development Permits (CDPs) to instead be analyzed as an integrated and coordinated system, thus expediting the permitting process and saving money through use of a comprehensive permit vehicle. This PWP has also been developed to function as a companion to California Board of Forestry and Fire Protection's (Board of Forestry) statewide Vegetation Treatment Program (CalVTP) and its associated Programmatic Environmental Impact Report (PEIR). In addition to the CalVTP, the Coastal Vegetation Treatment Standards (Coastal VTS) were developed to provide additional guidance and clarity for projects to be implemented within the Coastal Zone and within and/or in proximity to Environmentally Sensitive Habitat Areas (ESHA) and wetlands[1]. As such, this PWP provides a planning framework to review and authorize individual vegetation management projects in Marin County over the next 10 years or until dissolution of Marin Wildfire, whichever occurs sooner, using principles, strategies, and best management practices that align wildfire risk reduction planning with the protection of coastal resources.

Marin Wildfire's Forest Health and Fire Resilience PWP focuses explicitly on developing an efficient and programmatic approach to compliance with the California management act in order to increase the pace and scale of implementation of critical projects that will improve both ecological conditions and the resilience of the Marin County landscapes to future climate change induced wildfire. Projects that fit within and are consistent with the PWP and are designed and carried out with Marin Wildfire oversight will be able to use the compliance procedures articulated in this document and will not be required to obtain individual CDPs.

This PWP is intended to serve as a compliance pathway for those forest health and fire prevention projects that otherwise would have required a CDP within much of Marin County's Local Coastal Program (LCP) area. Projects that are currently exempt from the Coastal Act will continue to be exempt. Projects on federal land or with a federal lead agency can continue to comply with the Coastal Zone Act through coordination with the CCC's Federal Consistency

[1] Refer to Section 7 of the PWP for the complete definition of ESHA.

Office in San Francisco. Chapter 6 contains additional detail regarding the process for approval of projects within and not within the scope of the PWP.

To date, one other PWP has been developed in coastal Marin. The PWP was certified on May 9, 2024, for the Tomales Bay State Park. The Tomales Bay State Park PWP only includes ecological restoration treatments, mainly to preserve and improve resilience of the Bishop pine forest, whereas this PWP includes ecosystem health and fire prevention project types and treatments focused on enhancing natural habitats around communities. This PWP will not affect exemptions, nor will it create new exemptions from the Coastal Act or Local Coastal Program. Except to the extent described in Section 6.2, this PWP will also not replace existing permit pathways (individual Coastal Development Permits or Timber Harvest Plans) for projects.

Additionally, the PWP does not preclude the coordinated development of long-term solutions at the state level that could further streamline permitting consistently across the state. This PWP is divided into the following eight sections:

- Section 1: Introduction
- Section 2: Purpose and Need
- Section 3: Program Description
- Section 4: PWP Project Standards
- Section 5: Local Planning Context
- Section 6: Administration, Approval Process, and Program Review
- Section 7: Glossary of Terms
- Section 8: References

2 Purpose and Need

2.1 Purpose

Many of the native vegetation species and communities of coastal Marin County have adapted to tolerate or, in some cases, require fire to propagate (Marin Conservation League 2021). The fire history of coastal northern California has varied over time with periods of high fire frequency during the Native American and early rancher eras, and lower fire frequency prior to Native American management and again in recent times (Forrestel et al. 2011). Average fire return intervals in Marin County were an average of 15 to 18 years for the period from 1450 to 1850 and since then have significantly increased, while the annual acres that have burned have decreased to a few hundred or less (Golden Gate National Parks Conservancy 2023).

Like many areas of the state, forest, woodland, chaparral, and grassland landscapes throughout Marin County are undergoing significant change due to climate change (particularly longer, hotter dry seasons and more extreme precipitation during the rainy seasons), the spread of invasive species, and the immeasurable toll of sudden oak death and other forest pathogens on regional ecosystems and overall forest health. Altered fire regimes, climatic patterns, and increased fuel loads are driving larger and more catastrophic wildfire. The result has been damaging changes to ecosystems that require environmentally sensitive, landscape-level treatments to help reduce the impact of changing climate, increased wildfire risks, and altered ecological conditions impacting Marin County.

In the Marin County Coastal Zone, the Mount Vision Fire burned over 12,000 acres in the Point Reyes National Seashore in 1995. The Mount Vision Fire is one of the county's most destructive wildfires that destroyed 45 structures in Inverness Park. The devastation resulting from the Mount Vision Fire serves as a reminder of the threat of wildland fire in the Coastal Zone. The 2017 and 2018 wildfires in Sonoma and Butte Counties left nearby communities, including those in Marin County, frightened and concerned about wildfire preparedness (Marin County Civil Grand Jury 2019; Marin County Fire Department 2018). The lessons learned from the 2017 and 2018 fires spurred the development of Marin Wildfire.

The 2020 wildfire season arrived shortly after the 2018 wildfire season, which at the time was the largest and most destructive on record. The mass destruction in the 2018 wildfire season ushered in a series of Executive Orders, Legislation, and reports focused on identifying (a) the factors driving the level of catastrophic fire affecting the state, (b) the barriers to implementing fuel load reduction and forest resilience work at an appropriate pace and scale, and (c) the key tools and mechanisms necessary to turn the tide on this crisis and set the state on a trajectory

that reduces the risk, severity, and impact of catastrophic wildfires. The 2020 California wildfire season was a record-setting year of wildfires that burned across the state of California.

> "As of the end of the year, nearly 10,000 fires had burned over 4.2 million acres, more than 4% of the state's roughly 100 million acres of land, making 2020 the largest wildfire season recorded in California's modern history. California's August Complex fire has been described as the first "gigafire" as the area burned exceeded 1 million acres. The fire crossed seven counties and has been described as being larger than the state of Rhode Island. (CAL FIRE 2023)."

The California Forest Management Task Force's January 2021 *Wildfire and Forest Resilience Action Plan* is a clear call for increasing the pace and scale of fuel reduction and forest health actions, and the Plan places the essential work described in this PWP within the critical context of state, regional, and local fire resilience efforts.

In addition to the direct human and ecological toll of these catastrophic wildfires is the global toll of greenhouse gas emissions. The California Air Resources Board, in their 2023 report titled, "Wildfire Emissions Estimates for 2022", estimates that California's 2022 wildfire season resulted in the release of approximately 8.9 million metric tons of carbon dioxide into the atmosphere (CARB 2023), which exacerbates climate change and the climatic conditions that can result in more frequent and severe wildfires.

Local agencies of Marin County are joining efforts to design, permit, and implement critical, high-priority vegetation treatment activities that will reduce future risk of catastrophic, severe intensity fire and improve climate and fire resiliency for native ecosystems. Marin Wildfire, in partnership with Marin County, member fire agencies, public and private landowners, technical advisors, the CCC, and other partners are leading a regional prioritization effort to identify, design, permit and implement multiple mission critical forest health and fuel load reduction projects within the Coastal Zone over the initial 10-year timeframe of this PWP or the dissolution of Marin Wildfire[2], whichever occurs sooner. Marin Wildfire member agencies consist of the following:

- Bolinas Fire District
- City of Larkspur
- City of Mill Valley
- City of San Rafael
- County of Marin Fire
- Inverness Fire District
- Kentfield Fire District
- Marinwood Community Services District
- Muir Beach Volunteer Fire Department/ Muir Beach Community Services District
- Novato Fire District
- Sleepy Hollow Fire District
- Southern Marin Fire District
- Stinson Beach Fire Protection District
- Town of Corte Madera
- Town of Fairfax
- Town of Ross
- Town of San Anselmo

[2] Measure C approved a tax to all parcels of real property in Marin County starting in 2020 for a period of 10 years. Measure C may be renewed or dissolved following the initial 10-year period.

This effort will use CAL FIRE Fire Hazard Severity Zone (FHSZ) maps, high-resolution vegetation mapping of Marin County, CAL FIRE fire susceptibility maps, modeling conducted for the purpose of evaluating evacuation route vulnerability in Marin County, and input from public and private sector experts in ecosystem science and wildfire science to create an on-going docket of high priority projects for implementation. Marin Wildfire currently has several grants from CAL FIRE for projects in other parts of Marin County and is pursuing funding from others where funds can be applied to planning and implementation of forest health and fire prevention projects within the Coastal Zone. Marin Wildfire intends to seek additional public and private grant funding over the next decade for design, permitting, and implementation of these priority projects due to the high fire risk within the region and the history of wildfires in the Coastal Zone.

This PWP provides a planning framework to review and authorize individual vegetation management projects in Marin County's Coastal Zone over the next 10 years or until dissolution of Marin Wildfire, whichever occurs sooner, using principles, strategies, and best management practices that align fire risk reduction planning with the protection of coastal resources. Over the authorized period of the PWP, Marin Wildfire and its partners plan to conduct high priority forest health and fire prevention projects with voluntary collaborating landowners and land management agencies within the PWP Program Area in moderate to very high wildfire hazard areas of the Coastal Zone of Marin County. However, activities will not occur across the entirety of the PWP Program Area.

2.2 Need

The coast is particularly vulnerable to catastrophic wildfires due to historic development patterns in Wildland Urban Interface (WUI) areas, departure from natural fire return intervals, long response times for first responders, strong winds, and resource management patterns. According to the 2020 Community Wildfire Prevention Plan, "[r]esponse times in these [unincorporated rural] communities present significant challenges to firefighting as emergency fire access and evacuation egress is limited by narrow, winding roads lined with dense vegetation." High priority forest health and fire prevention projects must be carried out to promote fire resiliency and allow for the opportunity to reestablish the fire regime in these coastal areas. Efficient implementation requires programmatic streamlining of California Environmental Quality Act (CEQA) compliance and Coastal Act authorizations. The California Board of Forestry has created a tool to address CEQA compliance for large and complex fuel management and forest health projects through adoption of the CalVTP PEIR in January of 2020 (Board of Forestry and Fire Protection 2019). This PWP will be a programmatic companion to the CalVTP to enable streamlined compliance with the California Coastal Act.

To reduce risk of catastrophic wildfire to communities and ecosystems, and improve ecological conditions and trajectories for our forests, woodlands, and grasslands, this PWP provides a programmatic authorization tool that utilizes the CalVTP along with targeted strategies for projects within the Coastal Zone (as directly incorporated into this PWP and articulated in the

Coastal VTS for Marin Wildfire or grant-funded Marin County projects) as the critical framework for project analysis. This PWP enables Marin Wildfire and project partners to design and implement multiple critical forest health, ecosystem restoration, and fire prevention projects throughout the PWP Program Area for up to a 10-year initial period. This PWP also creates a clear and agreed upon process for approval of individual projects submitted under the PWP that includes:

- Early consultation among applicable parties including Coastal Commission staff, Marin Wildfire staff, registered foresters or qualified professionals, fire agencies, local landowners and land managers, and tribal entities;
- Inclusion of the Coastal VTS developed by Coastal Commission and Marin Wildfire staff and technical advisors, into the CalVTP Project Specific Analyses (PSAs);
- Timelines for review and approval of PSAs under the PWP process, including through the preparation of Notices of Impending Developments (NOIDs);
- A process for projects that are of the same type and meet the same goals and standards as articulated in the CalVTP and Coastal VTS, but do not fit under the CalVTP due to either their location being solely outside the treatable landscape (for example, defensible space work conducted by private property owners on private property) or their scale being too small to warrant use of the extensive CalVTP PEIR process; and
- A process for monitoring, enforcement, and programmatic review.

This effort leverages significant collaboration between Coastal Commission staff and Marin Wildfire over the past many months to develop a set of agreed upon vegetation treatment standards that are referred to as the Coastal VTS (Exhibit A). The Coastal VTS, coupled with the CalVTP PEIR, provides clear standards for forest health and fire prevention projects within the Coastal Zone covered by this PWP. In developing this PWP, Marin Wildfire worked with Coastal Commission and Marin County staff on an iterative and focused review of the Marin County Land Use Plan (LUP) and Implementation Plan (IP) to ensure that policies specific to local sensitive resources were adequately addressed.

3 Program Description

3.1 Overarching Goal of Forest Health and Fire Resilience Program

This PWP and the projects that will be approved under it directly support the intent of the Marin Wildfire's Strategic Plan goals, California's climate goals, the goals of the 2021 California Wildfire and Forest Resilience Action Plan, and the goals of the CCC and the Marin County LCP for the protection of ESHA and wetlands (MWPA 2023). Approved projects are likely to be implemented within or adjacent to ESHA and wetlands and will be designed to:

- Proactively restore forest health, improve ecosystem resiliency, and conserve woodlands, shrublands, and grasslands by conducting ecologically-minded forest health treatments and promoting native habitat.
- Protect water supply sources and water quality by strategically implementing ecological restoration projects across priority watersheds.
- Encourage the long-term storage of carbon in forest and woodland trees and soils through the reduction of dense small trees and understory thus promoting healthier stands of mature trees.
- Minimize the loss of forest carbon from large, intense wildfires, through reduction of ladder fuels and brush resulting from decades of fire suppression.
- Promote public safety, health, and welfare and protect public and private property through the implementation of ecologically restorative fuel reduction treatments in the wildland urban interface.

3.2 Forest Health and Fire Prevention Project Design Approach

3.2.1 Overview

Vegetation communities and their associated faunal assemblages have evolved with specific disturbance regimes. These regimes result in a mosaic of habitats, and along with energy inputs and stability over time, are important drivers of diversity. In Mediterranean climates, such as those found in much of California, fire is the most important, large-scale natural disturbance regime driving the distribution and composition of vegetative communities.

An expanding population, increased development into the wildland-urban interface, and the cumulative impacts of historic fire suppression policy, which concentrates the state's resources on fire reduction, has resulted in significantly altered vegetation communities and increased fire risk to native habitats, lives, and property. These facts have been widely recognized, and significant resources are now being directed towards fuels treatments and forest management.

While these fuel treatments are largely motivated by an increase in catastrophic wildfire, they present an opportunity to provide ecological benefits on the lands where they are implemented and to the broader landscape they are designed to protect.

When developing vegetation management projects, the terms forest health, ecosystem restoration, and fuel reduction are often used, which can either refer to markedly different treatments or end states, or ideally, to very similar ones. In the broadest sense, a healthy forest or ecosystem is one that possesses the ability to naturally sustain the unique species composition and processes that exist within it. This encompasses a system's biodiversity, including the plant, animal, and fungal assemblages that occur there, as well as the ecosystem processes and services that the forest provides, such as carbon sequestration, erosion control, and nutrient cycling. Managing for ecosystem restoration or forest health means managing to sustain and support these assemblages and processes.

Fuel reduction, while often supporting forest or other ecosystem health, is focused on the type, arrangement, and quantity of flammable materials found in the landscape. By modifying any of these attributes, fuel reduction projects seek to alter fire behavior, typically reducing intensity, rate of spread, or flame length, to assist in control of wildfires or prescribed fires. The ultimate goal is to design and implement fuel reduction projects that help protect life and property from wildfire, while simultaneously furthering forest health ecosystem benefit goals.

Fuel reduction projects that are designed based on the latest science to improve resiliency, emulate the effects of and allow for the opportunity to reestablish historic fire regimes, create a system that is equipped to respond to natural disturbance events in the future, or provide strategic safety measures for fire personnel and the general public, while minimizing adverse impacts to the natural environment. With vegetation serving as the primary source of fuel in wildland fires, manipulation of vegetation to create fire-resilient, ecologically-resilient, and healthy ecosystems is paramount to ensuring the safety of human life and property as well.

As such, while forest health projects are explicitly designed to directly improve both ecosystem health and the provisioning of other essential ecosystem services, fuel reduction projects should, where practicable, also be designed to directly improve ecosystem conditions (e.g., removal of exotic invasive plant species, management that mimics natural disturbance regime). Studies have shown that fuel reduction activities can have beneficial effects on understory vegetation, species richness, invasive species reduction, and native plant communities (Dodson et al. 2008). Vegetation treatments can be beneficial for fuel reduction as well as facilitating stand structure resilience to wildfires (Stephens et al. 2012b). Understory species diversity and richness can increase following prescribed burn and vegetation thinning treatments (Dodson et al. 2008; Odland et al. 2021). Fuel reduction treatments that open the forest canopy to provide increased light to the understory can increase understory production and diversity similar to the effects of low- to moderate-intensity fires (Bartuszevige and Kennedy 2009). Fuel reduction activities can be implemented to facilitate native plant establishment but can also increase the cover of non-native invasive species if not managed carefully. Fuel reduction projects that cannot be designed to directly improve or restore ecosystems or ecosystem processes are

expected to provide indirect ecosystem benefits by reducing the severity of future wildfires on ecosystems and the ability of those ecosystems to recover more quickly.

If appropriately designed and implemented, forest health and fuel reduction projects should achieve as many of the following goals as feasible:

- Promote an appropriate mosaic of native vegetation types that support diverse native floral, faunal, and fungal assemblages and are resilient to climate change;
- Improve habitat for rare, threatened, and endangered plant and animal species and communities where they are present;
- Increase the ability to manage wildfire and implement prescribed fire;
- Reduce impacts to natural and cultural resources from fire suppression activities;
- Maintain important cultural landscapes;
- Significantly reduce loss of life and property from catastrophic wildfire; and,
- Educate the public about the role of fire in California's landscapes and their role in living with it.

These goals acknowledge that complete reestablishment of fire regimes that existed during the evolutionary history of the plants and animals found within the Coastal Zone of Marin County cannot be implemented under current conditions due, in a large part, to higher density tree and shrub communities than pre-fire suppression conditions as a result of altered disturbance patterns and successional processes, and buildup of dead and downed vegetation. Additionally, communities are interspersed within and interfacing with the wildlands (Fertel et al. 2023). It is also understood that even if historic fire regimes were reestablished, some of these natural communities have been so altered that the effects of these regimes would not result in a restoration to a pre-fire suppression state.

Given these constraints, where possible, evolutionarily appropriate fire regimes or surrogates (e.g., mechanical, manual, prescribed burning) for those regimes should be simultaneously enacted or maintained. The following literature provides peer-reviewed support for the design approach described in this PWP: (Keeley 2002), (Stephens et al. 2012b), and (Vaillant et al. 2009). Historically, Native Americans have used fire as a land management tool in California's coastal ranges (Keeley 2002). Burning was used to promote the establishment of particularly important shrub species, increase habitat for animal resource exploitation, expand water resources, reduce fire and wildlife hazards, and facilitate travel through dense chaparral (Keeley 2002). Keeley (2002) hypothesized that Native Americans burning in coastal California subsidized lightning ignitions such that landscape mosaics of grassland and open shrubland were altered. Studies have shown that both prescribed fire and mechanical treatments are successful in reducing fire behavior (i.e., fire type, flame length, fireline intensity, and rate of spread) in California (Vaillant et al. 2009). Combining mechanical methods and prescribed fire can reduce the potential for crown fire under extreme fire conditions (Vaillant et al. 2009). Prescribed fire and mechanical thinning alters stand structure and fuel beds such that treatment areas are more resilient with respect to wildfires (Stephens et al. 2012a). As discussed above, fuel reduction treatments can be used to mimic landscape heterogeneity and historic fire regimes (Stephens et al. 2012a).

As noted in the *Marin Regional Forest Health Strategy* published in 2023 by One Tam and partners, the Marin Forest Health Strategy is different from wildfire risk reduction work but there are many ways that risk reduction work can increase or protect forest resilience. The document further notes that although forest management may not be able to reduce the total area burned by wildfires, strategic vegetation management can help decrease fire intensity and severity at the local scale in key areas, and improve forest resilience to fire, insects, and drought (Golden Gate National Parks Conservancy 2023). One Tam's report states that "Thinning can have multiple ecological benefits that emulate the effects of a low to moderate intensity wildfire, such as reducing stand density, decreasing competition for light and water resources, and increasing vigor and resilience for remaining trees (Golden Gate National Parks Conservancy 2023)." The report specifically calls out thinning as a benefit for the County's Bishop Pine forests while acknowledging that thinning does not have all the same benefits as fire, because it does not trigger the germination of many fire-adapted species. Thinning can be used to manage pest and pathogen-impacted vegetation, control Douglas-fir encroachment, and can act as a fire surrogate by removing small diameter trees and accelerating stands towards old-growth conditions. Fuel treatment activities can also reduce the risk of type conversion from higher carbon dense forests to lower carbon density vegetation types such as grassland or shrubland, a conversion that can occur after a high severity wildland fire (Hurteau and Brooks 2011). Furthermore, thinning can support the growth of a diverse understory and shrub layer (Golden Gate National Parks Conservancy 2023). Vegetation thinning treatment activities are warranted as forest density has been documented as substantially increased since wildfires have been suppressed for over the last century, in a large part due to conversion of woodlands and shrub patches in coastal California (Fertel et al. 2023). Accordingly, the higher density vegetation and likely increased level of accumulated dead and downed vegetation is not reflective of the natural vegetation communities of coastal Marin prior to fire suppression. This is further reflected in the One Tam report's description of thinning for forest health which is similar to the treatment methods allowable under this PWP: "Treatment prescriptions that involve a thinning component can and should be site and forest type specific, however they generally include elements such as removal of smaller-diameter trees growing in dense stands, management of pathogen-impacted vegetation, and/or reduction of fuel loads to increase wildfire resilience or facilitate beneficial fire use (Golden Gate National Parks Conservancy 2023)."

To accomplish this vision of ecological restoration and resilience, improved forest health, and reduced risk and severity of wildfire, this PWP will guide development, approval, and implementation of high priority forest health and fire prevention projects within the PWP Program Area of Marin County's Coastal Zone over the next 10 years or until dissolution of Marin Wildfire, whichever occurs sooner. Brief descriptions are provided below of the typical purpose and locations of forest health projects and fire prevention projects. As discussed throughout this PWP, a project may be designed to achieve either fire prevention or forest health outcomes or, more commonly, to achieve both outcomes.

3.2.2 Forest Health Project Design

Forest health projects involve the reestablishment of the overall condition, structure, and ecological processes of the landscape to that which would be expected had fire not been excluded over time. Treatments aim to restore the natural fire regime of a landscape or mimic pre-fire exclusion conditions (prior to European settlement), and include ecological restoration via invasive species management of vegetation succession with the goal of improving ecological diversity (e.g. removing Douglas fir trees encroaching into native grasslands), and other habitat enhancements (Golden Gate National Parks Conservancy 2023).

3.2.3 Fire Prevention Project Design

Fire prevention projects involve the strategic removal of fuels to reduce the risk, intensity, severity, and spread of wildfires. Wildfire prevention includes areas within the defensible space clearance area around homes and structures identified in PRC Sections 4290 and 4291. Beyond structure defensible space clearance, fire prevention primarily focuses on removal of invasive and non-native, fire hazardous vegetation, removal of dead and dying vegetation, and limbing up of native trees to mimic conditions that might have existed if wildfires were allowed to occur. Treatments may also include fuel breaks, understory thinning, and hazardous fuels reduction.

3.2.4 Project Location and Prioritization Considerations

The PWP Program Area depicts the eligible area where activities under the PWP could occur. However, activities will not occur across the entirety of this region. In addition, Marin Wildfire's Board members and staff are committed to equitable and just treatment of all people, and are compelled to protect/consider the welfare of the entire community. Marin Wildfire acknowledges that People of Color have experienced bias and institutional racism, including discriminatory land use policies, desecration of sacred lands and cultural resources, and concentration of environmental pollution, which has resulted in inequitable distribution of environmental benefits and burdens that still disproportionately burden these communities today. To address this, one goal of the PWP is to ensure selection and prioritization of projects that benefit California Native American Tribes and local communities, including through early and meaningful coordination, planning, design, and implementation of forest health and fire prevention projects authorized under the PWP.

3.3 Program Area

The Marin Wildfire's Forest Health and Fire Resilience PWP covers the County's LCP jurisdiction area, the Mount Tamalpais State Park, and a small portion of Tomales Bay State Park, but excluding any areas of CCC retained jurisdiction. The PWP Program Area encompasses approximately 39,300 acres where potential future project activities could take place.

Figure 3-1 and Figure 3-2 show the geographic context within which the PWP fits, as well as the relationship between the PWP Program Area and the Marin County LCP. Figure 3-3 and Figure

3-4 provide context for the land management in the Coastal Zone and within the PWP Program Area. Areas in central Marin County within the Coastal Zone but excluded from the PWP Program Area are federal lands. These figures also show Marin Wildfire member agency jurisdictions.

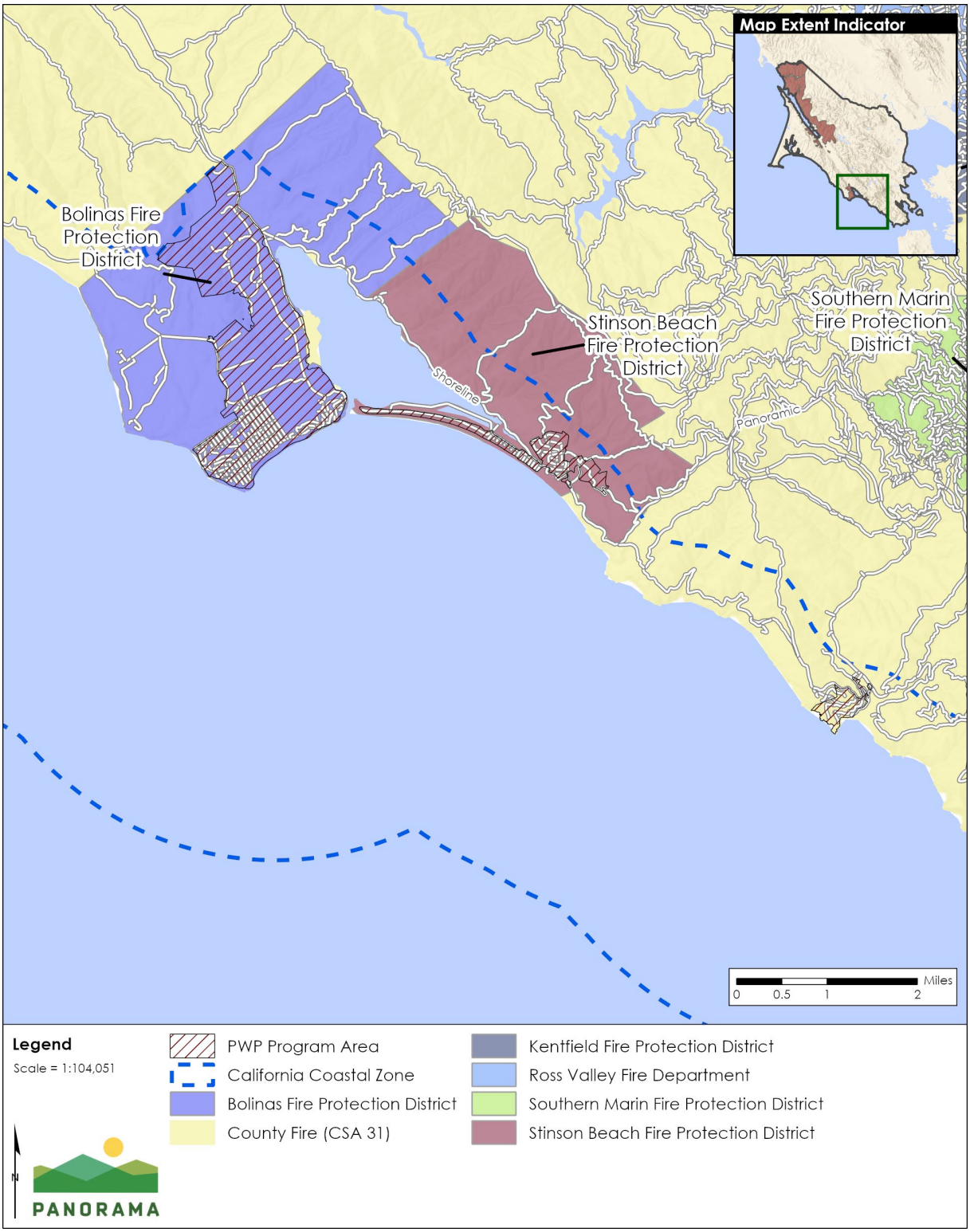
Figure 3-5 and Figure 3-6 display the PWP Program Area overlayed on the adopted CAL FIRE's Fire Hazard Severity Zone Maps to provide context for future planning efforts within the PWP Program Area. The variable fire and fuels difficulty is shown in Figure 3-7 and Figure 3-8, based on a modeling effort led by Marin Wildfire. The variable fire and fuels difficulty scores depicted in the figures represent the likelihood of a fire igniting and moving through a relatively higher- or lower-risk area. The variable fire and fuels risk considers several factors including rate of spread, flame length, near-road ignitions, and key infrastructure (Sonoma Technology, University of California, Berkeley, Fehr & Peers, Reax Engineering, Spatial Informatics Group 2023).

Figure 3-9 and Figure 3-10 shows the CalVTP treatable landscapes in relation to the PWP Program Area. Projects under the PWP may be proposed anywhere within the PWP Program Area. However, the entire Program Area would not necessarily be included in future project proposals for fuel reduction or forest health treatments. California State Parks is a major land manager partner for the PWP but will not fund, implement, or maintain any projects under this PWP. Any projects proposed by Marin Wildfire and member agencies under this PWP that overlap with State Park lands would require coordination with State Parks during planning, implementation, and maintenance. While the PWP has been developed as a companion to the CalVTP, it is expected that some high priority projects outside of the modeled treatable landscape will be developed and authorized through the PWP, as explained in more detail below. Figure 3-11 and Figure 3-12 provide additional context by illustrating the LCP land use designations and Figure 3-13 and Figure 3-14 depict the zoning designations in the PWP Program Area, which are described in Table 3-1 and Table 3-2, respectively. Exhibit D shows the fine-scale vegetation types within the PWP Program Area.

Figure 3-1 PWP Program Area (1 of 2)

Source: (Marin County 2023b; California Coastal Commission 2019; Marin County 2023a; 2003)

Figure 3-2 PWP Program Area (2 of 2)

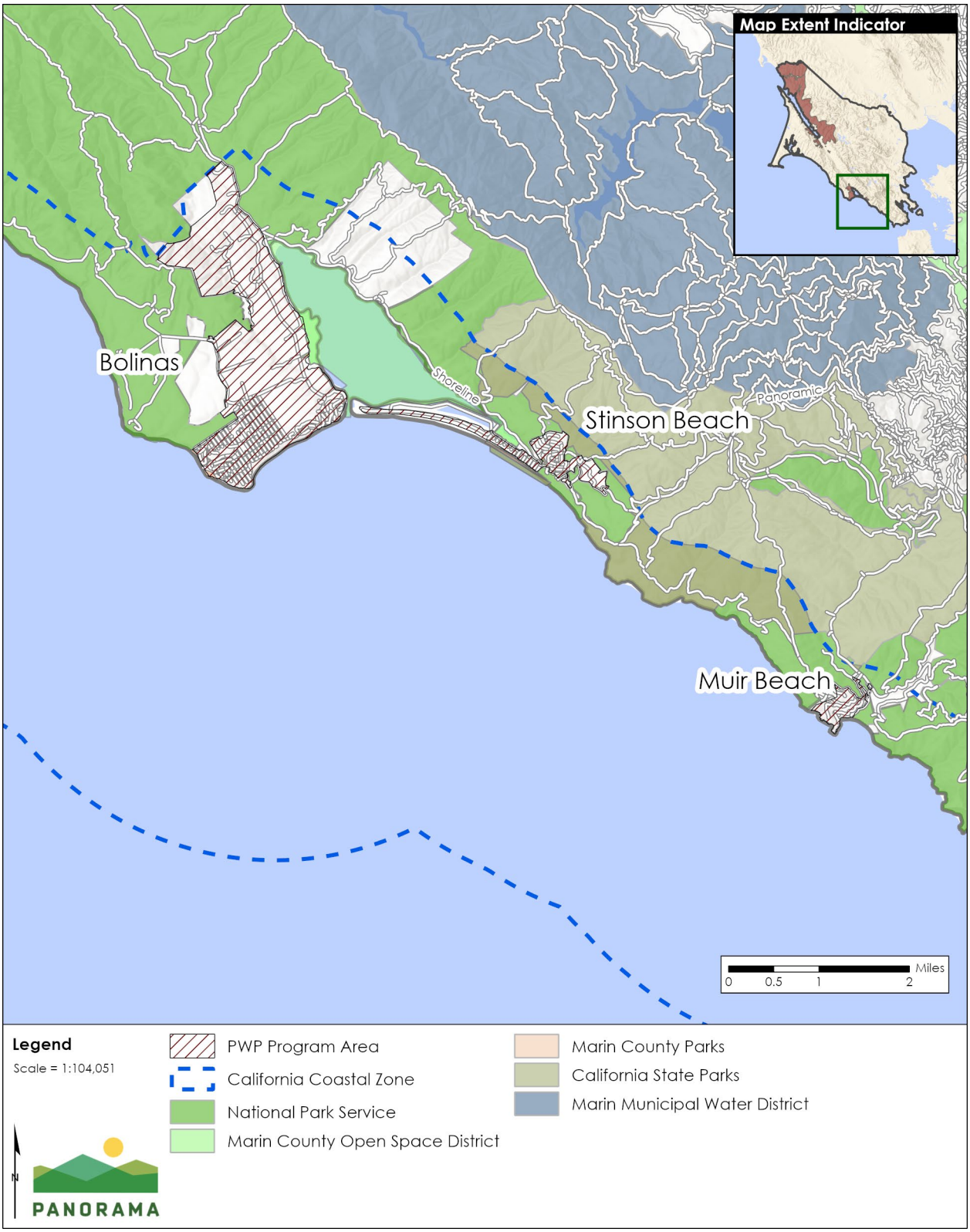


Source: (Marin County 2023b; California Coastal Commission 2019; Marin County 2023a; 2003)

Figure 3-3 Land Management (1 of 2)

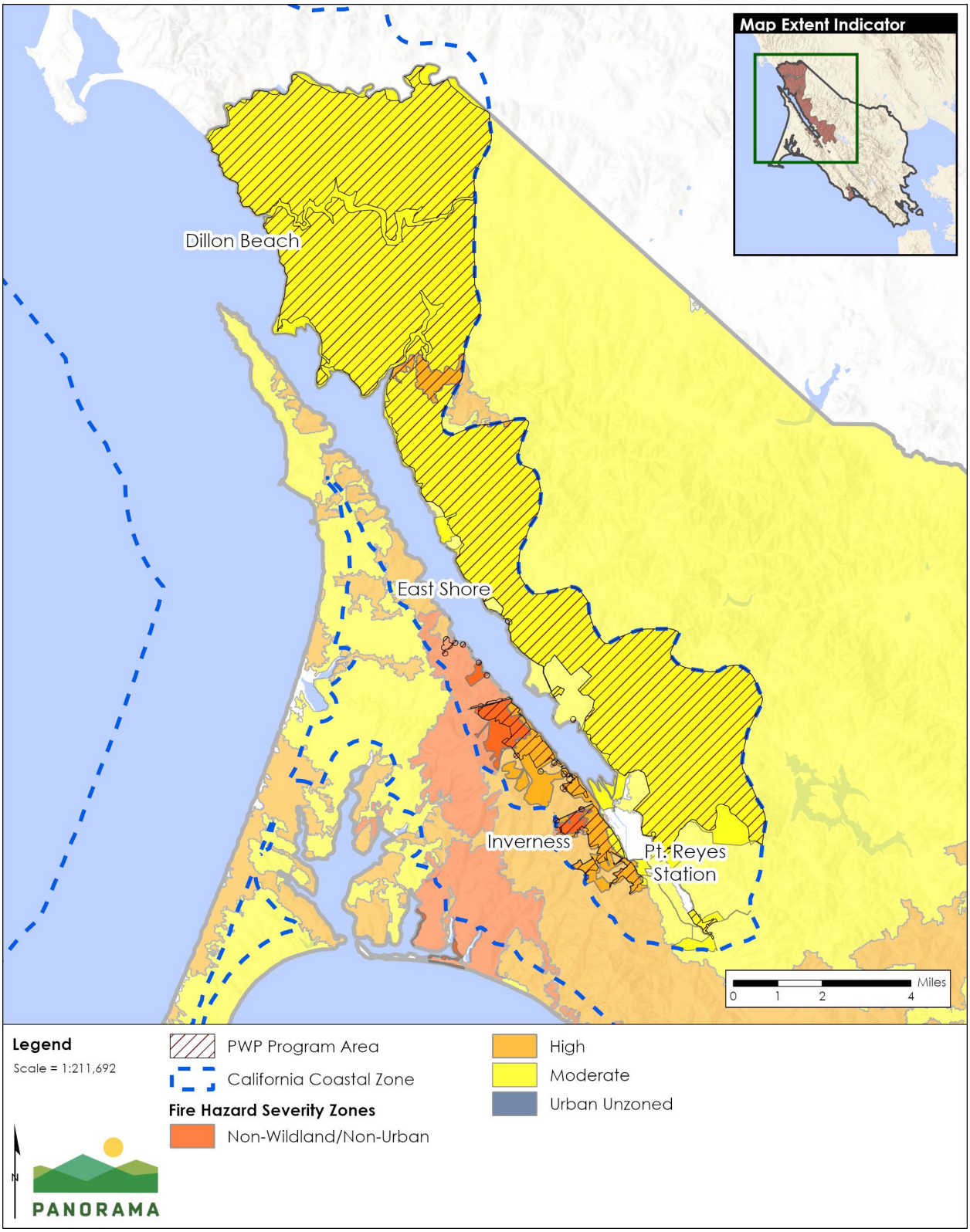
Source: (Marin County 2023b; 2003; California Coastal Commission 2019)

Figure 3-4 Land Management (2 of 2)



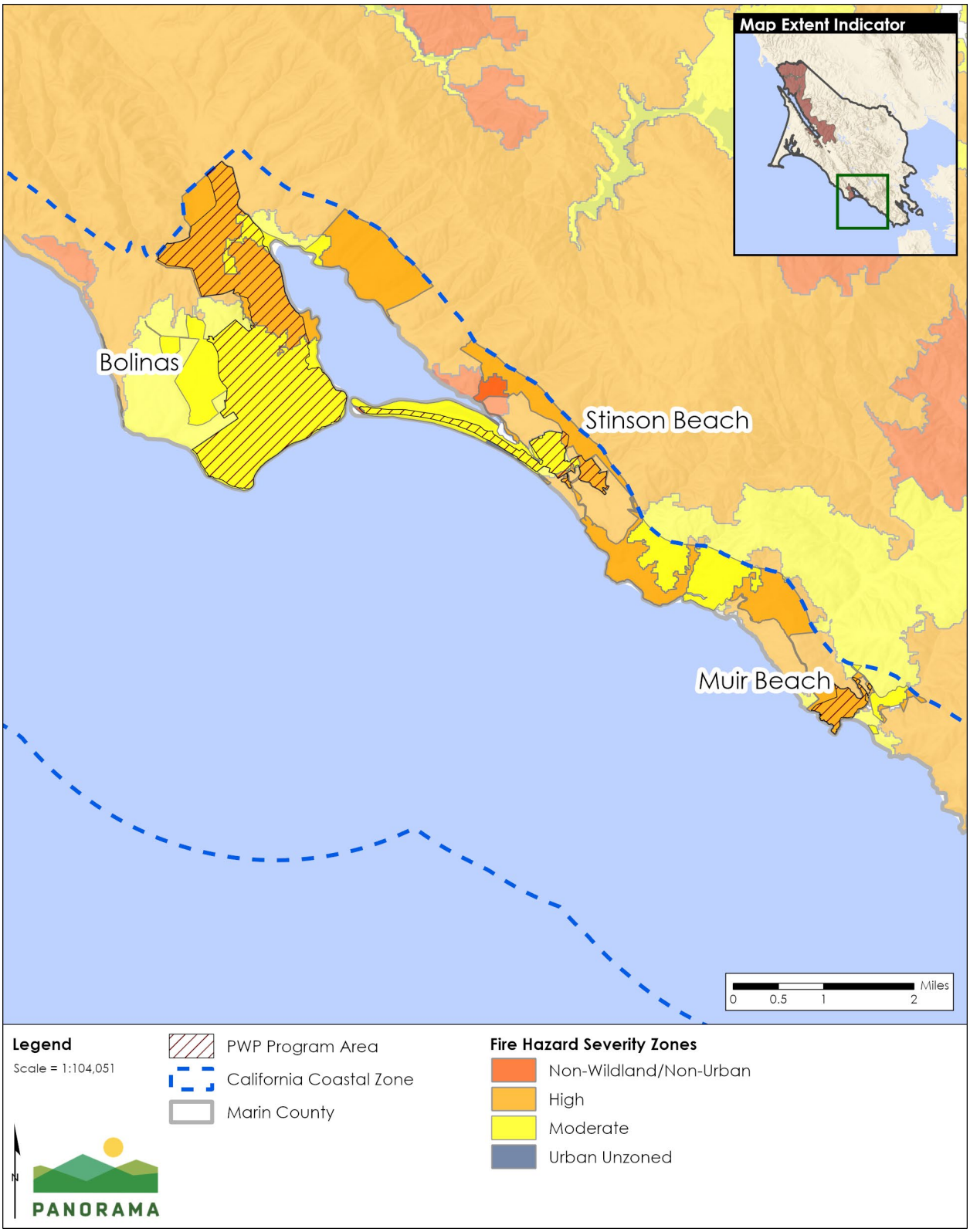
Source: (Marin County 2023b; 2003; California Coastal Commission 2019)

Figure 3-5 Fire Hazard Severity Classes (1 of 2)



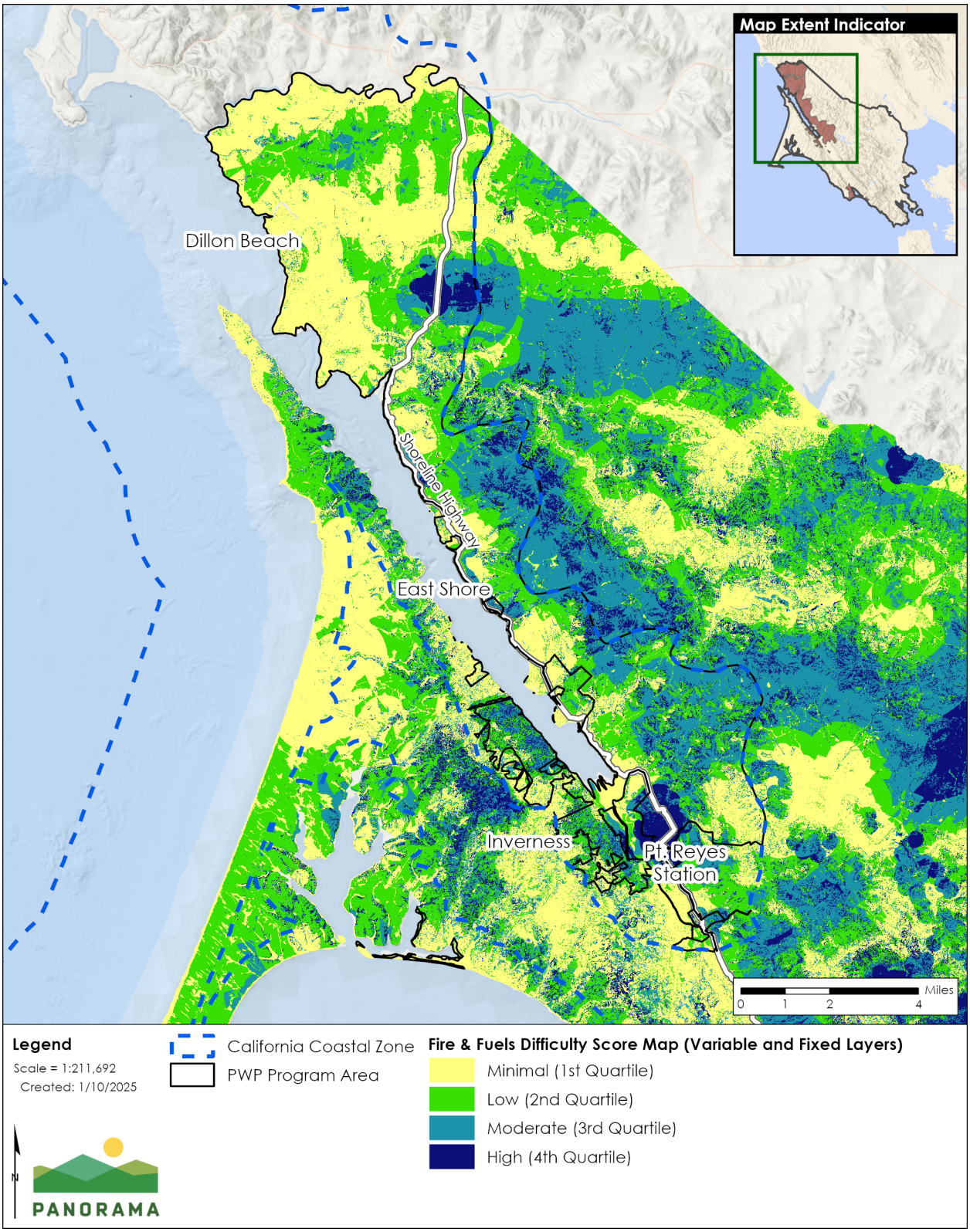
Source: (CAL FIRE 2007; Marin County 2003; California Coastal Commission 2019)

Figure 3-6 Fire Hazard Severity Classes (2 of 2)



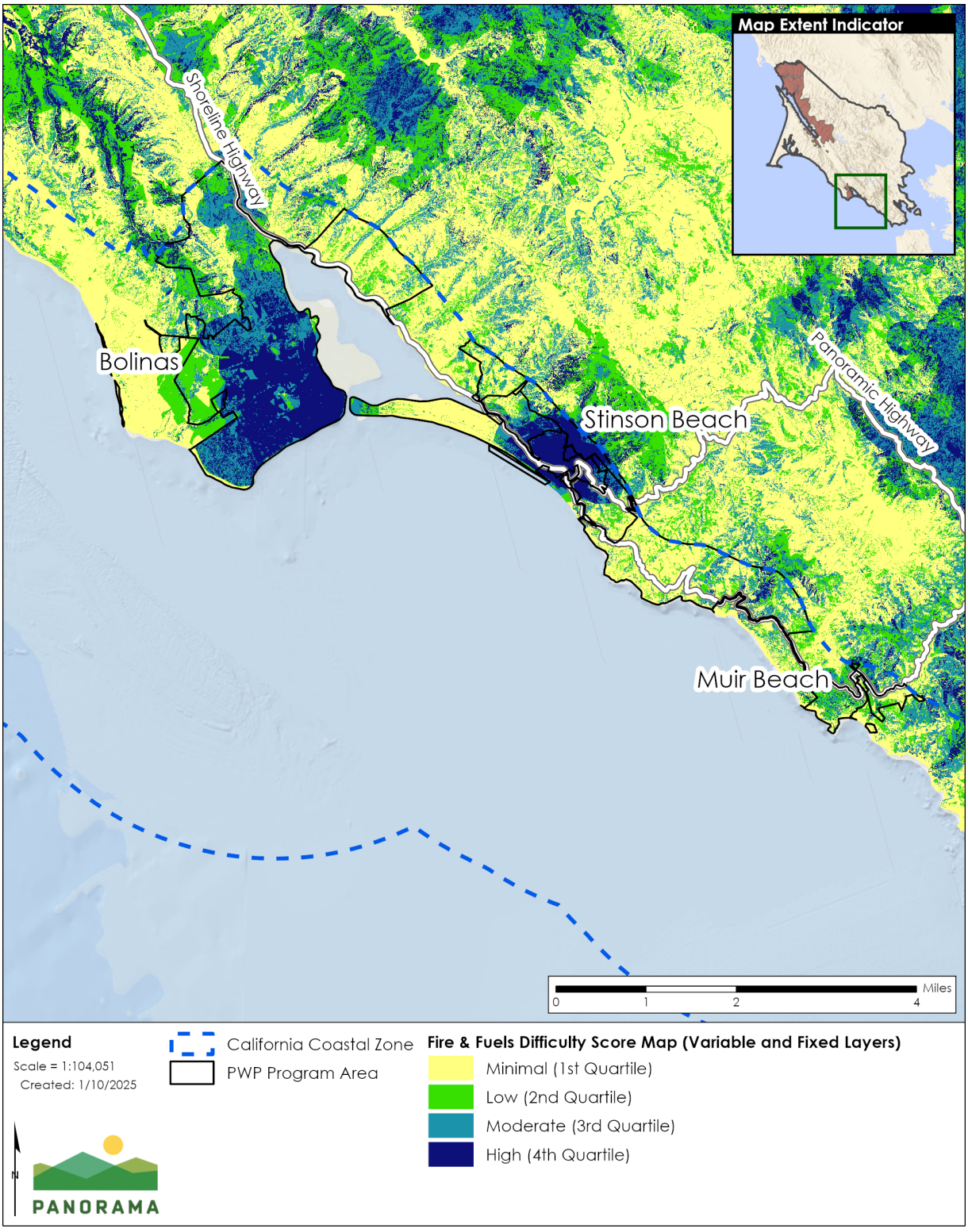
Source: (CAL FIRE 2007; Marin County 2003; California Coastal Commission 2019)

Figure 3-7 Fire and Fuels Difficulty (1 of 2)



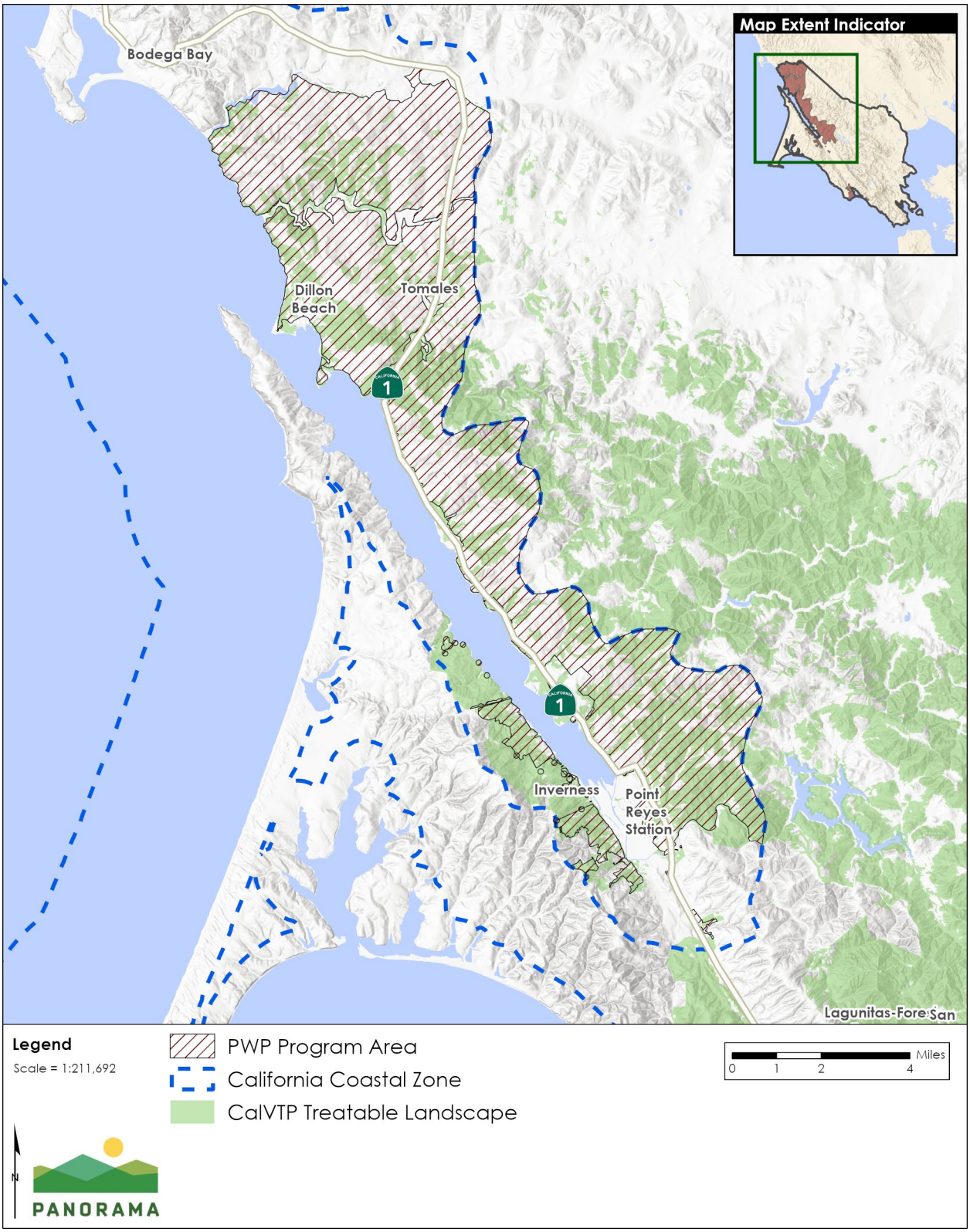
Source: (Sonoma Technology, University of California, Berkeley, Fehr & Peers, Reax Engineering, Spatial Informatics Group 2023)

Figure 3-8 Fire and Fuels Difficulty (2 of 2)



Source: (Sonoma Technology, University of California, Berkeley, Fehr & Peers, Reax Engineering, Spatial Informatics Group 2023; California Coastal Commission 2019)

Figure 3-9 CalVTP Treatable Landscapes (1 of 2)

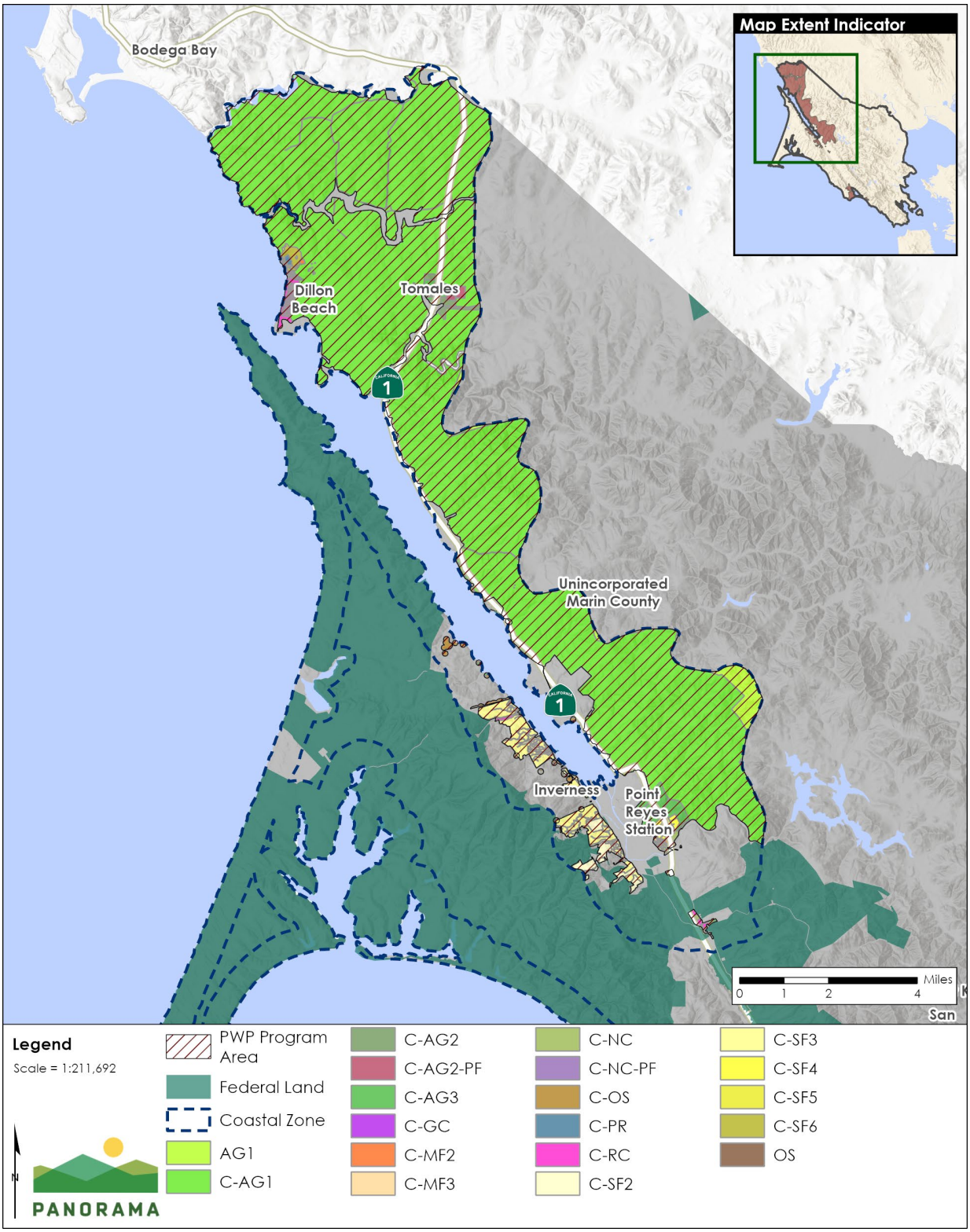


Source: (CAL FIRE 2022; Marin County 2003; California Coastal Commission 2019)

Figure 3-10 CalVTP Treatable Landscapes (2 of 2)

Source: (CAL FIRE 2022; Marin County 2003; California Coastal Commission 2019)

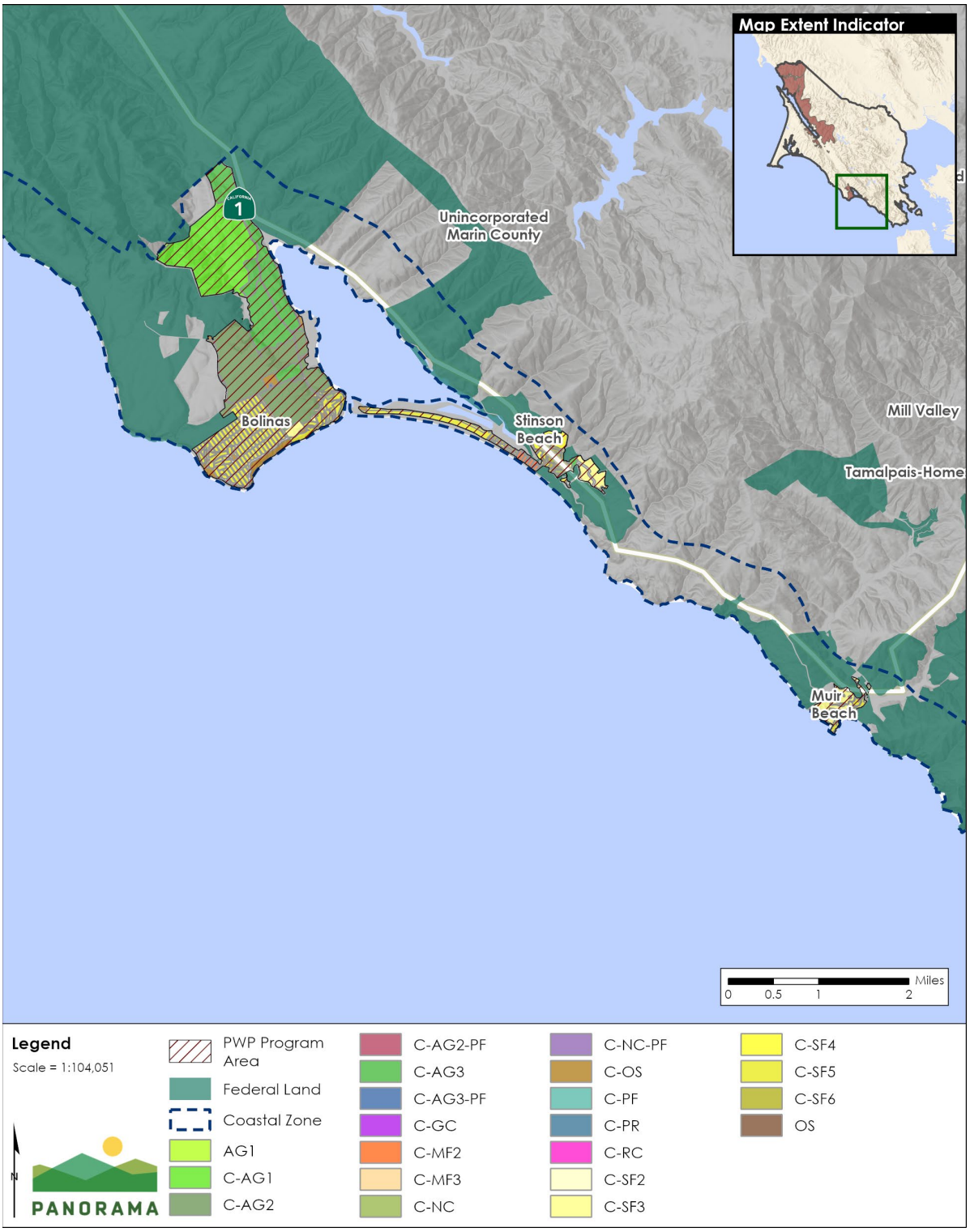
Figure 3-11 Land Use Designations in the PWP Program Area (1 of 2)



Note: Only land uses within the PWP Program Area are shown in the legend.

Source: (Marin County 2025a; 2003; California Coastal Commission 2014)

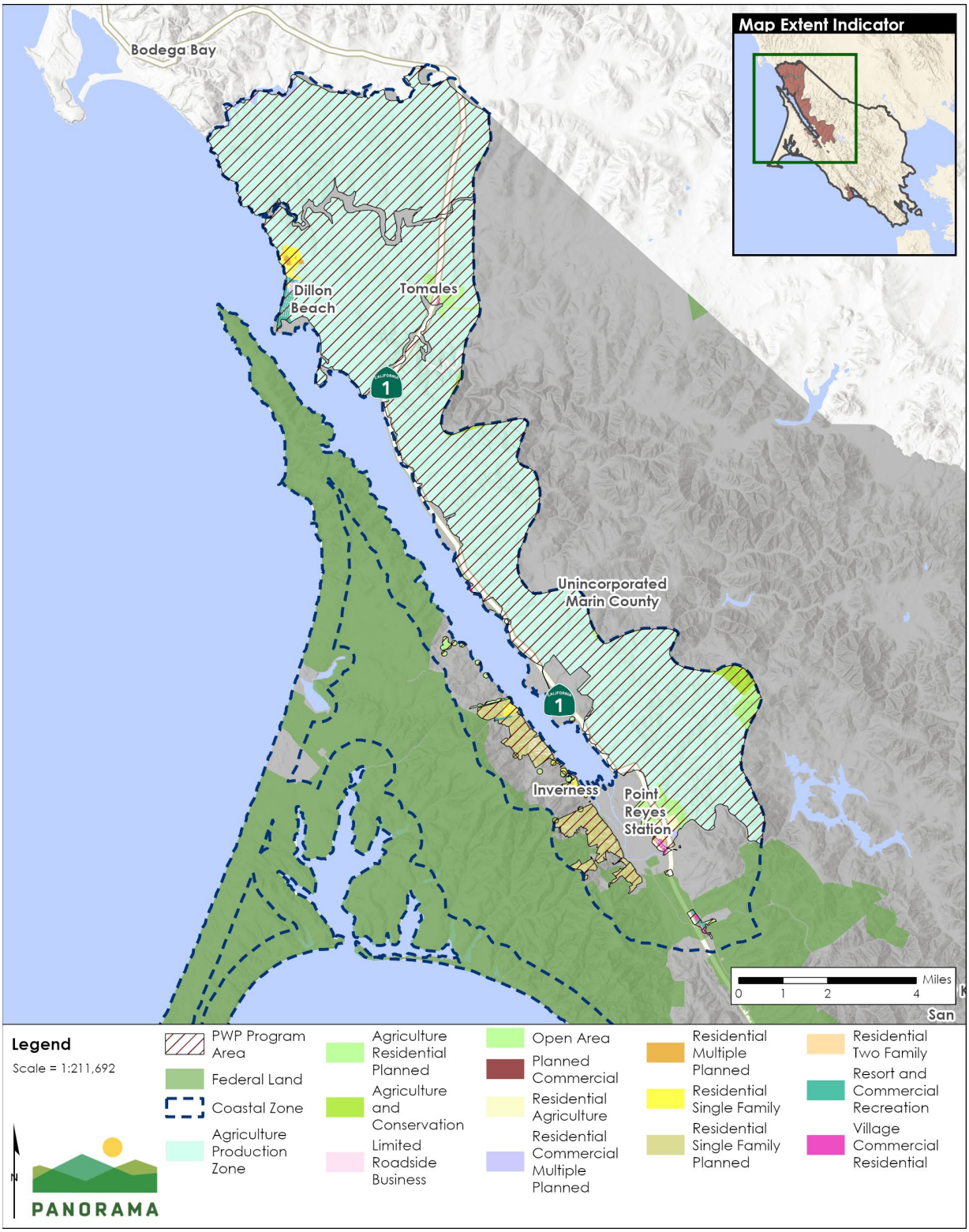
Figure 3-12 Land Use Designations in the PWP Program Area (2 of 2)



Note: Only land uses within the PWP Program Area are shown in the legend.

Source: (Marin County 2025a; 2003; California Coastal Commission 2014)

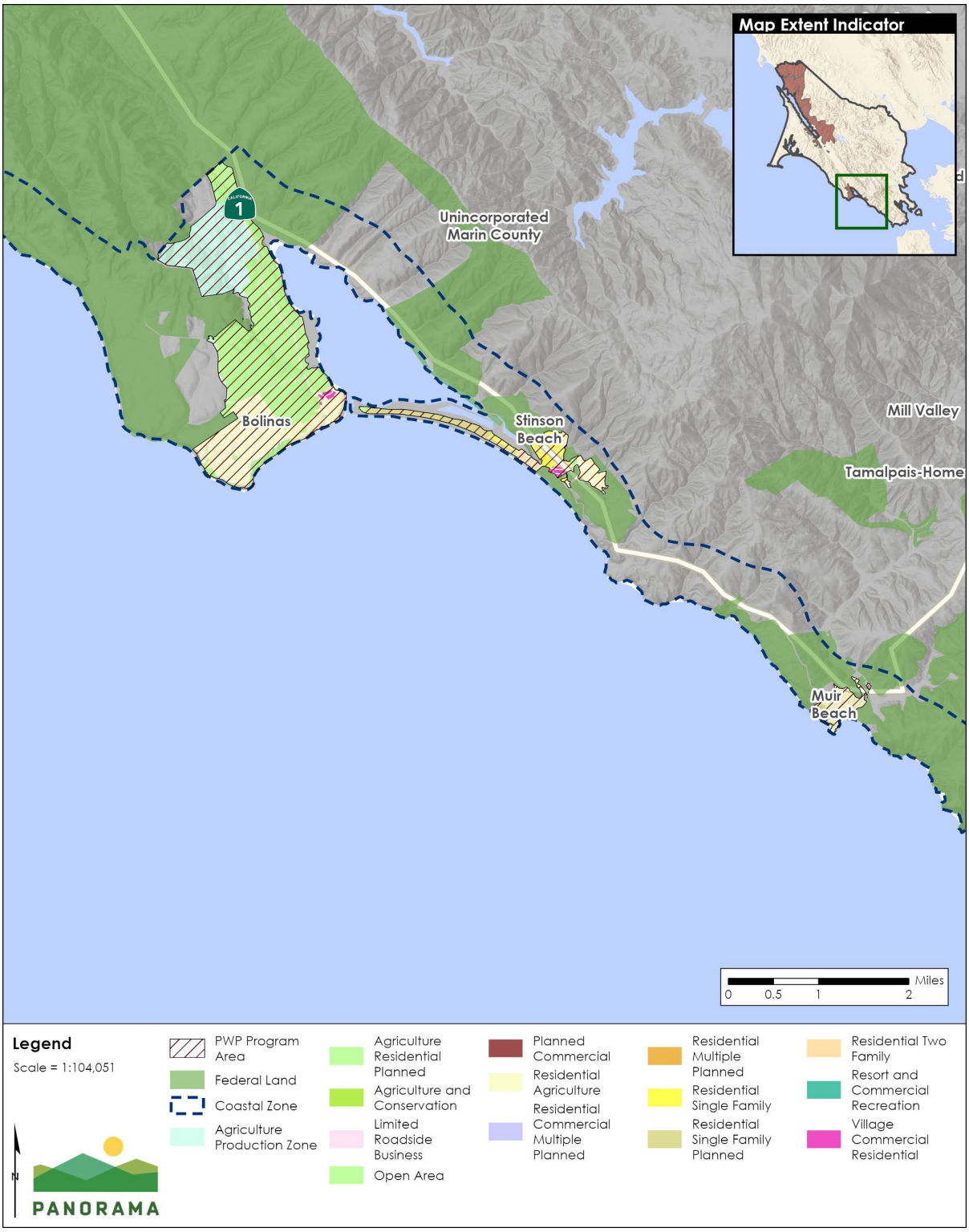
Figure 3-13 Zoning Designations in the PWP Program Area (1 of 2)



Note: Only zoning designations within the PWP Program Area are shown in the legend.

Source: (Marin County 2025b; 2003; California Coastal Commission 2014)

Figure 3-14 Zoning Designations in the PWP Program Area (2 of 2)



Note: Only zoning designations within the PWP Program Area are shown in the legend.

Source: (Marin County 2025b; 2003; California Coastal Commission 2014)

Table 3-1 Marin County Land Use Designations in the PWP Program Area

Land Use Description	Land Use Code	
Agriculture	• AG1 • C-AG1	• C-AG2 • C-AG3
Agricultural/Public Facility	• C-AG2-PF	• C-AG3-PF
General Commercial	• C-GC	
Multi-Family	• C-MF2	• C-MF3
Neighborhood Commercial	• C-NC	
Neighborhood Commercial/Public Facility	• C-NC-PF	
Open Space	• C-OS	• OS
Public Facility	• C-PF	
Planned Residential	• C-PR	
Recreational Commercial	• C-RC	
Single Family	• C-SF2 • C-SF3 • C-SF4	• C-SF5 • C-SF6

Table 3-2 Marin County Zoning Designations in the PWP Program Area

Zoning Description	Zoning Code	
Agriculture and Conservation	• A40	• A60
Agriculture Production Zone	• APZ-60	• C-APZ-60
Agriculture Residential Planned	• ARP-2 • ARP-40 • ARP-60 • C-ARP-1 • C-ARP-1.2 • C-ARP-1.7	• C-ARP-1.93 • C-ARP-10 • C-ARP-2 • C-ARP-20 • C-ARP-3 • C-ARP-5
Limited Roadside Business	• C-H1	
Open Area	• C-OA	• OA
Planned Commercial	• C-CP	
Residential Agriculture	• C-RA-B2 • C-RA-B3 • C-RA-B4	• C-RA-B5 • C-RA-B6
Residential Commercial Multiple Planned	• C-RMPC • C-RMPC-0.7	• C-RMPC-1.2

Zoning Description	Zoning Code	
Residential Multiple Planned	• C-RMP-0.60 • C-RMP-0.85 • C-RMP-1 • C-RMP-2.2	• C-RMP-3.2 • C-RMP-4.3 • C-RMP-6.5 • C-RMP-8
Residential Single Family	• C-R1 • C-R1-B2 • C-R1-B3	• C-R1-B4 • C-R1-B5 • C-R1-BD
Residential Single Family Planned	• C-RSP-0.1 • C-RSP-0.16 • C-RSP-0.2 • C-RSP-0.25 • C-RSP-0.33 • C-RSP-0.4 • C-RSP-0.5 • C-RSP-1	• C-RSP-1.6 • C-RSP-2 • C-RSP-7.26 • C-RSPS-0.346 • C-RSPS-0.387 • C-RSPS-1.4 • C-RSPS-2.9 • C-RSPS-3.5
Residential Two Family	• C-R2	
Resort and Commercial Recreation	• C-RCR	
Village Commercial Residential	• C-VCR • C-VCR-B1	• C-VCR-B2 • C-VCR-B4

3.4 Types of Projects and Activities to be Covered

3.4.1 Overview

Except as noted below, the projects covered under this PWP will utilize the CalVTP for planning guidance, environmental review, and analysis and will adhere to the mitigation and monitoring requirements as provided in that program. In addition, projects will be designed explicitly to meet the Coastal Zone-specific requirements contained in the Coastal VTS, designed collaboratively with Coastal Commission staff (Exhibit A). Projects occurring within the Coastal Zone, but fully outside of the CalVTP treatable landscape, and/or projects that are too small in scope to warrant utilizing the extensive CalVTP PEIR, must still be developed to meet all design, mitigation, monitoring, and other substantive requirements of the CalVTP as well as the requirements of the Coastal VTS in order to be approved under the PWP. CEQA compliance for projects outside of the CalVTP treatable landscape or for projects that are too small in scope to use the CalVTP PEIR will be accomplished through separate, appropriate environmental review— most likely a Categorical Exemption, Negative Declaration, or a Mitigated Negative Declaration that tiers off the analyses and measures in the CalVTP PEIR.

All PWP activities will follow the definitions, guidance, and measures provided in the CalVTP PEIR. The CalVTP PEIR divides project types into three categories based on the goals of each activity. These categories include ecological restoration, WUI fuel reduction, and fuel breaks.

The acreage of the Program Area that falls within each modeled CalVTP PEIR category is shown in Table 3-3 and Figure 3-15 through Figure 3-20. It is important to note that while the CalVTP PEIR distinguishes between ecological restoration and both WUI fuel reduction and fuel breaks, for the purpose of this PWP, WUI fuel reduction and fuel break activities will be designed, when practicable, to provide direct ecosystem benefits. Direct ecosystem benefits that could accrue from WUI fuel reduction or fuel break projects include, but are not limited to, removal of non-native invasive vegetation, creation of ecologically-valuable edge habitat where appropriate, revegetation with native plant species, and modifications to vegetation structure that mimic the effects of natural disturbance regimes.

Table 3-3 Modeled CalVTP PEIR in the Program Area

Modeled CalVTP PEIR Categories	Acres
Ecological Restoration	980
WUI Fuel Reduction	14,838
Fuel Break	4,038
Total	**19,856**

Based on geography, proximity to critical infrastructure, and/or specific fire prevention goals, integration of direct ecological restoration benefits may not be possible for all WUI fuel reduction and fuel break treatments. That said, all WUI fuel reduction and fuel break treatments will provide meaningful indirect ecosystem benefits through reduced severity, intensity, likelihood, and extent of catastrophic wildfire in the various forest, woodland, shrubland, and grassland habitats.

The CalVTP PEIR was designed to provide coverage for ecological restoration and fuel break/fuel reduction projects located in state-designated treatable landscapes. These treatable landscapes are a combination of State (Fire) Responsibility Area (SRA) lands that fall under the three categories listed above: identified WUI fuel reduction areas, extension of fuel breaks that cross into local jurisdictions as well as those along ridgelines and roadways, and treatment areas for ecological restoration. As per Appendix PD-1 from the CalVTP PEIR, these treatable landscapes were developed using three Geographic Information System (GIS)-based analyses that compared SRA land, treatable categories, and vegetated landscapes dominated by tree, shrub, or grass communities. Any projects located outside of SRA land (e.g., within local responsibility areas or on federally owned land), as well as areas not pre-identified using the aforementioned treatable landscape categories, are omitted from outright coverage by the CalVTP PEIR, but not necessarily from the PWP. However, under the CalVTP, areas outside the treatable landscape can be included in the PEIR through an addendum if the types of vegetation are covered already, the types of treatment activities are covered, and no new or substantially greater impacts would occur. Because treatable landscapes were determined for the entirety of California utilizing GIS modeling, local, site-specific and more granular-level conditions were often unaccounted for. Figure 3-9 and Figure 3-10 show areas within and outside of the CalVTP treatable landscape in the PWP Program Area.

Figure 3-15 Modeled CalVTP PEIR Ecological Restoration (1 of 2)

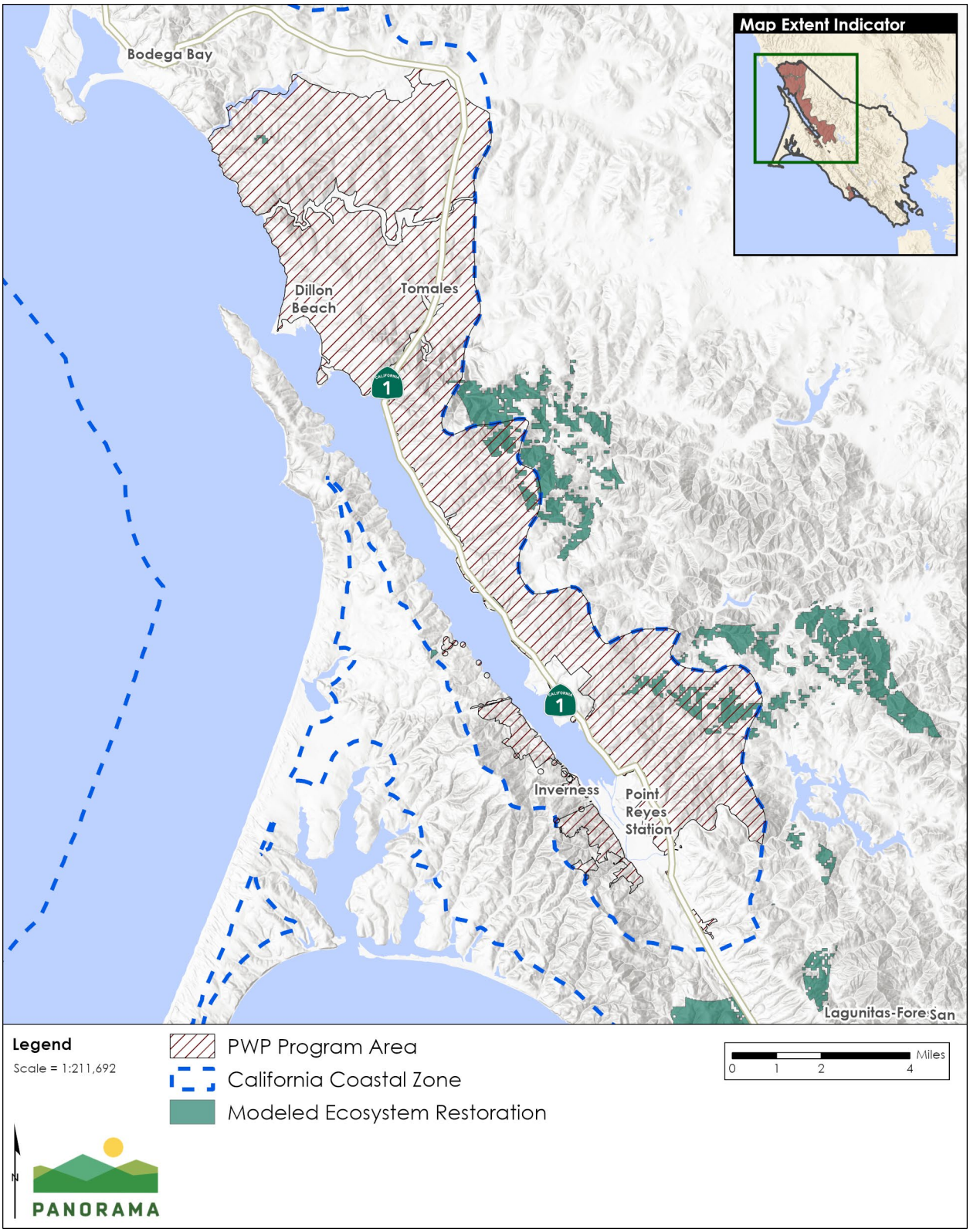


Figure 3-16 Modeled CalVTP PEIR Ecological Restoration (2 of 2)

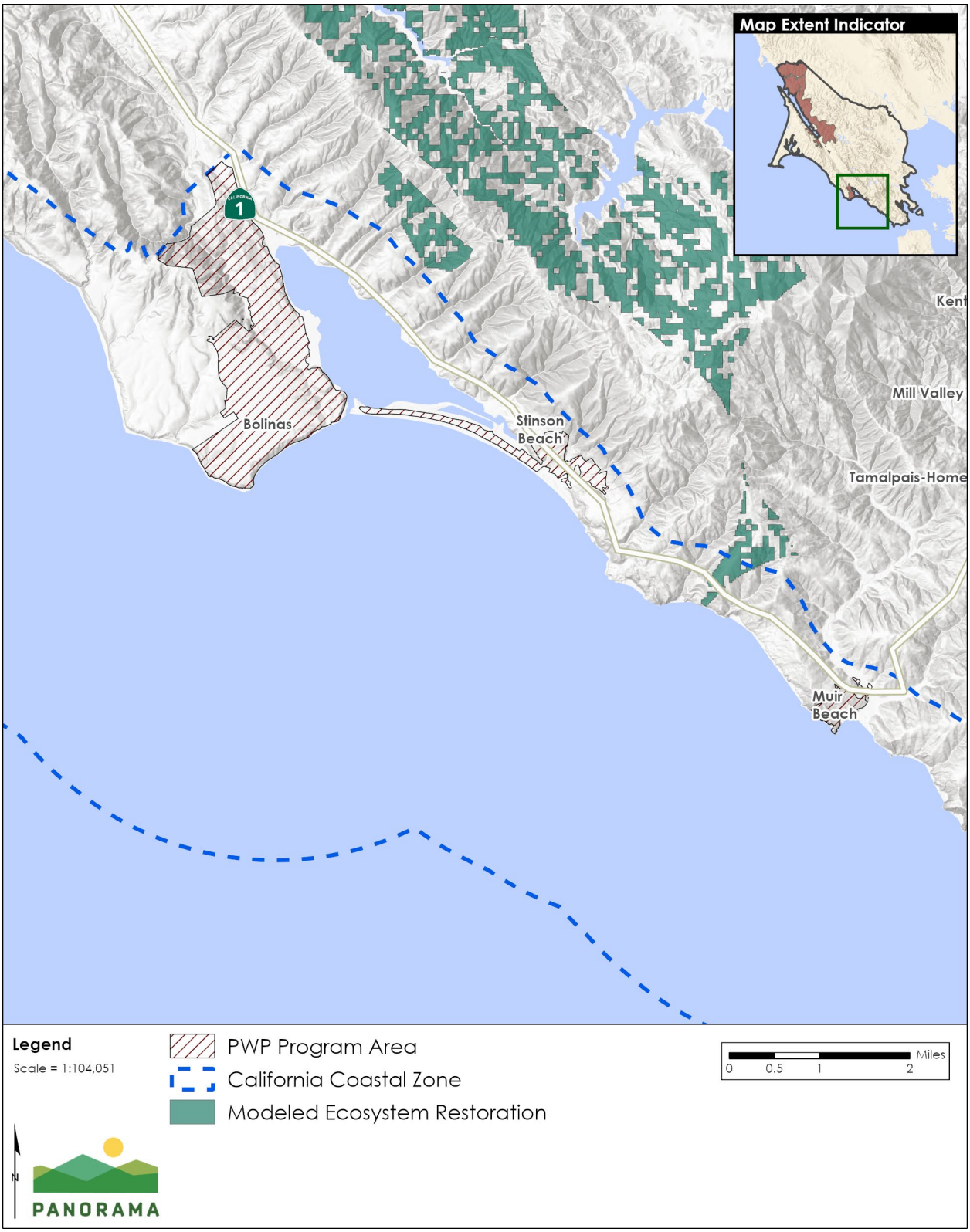


Figure 3-17 Modeled CalVTP PEIR Fuel Breaks (1 of 2)

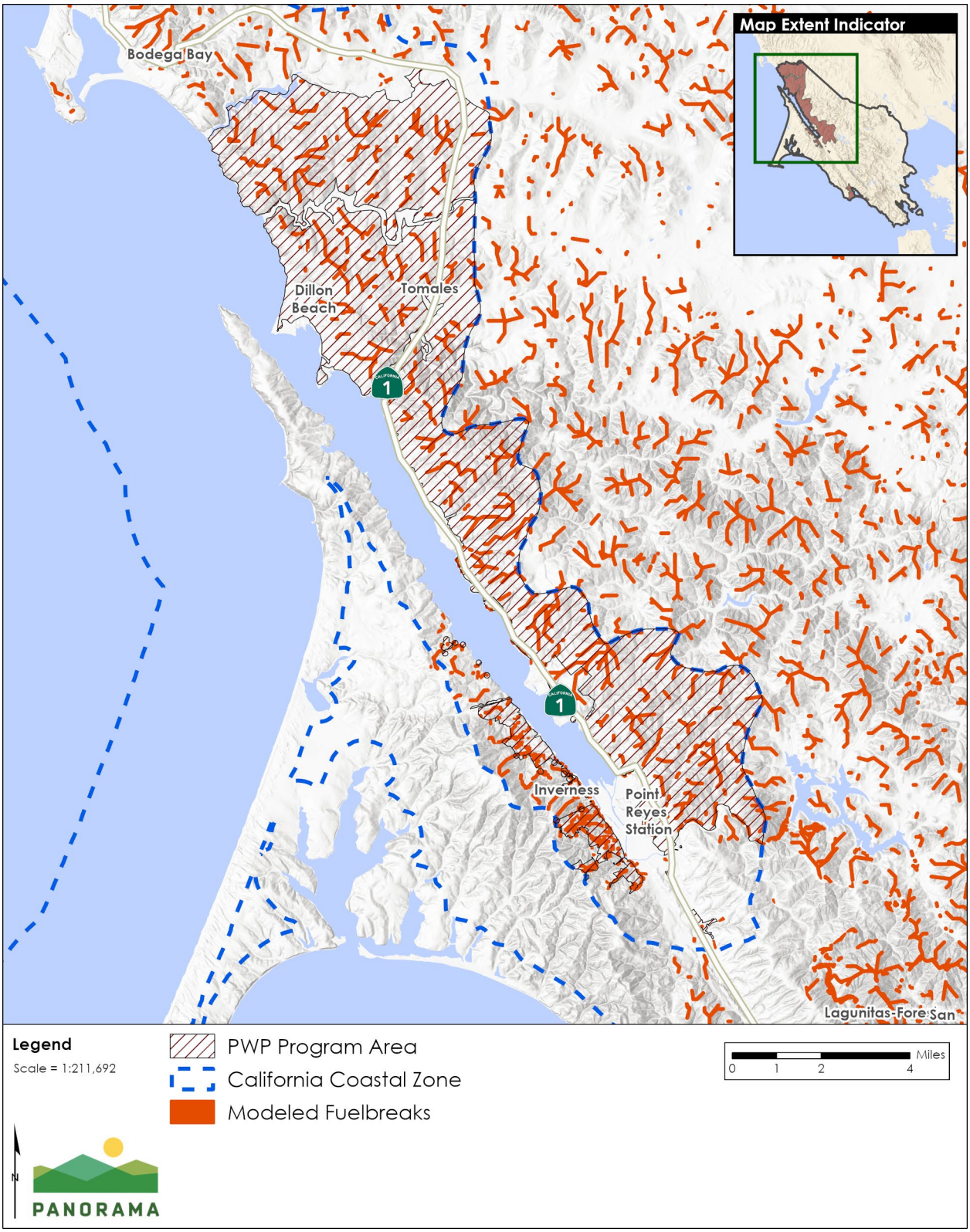


Figure 3-18 Modeled CalVTP PEIR Fuel Breaks (2 of 2)

Figure 3-19 Modeled CalVTP PEIR WUI Fuel Reduction (1 of 2)

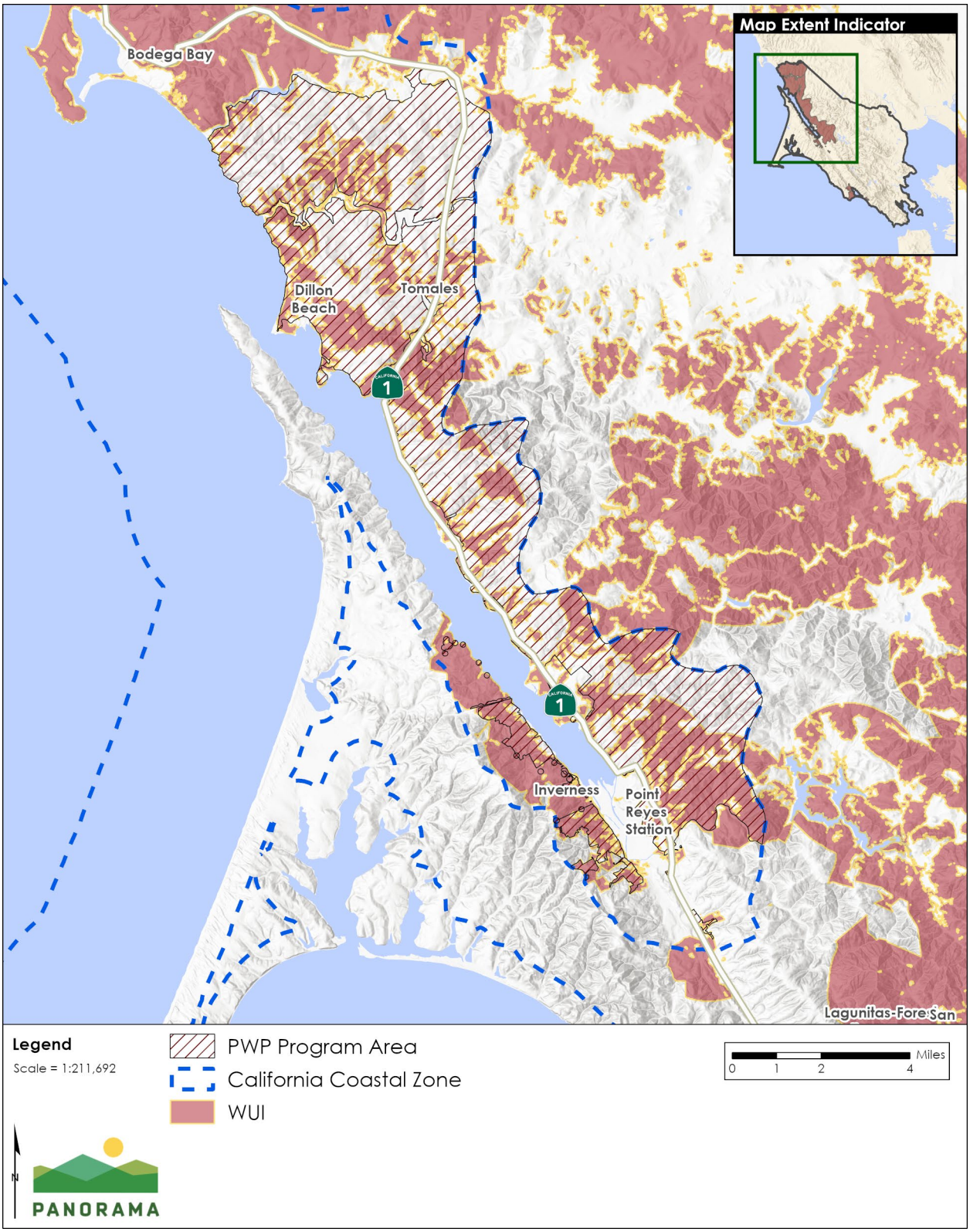
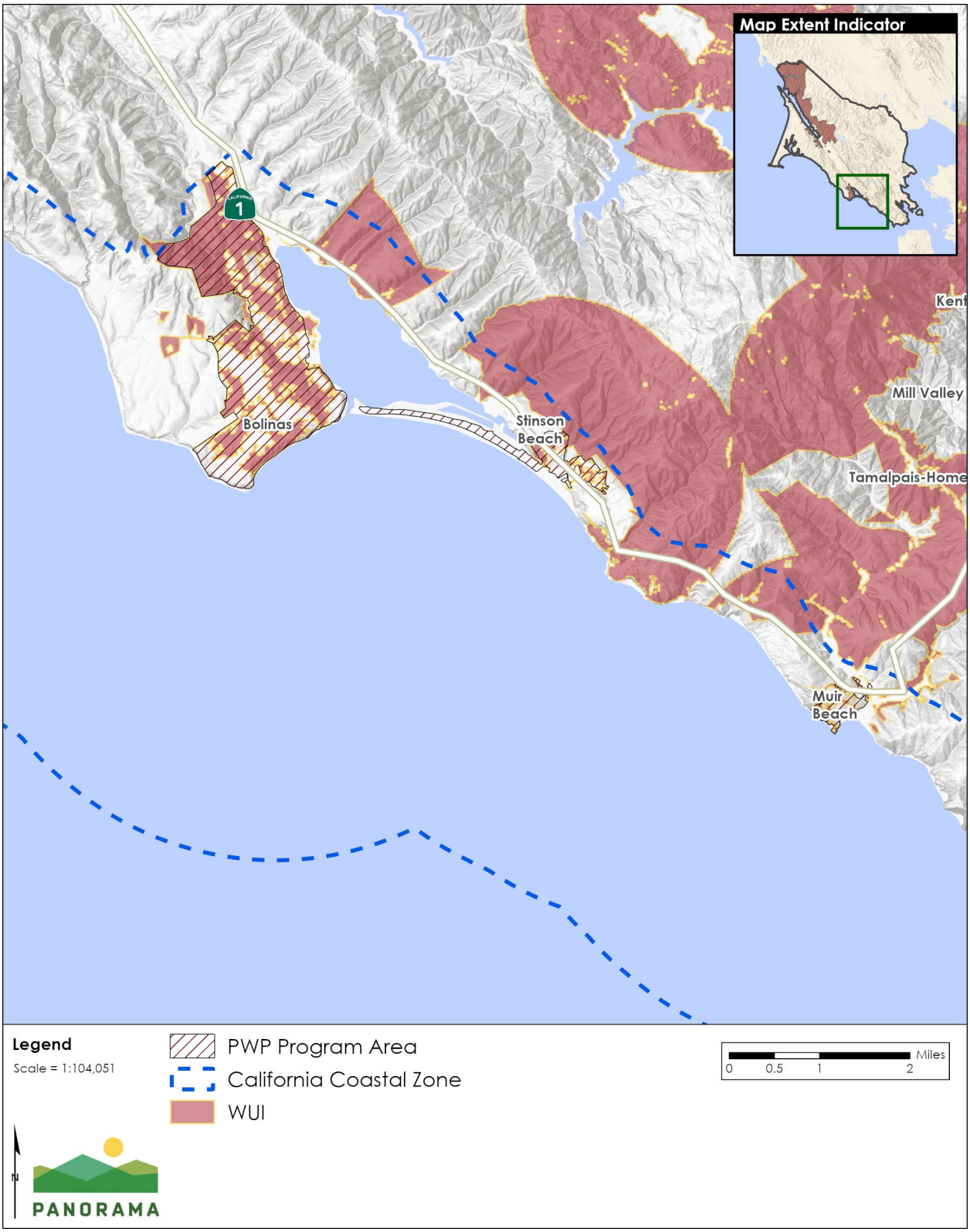
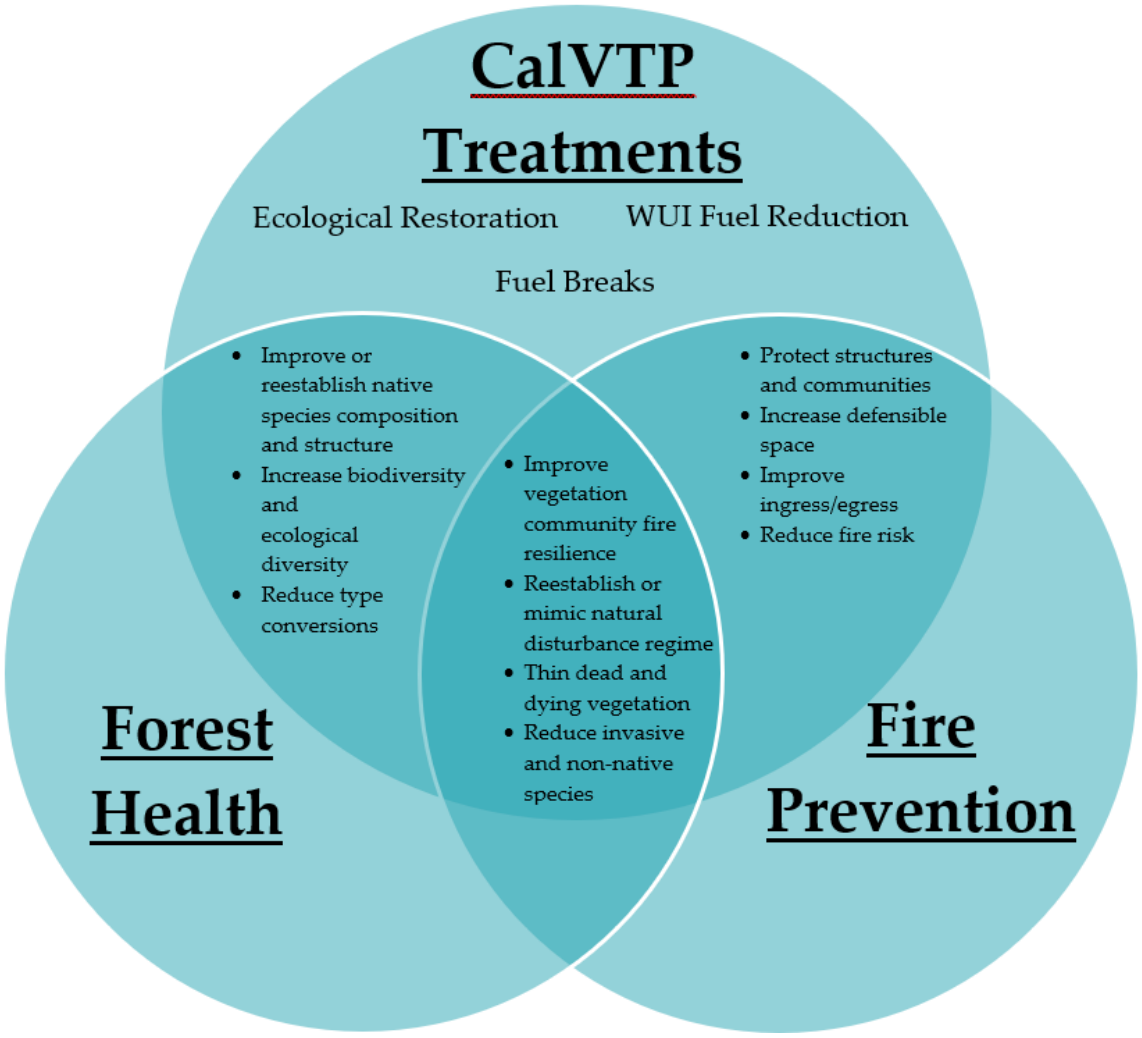


Figure 3-20 Modeled CalVTP PEIR WUI Fuel Reduction (2 of 2)



The Coastal VTS categorizes potential projects into two project types that differ from the three defined in the CalVTP PEIR. These two overarching categories are forest health projects and fire prevention projects (refer to Section 3.2 for more information). As discussed previously, forest health projects provide ecological benefits and improve the habitat's fire resiliency, including within ESHA. Fire prevention projects, while designed to protect ecosystems as much as feasible, include a level of vegetation removal that may adversely impact ESHA in order to assure protection of existing structures or infrastructure, such as homes and roadways critical for evacuation and emergency access. Pursuant to this PWP, forest health projects can include projects that are categorized through the CalVTP as ecological restoration, WUI fuel reduction, and, in some cases, fuel break activities (for shaded fuel breaks). Fire prevention projects include CalVTP WUI fuel reduction and fuel break activities that could have adverse impacts on ESHA while addressing human life and property safety risks associated with wildfire, but are designed to reduce the likelihood of significant and long-term impacts on ESHA and coastal resources from catastrophic wildfire. These terms are defined below and are consistent with the definitions in the CalVTP and cross-walked with the terms used in the Coastal VTS in the venn diagram that follows.



3.4.2 Ecological Restoration

This treatment includes all the projects referred to as forest health projects as well as other ecosystem health projects in woodlands, shrublands, and grasslands. In areas that have departed from the natural fire regime as a result of fire exclusion, ecological restoration would focus on restoring ecosystem processes, conditions, and resiliency by moderating uncharacteristic wildland fuel conditions to reflect historic vegetative composition, structure, and habitat value. These activities will result in improved ecosystem health, improvement in native species composition and age structure, and mitigation of tree encroachment into coastal shrub and grassland ecosystems. It also includes the removal of weedy and invasive species and the removal of diseased vegetation, with an emphasis on moderating uncharacteristic fuel build-up due to the deprivation of natural fire regimes. This CalVTP project type includes the forest health projects in the Coastal VTS covered by this PWP as well as limited fire prevention projects that are able to incorporate meaningful ecological restoration objectives into the design and implementation phases.

3.4.3 Wildland-Urban Interface Fuel Reduction

Located in WUI-designated areas, fuel reduction would generally consist of the strategic removal of vegetation to prevent or slow the spread of non-wind driven wildfire between structures and wildlands. WUI fuel reduction includes vegetation thinning and removing ladder fuels, thereby increasing forest resilience and defensible space at the boundary of communities and wildlands. WUI fuel reduction projects can be designed to protect ESHA, wetlands, and adjacent habitats from extreme fire conditions. In some cases, WUI fuel reduction projects can also be designed to provide ecological benefits and improve the habitat's fire resiliency within the treatment area. WUI fuel reduction projects are described in the Coastal VTS under both fire prevention and forest health. A given project could fit under either fire prevention or forest health or both, depending on the specific situation and project objectives that can be implemented. Defensible space work occurring in areas classified as ESHA, whether determined by the project Registered Professional Forester (RPF), qualified professional, or vegetation mapping, pending availability and/or accuracy, may only be conducted as part of a larger WUI fuel reduction and ecological restoration project. Such defensible space projects will only treat ESHA within the minimum defensible space required by the County pursuant to local County Fire code (Marin County municipal code refers to defensible space as required by PRC § 4291, which mandates maintenance of 100 feet from the structure, but not beyond the property line).

3.4.4 Fuel Breaks

In strategic locations, fuel breaks remove flammable vegetation to slow the spread of wildfire, create a staging area for firefighting efforts, and provide ingress and egress during a wildfire incident. Fuel breaks result in zones of less dense to significantly less dense vegetation, often in a linear layout and often associated with an existing road, community, or right of way. A shaded fuel break maintains a targeted level of tree cover while moderating surface fuels to limit a fire's ability to spread. Fuel breaks can be designed to protect adjacent habitats and

ESHA from extreme fire conditions. In some cases, they can also be designed to provide ecological benefits and improve the habitat's fire resiliency within the treatment area. Fuel breaks are described in the Coastal VTS under both fire prevention and forest health. A given fuel break project could fit under either fire prevention or forest health or both, depending on the opportunities and constraints for each project location.

3.4.5 Other Covered Project Types

The PWP envisions four scenarios where projects would be approved under the PWP, but may require additional CEQA compliance, potentially as tiered off the CalVTP PEIR. These include:

Fuel Breaks not included in the treatable landscape:
Fuel breaks directly adjacent to and within communities utilized by fire agencies for strategic fire suppression locations in Marin County are often not included in the treatable landscape of the CalVTP PEIR either because they have been decommissioned, poorly maintained, or have not followed prominent ridges. Nevertheless, these fuel breaks have provided and continue to provide strategic locations for fuel break/WUI fuel reduction projects, and their maintenance is critical to local fire prevention and firefighting efforts.

WUI Fuel Reduction projects outside of the treatable landscape:
Critical WUI fuel reduction projects may occur in residential and rural-residential settings within the Coastal Zone and outside of the treatable landscape. Many of these areas were once dominated by low-growing coastal scrub and grassland but are now a matrix of homes and dense flammable fuels. These fuels include invasive tree species such as *Eucalyptus* spp. and fast growing non-native invasive woody shrubs like French broom (*Genista monspessulana*). WUI fuel reduction projects could include the strategic removal of these species for both fuel management and ecosystem restoration. Projects could occur on private or public lands in the WUI and would include the mechanical and manual removal of non-native invasive species. This treatment might also include targeted herbicide application to address resprouting of invasive species. Restoring these areas to low-growing native vegetation would meet the objectives of removing hazardous fire fuels in the community while restoring ecosystems and increasing biodiversity. Other projects might include thinning or removing eucalyptus stands, removing ladder fuels to reduce the risk of crown fires, or returning forest understories to more manageable levels that encourage native vegetation recruitment.

Projects that are smaller than the scale of project envisioned for the CalVTP:
While the CalVTP PEIR does not provide a minimum size limit for projects, the level of analysis for the full PEIR process is not easily scaled down for small projects, though these projects will still require CEQA and Coastal Act compliance, unless exempt. Projects in this category, under the PWP, could still be designed and analyzed to meet the parameters of the Coastal VTS and all applicable elements of the CalVTP, but would likely not be approved under the CalVTP PEIR. For example, a neighborhood eucalyptus removal project within 0.5 acre of urban or suburban WUI land may be too small to warrant inclusion under the CalVTP PEIR (e.g., may be Categorically Exempt from CEQA), but would prove extremely valuable in reducing flammable vegetative fuel loads in a neighborhood setting, could be designed to replace non-native

vegetation with native species, and could require authorization under the Coastal Act. The PWP anticipates these projects could be approved through the PWP process with creation of a project document and supporting studies that include a PSA-equivalent document and include all relevant measures and standards from the CalVTP PEIR (Exhibit B) and Coastal VTS (Exhibit A).

Defensible space vegetation treatments as a subset of a larger, contiguous WUI Fuel Reduction or Ecological Restoration project:
The CalVTP PEIR intentionally did not analyze defensible space areas, areas up to 100 feet radius surrounding homes or structures, or to the property line, whichever is less, on private properties. PRC Section 4291 provides that landowners are responsible for the maintenance of vegetation in this defensible space area. However, if defensible space areas are included as part of a larger WUI Fuel Reduction or Ecological Restoration project, these relatively small areas of defensible space treatments can be classified as fire prevention activities under the Coastal VTS and can be considered for approval in a PSA as a subset of a larger project that is categorized as Ecological Restoration or WUI Fuel Reduction. This is to ensure that the relatively more intensive fire prevention work in defensible space areas is balanced with other work having restoration elements as their primary goals. Treatments in these areas pursuant to the PWP will be overseen by Marin Wildfire to ensure that design, initial implementation, and longer-term maintenance is consistent with the PWP, including all SPRs under the CalVTP and requirements of the Coastal VTS for Marin County. In these cases, the NOID, PSA, or an appendix to the PSA, would need to address the consistency of the proposed defensible space work with CalVTP and Coastal VTS standards in order to provide sufficient information for Coastal Act purposes, even though the defensible space work would not otherwise be subject to the CalVTP PEIR and its requirement for a PSA.

3.5 Range of Proposed Activities

Both forest health and fire prevention project types will provide fire resiliency benefits in the Coastal Zone to protect against loss of life, property, and destruction of ecosystems from catastrophic wildfire. All projects under this PWP, specifically projects being conducted within ESHA and wetlands, will provide ecological benefit, either directly or indirectly, to the greatest extent feasible. In addition, forest health projects are explicitly designed to provide direct ecological benefits to local landscapes. Given the nature of vegetation treatment activities, it is recognized that some projects cannot be designed to fully meet forest health or ecological restoration standards while also meeting the necessary fire resiliency objectives. For fire prevention projects that are not able to include forest health or ecosystem restoration as a primary objective, the project (or a portion of the project) will be designed to minimize impacts to coastal resources, specifically ESHA and wetlands, as required in Project Standards 2 and 3 (see Section 4, below), in consideration of the necessary fire resiliency objectives. To ensure that benefits to the environment are maximized through forest health and ecological restoration planning in the PWP Program Area, the majority of the total acreage of covered projects will be forest health projects.

Within each of the project types described above, the CalVTP identifies five specific treatment types that Marin Wildfire may utilize to implement projects and meet project goals and objectives. This PWP has been developed to be consistent with the CalVTP, and the maximum and minimum intensity of activity or activities proposed to be undertaken will comply with the analysis, evaluations, and limitations approved as part of the CalVTP PEIR in January of 2020 except that projects under the PWP may be proposed outside of the geographic area covered by the PEIR. In addition to the CalVTP, all projects undertaken through this PWP will adhere to the Coastal VTS for projects in the Coastal Zone (Exhibit A) and all other Project Standards in Section 4 of this PWP. These standards were developed through extensive collaboration between Marin Wildfire, County planning staff, natural resource experts at State Parks, and Coastal Commission staff. In addition to this collaboration, CAL FIRE regional staff were consulted on development of the Coastal VTS throughout the development process.

Minimum and maximum intensities of a given treatment will be based on the project goals and objectives as well as the size and location of a given project. Projects approved under this PWP may include one or many different treatment types and intensities. Four of the five CalVTP treatment activities that are proposed for use in projects covered under this PWP include manual treatment, ground-based mechanical treatment, herbicide application, and prescribed burning, which are summarized below. Prescribed herbivory would not be implemented under this PWP. Biomass disposal methods approved under the CalVTP include hauling, chipping and hauling, chipping and broadcasting, mulching using a tracked masticator, and pile burning.

3.5.1 Prescribed Burning

The application of low-intensity fire onto target vegetation is for purposes of ecological restoration and fuel reduction, including pile burning and broadcast burning. Pile burning consists of burning piles of vegetative debris following treatment to remove biomass. Broadcast burns are carried out with appropriate preparation, such as creating a fire line by removing fuels that will prevent the fire's spread outside of the target area, or by using existing abiotic features, such as fire roads. They are planned and conducted in close coordination with fire personnel and carried out only when weather, air quality and fuel conditions are optimal. Broadcast burning includes cultural burning, applying fire to coastal prairie to reduce thatch (fuels) and restore native vegetation, and low-intensity forest understory burns aimed at reducing ground fuels, fire-intolerant species, and control of the occurrence and spread of sudden oak death.

3.5.2 Ground-Based Mechanical Treatment

This treatment activity focuses on the use of motorized ground-based equipment to cut, uproot, crush/compact, or chop existing vegetation. The most common and efficient manner is to utilize this equipment on slopes less than 50 percent, and on slopes less than 30 percent in select habitats, to increase the health and vigor of the forest by reducing resource competition among vegetation. This type of treatment will also utilize ground-based equipment from existing roadways to reduce impacts to vegetation adjacent to roads.

3.5.3 Manual Treatment

This treatment activity focuses on the use of hand tools and hand-held power tools such as shovels, chainsaws, weedwhackers, or loppers to remove target vegetation. A crew limbing trees and removing ground fuels with chainsaws and loppers to create a shaded fuel break is a common form of manual treatment. The treatment, disposal, or removal method for cut vegetation (e.g., lop and scatter, piling, or complete removal), will depend on a specific project's objectives.

3.5.4 Herbicide Application

Herbicides are applied through ground application methods and used to target specific invasive species when other methods are not feasible due to their costs, effectiveness, or potential environmental impacts. Some applications are applied to new foliar growth of invasive species where uprooting may cause excessive soil disturbance. Other applications treat stumps immediately after the felling of invasive species, such as *Eucalyptus globulus*, to prevent resprouting.

3.6 Facilities Proposed to be Constructed Pursuant to the PWP

Activities and projects that involve removal of "major" vegetation meet the definition of *development* in the Coastal Zone, in accordance with PRC Section 30106[3] and would be covered by this PWP. No new facilities are proposed for construction as part of this PWP.

3.7 Proposed Timetable for the Future Activities/Projects

Marin Wildfire, including member agencies, will work with local landowners, CAL FIRE, technical advisors, fire safe councils, tribal entities and local communities, Coastal Commission staff, Marin County planners and other partners to prioritize and develop projects that will be implemented over the life of this PWP. Marin Wildfire will leverage existing forums for project identification, prioritization and coordination including, for example, local Fire Safe Councils. Potential PWP projects may be phased over the course of the authorized term of the PWP and approved through NOIDs that will be submitted to the Coastal Commission for approval. NOIDs may include one or more projects and NOIDs are expected to be submitted to the Coastal Commission one time per year though may be submitted on a different schedule or more regularly as appropriate. If implementation of a specific activity/project is delayed due to unforeseen circumstances, the approved project will be automatically put into the queue for implementation the following year.

[3] As defined by PRC § 30106, "Development" includes, "the removal or harvesting of major vegetation other than for agricultural purposes, kelp harvesting, and timber operations which are in accordance with a timber harvesting plan submitted pursuant to the provisions of the Z'berg-Nejedly Forest Practice Action of 1973".

Marin Wildfire will manage the development and implementation of most projects permitted through the PWP. In other limited cases, partners can request permitting support from Marin Wildfire through the PWP on projects they themselves are implementing, in which case Marin Wildfire will oversee development of PWP supporting documentation and will provide implementation oversight sufficient to ensure such projects comply with the PWP. Projects proposed by other public agencies or private individuals that are not designed and carried out with Marin Wildfire oversight are not within the scope of the PWP; such projects will require either a PWP amendment (if they qualify as public works) or separate authorization through a CDP application, as appropriate for the particular situation.

Projects/activities approved under the PWP will include both an initial implementation phase and subsequent follow-up management at ecologically appropriate intervals. These expected intervals will be clearly defined in each PSA submitted as part of the NOID process.

Marin Wildfire shall submit PSAs to the CCC as part of the NOID process for review and approval for the purpose of coastal development authorization prior to conducting projects. Coordination between Marin Wildfire and the CCC shall occur as early as feasible in the design process to streamline consistency review under the PWP (see Section 7, for more on administrative processes related to the PWP).

PSAs shall include clear problem and goal statements (e.g., overall project goals, fire prevention goals, ecological goals) associated with each project proposed pursuant to this PWP and will be submitted as part of the NOID process. These statements are intended to assist Marin Wildfire and the CCC in developing mutual understanding of the potential impacts and benefits – both short and long-term – for each project, and the structure for the problem and goal statements is articulated in the Coastal VTS. It is expected that this information will be incorporated into Standard Project Requirements (SPR) BIO-3 (Sensitive Natural Communities) and SPR BIO-8 (Identify and Minimize Impacts to Coastal Zone ESHA) of the CalVTP project PSA including the completed Coastal VTS document provided in the attachments section of each project PSA.

4 PWP Project Standards

4.1 PWP Project Requirements

Please refer to the CalVTP PEIR Program-Level SPRs and Mitigation Monitoring and Reporting Program (MMRP) tables for a full accounting of relevant protective measures that will be implemented for all projects under this PWP. The SPRs can be found in Appendix PD-3 of the CalVTP Final PEIR and the MMRP is located in Appendix B of the Final PEIR, Volume I. Exhibit B of this PWP provides the SPRs in full that will be applied to PWP projects, as appropriate. Due to the fact that most, if not all, projects approved under this PWP will take place in or near ESHA or coastal wetlands, project-specific PSAs will also provide detailed information that addresses items in the Coastal VTS bulleted below and provided in Exhibit A of this PWP:

- Protect Ecosystem
- Protect Wetlands
- Use Vegetation Removal Hierarchy
- Limit Treatment within Chaparral and Coastal Sage Scrub
- Determine Suitable Use of Prescribed Fire
- Control Invasive Species
- Limit Equipment Types
- Limit Herbicide Use
- Protect Coastal Viewshed
- Limit Accelerants
- Limit the Need for Soil Stabilization
- Protect Coastal Public Access and Recreation

4.2 PWP Project Standards

Project Standard 1: Qualifying PWP Projects

Projects covered through this PWP shall be limited to Forest Health and Fire Prevention projects, as those terms are defined in the Coastal VTS, undertaken within the PWP Program Area (Figure 3-1 and Figure 3-2 above) over the next 10 years from the date of PWP certification or until dissolution of Marin Wildfire, whichever occurs sooner.

Project Standard 2: Consistency with the CalVTP PEIR:

PWP projects shall be fully consistent with the requirements of the CalVTP PEIR, including the SPRs and mitigation measures of the CalVTP PEIR (refer to Exhibit B for the full text), except where more specifically addressed in Project Standard 3. Key CalVTP PEIR measures include, but are not limited to:

- Administrative: SPRs AD-1 through AD-9
- Aesthetic and Visual Resource: SPRs AES-1 through AES-3 and Mitigation Measure AES-3

- Air Quality: SPRs AQ-1 through AQ-6 and Mitigation Measure AQ-1
- Archaeological, Historical, and Tribal Cultural Resources: SPRs CUL-1 through CUL-8 and Mitigation Measure CUL-2
- Biological Resources, including Special Status Plants, ESHA, Invasive species, and Wildlife: SPRs BIO-1 through BIO-12 and Mitigation Measures BIO-1a, BIO-1b, BIO-1c, BIO-2a, BIO-2b, BIO-2c, BIO 2d, BIO-2e, BIO-2f, BIO-2g, BIO-3a, BIO-3b, BIO-3c, BIO-4, and BIO-5
- Geology, Soils, and Mineral Resources: SPRs GEO- 1 through GEO-8
- Greenhouse Gas Emissions: SPR GHG-1 and Mitigation Measure GHG-2
- Hazardous Material and Public Health and Safety: SPRs HAZ-1 through HAZ-9 and Mitigation Measure HAZ-3
- Hydrology and Water Quality: SPRs HYD-1 through HYD-6
- Noise: SPRs NOI-1 through NOI-6
- Recreation: SPR REC-1
- Transportation: SPR TRAN-1
- Public Service and Utilities: SPR UTIL-1

Project Standard 3: Coastal Vegetation Treatment Standards for Marin County

Projects shall be fully consistent with the Coastal VTS for Marin County attached as Exhibit A of this PWP.

Project Standard 4: Defensible Space as a component of Fire Prevention

Qualifying projects under this PWP may include treatment activities (as defined under the CalVTP) within 100 feet from structures (or to the property line, whichever is closer), unless accompanied by a clear rationale, provided by a qualified professional, as to why additional defensible space is required to reduce fire risk or other regulations require a greater distance (PRC § 4291), with any additional treatment areas around structures and communities focused on forest health. Such projects shall comply with all of the following conditions:

- Treatment activities within the applicable defensible space zone shall be limited to fuel modification of existing vegetation necessary for establishing and/or maintaining the minimum defensible space required pursuant to PRC Section 4291.
- Treatment activities within the applicable defensible space zone shall be undertaken as part of a larger, contiguous Ecological Restoration project and/or WUI Fuel Reduction project;
- To the maximum extent feasible, treatment activities within the applicable defensible space zone shall be designed to protect ESHA and wetlands, including through compliance with the Coastal VTS provided under Exhibit A of this PWP and the preparation of individual property-focused fuel modification plans, where necessary to address potential ESHA impacts and other coastal resource impacts;
- Where impacts to ESHA or wetlands are anticipated, treatment activities shall be designed in consultation with applicable resource protection agencies, including the Coastal Commission and relevant fire authority (e.g., County Fire, Bolinas Fire Protection District, Inverness Public Utility District, Southern Marin Fire Protection

District, Stinson Beach Fire Protection District, Muir Beach Volunteer Fire Department/Muir Beach Community Services District); and,

- Projects shall be implemented pursuant to contractual agreements with landowners specifying the terms and conditions of the defensible space project, including scope of work, location, duration (e.g., one-time or ongoing maintenance), responsibility, and liability, as well as other terms and conditions as necessary.

Project Standard 5: Project and Program Monitoring

Monitoring for each PWP project shall occur consistent with all specified CalVTP monitoring requirements. In addition, 5 years following certification of this PWP, Marin Wildfire shall prepare a 5-year programmatic review identifying at a minimum: the status of individual projects implemented under the PWP, as well as projects expected to be implemented under the PWP; level of program completion (e.g., number of acres treated, high priority areas for the subsequent 5 years; collective monitoring results; constraints and lessons learned, including potential opportunities for adaptive management; and program success). The programmatic review shall be submitted to the Coastal Commission and Marin County. At the 10-year mark or dissolution of Marin Wildfire, whichever occurs sooner, following certification of the PWP, a final programmatic review shall be prepared by Marin Wildfire and submitted to the County and Coastal Commission for review.

Project Standard 6: Tribal Coordination

Marin Wildfire shall notify California Native American tribes with traditional and cultural affiliation to each PWP project area during planning and prior to treatment activities that will potentially entail ground disturbance. As early as feasible during project planning, the relevant California Native American tribes shall be notified with a letter that includes a brief description, project maps and/or spatial data, and a request for input. The location of archaeological and tribal resources is confidential and shall only be made available when Marin Wildfire is engaged in consultation with a tribal group; initial letters shall not include the location of known archaeological sites or culturally sensitive areas. Information shared between Marin Wildfire and a tribe shall be sent via a protected and secured electronic transmittal link.

Any input from California Native American tribes regarding specific resources that could be affected shall be considered during project prioritization, design, and implementation. If treatment is planned for areas of known or previously recorded precontact and/or tribal cultural resources, the relevant California Native American tribes shall be invited to review and comment on avoidance protocols and participate in surveys and monitoring.

Project Standard 7: Community Engagement

To the maximum extent feasible, and through early and meaningful engagement, Marin Wildfire shall prioritize, design, and implement projects that benefit communities with lower income within the PWP program area. Meaningful engagement methods may include, but are not limited to, materials translation, radio broadcasts, social media outreach, in-person gatherings, webinars, and publication of materials on agency websites.

5 Local Planning Context

5.1 Marin County Local Coastal Program

The Marin County Board of Supervisors and the Coastal Commission approved the Marin County LCP in 1980 and 1981, respectively. The most recent certified LCP Amendments went into effect in August of 2021 and include the full LCP except for the environmental hazards policies that are currently in progress. The certified LCP environmental hazards policies from 2004 will continue in effect until amended. Marin Wildfire has reviewed the LCP and collaborated with the Marin County Community Development Agency in development of this PWP. The PWP has been designed to meet the requirements of the LCP. As such, future forest health and fire prevention projects within the Coastal Zone and approved under this PWP would be consistent with the LCP and would not require additional approvals from Marin County. A summary list of the most relevant LCP policies is provided below.

- Significant stands of trees should be identified and protected (Policy C-ES-2)
- Support management of Tomales Bay State Park and Mount Tamalpais State Park when conducting treatments on State Park lands consistent with the adopted General Plan (Policy C-PK-11)
- The resource values of ESHAs shall be protected by limiting development (Policies C-BIO-1, C-BIO-2, and C-BIO-3)
- Encourage restoration of degraded ESHAs (Policy C-BIO-5)
- Where feasible, require the removal of nonnative, invasive plant species, revegetation of denuded areas with native and non-invasive plants, and provision of primarily native, drought-tolerant plant species for areas of new or replacement planting (Policy C-BIO-6)

5.2 Cumulative Planning Context

The cumulative planning context of the Marin Wildfire Forest Health and Fire Resilience projects is informative to the PWP. Related projects proposed, planned, or currently underway in the vicinity of the PWP area are summarized below to describe the cumulative planning setting. The CalVTP PEIR satisfied the CEQA requirements for cumulative impact analysis related to vegetation treatment projects conducted consistent with that environmental document.

5.2.1 Point Reyes National Seashore Wildfire Management

In 2004, the Department of Interior, National Park Service (NPS) completed a Fire Management Plan/Environmental Impact Statement (FMP/EIS) for Point Reyes National Seashore and North

District of Golden Gate National Recreation Area. Fire management identified in the FMP/EIS is being used to markedly increase efforts to protect and enhance natural resources, preserve and as appropriate restore historic and cultural resources, and reduce hazardous fuels. The NPS fire management includes prescribed burning and mechanical treatments. Prescribed burning in Bishop pine stands is conducted under conditions that would result in germination and recruitment of new stands of Bishop pine. For road clearing, trees along the sides of the roadways would be limbed up to 10 feet in height, as needed. Native tree species that could be limbed include Douglas-fir and Bishop pine. Trees less than 4 inches in diameter at breast height (DBH) are removed from 10 to 15 feet wide corridors on each side of the road (measured from the edge of the roadway). This width can increase to 20 feet wide where roads cross topographic saddles. While the FMP/EIS concluded that some adverse impacts may occur, in all cases these adverse impacts would be temporary effects related to actions to preserve and restore park resources and values. Overall, the fire management activities identified in the FMP/EIS would result in benefits to park resources.

5.2.2 Tomales Bay State Park PWP

The Tomales Bay State Park Forest Health and Wildfire Resilience Public Works Plan (Tomales Bay PWP) was certified by the CCC on May 9, 2024. The purpose of the Tomales Bay PWP is to improve resilience of forested areas of the park, preserve and steward Bishop pine forest, restore native grasslands and shrublands, reduce future wildfire risk, and reestablish tribal priorities for vegetation management in the Tomales Bay State Park. The Tomales Bay PWP program area encompasses 2,433 acres where future project activities could take place. The Tomales Bay PWP proposes five treatment activities in accordance with the CalVTP including prescribed burning, manual and mechanical treatment, prescribed herbivory, and herbicide application.

5.2.3 Tomales Bay State Park Forest Health and Wildfire Resilience PSA

The Tomales Bay State Park Forest Health and Wildfire Resilience PSA and addendum was approved on October 10, 2024 by the CCC. The PSA/Addendum addresses the components of the CalVTP as required pursuant to CEQA and includes information required pursuant to the Coastal Act and the Tomales Bay State Park PWP. The project involves ecological restoration treatments on up to 1,590 acres within the 2,433-acre project area. The proposed ecological restoration treatment type and the treatment activities would include manual treatments, mechanical treatments, prescribed burning (comprising broadcast or cultural burning, pile burning, and/or air curtain burning), and herbicide application, as evaluated in the CalVTP PEIR.

5.2.4 Marin Wildfire Vegetation Management Projects

Marin Wildfire is currently conducting vegetation treatment projects within the Marin County coastal zone, including roadside vegetation management along evacuation routes. In 2021, the evacuation route project was approved by the Marin Wildfire Board of Directors and aimed to improve evacuation routes and ingress/egress along prioritized roads in Inverness, Tomales,

Bolinas, Stinson, Nicasio, Point Reyes, Olema, and the San Geronimo Valley in the West Marin Zone. The portion of the evacuation route project located within the Coastal Zone under the jurisdiction of the Marin County Local Coastal Program (LCP) triggered the need for a Coastal Development Permit (CDP). The CDP application was filed in June of 2022 and the CDP approved August 18, 2022.

The evacuation route treatments consist of vegetation management along prioritized roadways to improve routes for evacuation and ingress/egress throughout the communities in west Marin County. This work includes thinning of ladder fuels and limbing trees within 10 to 25 feet of roads and up to 15 feet vertically above roads. Treatments target invasive, non-native, and fire-hazardous vegetation and accumulative dead biomass along the roads. Some small trees, 8 inches DBH or smaller, could be removed as part of clearance for ingress and egress and ladder fuel removal. Some individual hazard trees, as determined by a qualified arborist or RPF, may be removed. No scenic, healthy, mature trees would be removed as part of the project.

The Southern Marin Zone - Highway 1 Evacuation Corridor Project consists of a fuel reduction zone to establish and maintain a defensible space zone on NPS lands adjacent to Highway 1 and the Muir Beach residential hillside community. Treatments were developed in close coordination with NPS staff and included the use of manual and mechanical tools to remove and thin understory shrubs and brush, particularly non-native shrubs, and dead and dying trees.

6 Administration, Approval Process, and Program Review

The purpose of this section is to set forth procedures for reviewing and authorizing projects as consistent with the Marin Wildfire's Forest Health and Fire Resilience PWP for vegetation treatment in the Coastal Zone that is carried out pursuant to the Board of Forestry's final PEIR for the CalVTP.

6.1 Roles and Responsibilities

This PWP will help expedite implementation of a series of projects in a comprehensive and coordinated manner to help meet the State's vegetation treatment goals outlined in the CalVTP. As part of this effort, two primary actors will participate in the PWP process; their roles and responsibilities are as follows:

- The CCC shall be responsible for reviewing and acting on the PWP and any amendments to it, as well as all PWP components, including reviewing and acting on the draft and final PSAs submitted as part of the NOIDs, reviewing and acting on all related NOIDs, enforcing NOID (project) conditions, and reviewing monitoring reports.
- Marin Wildfire shall be responsible for drafting the PWP and any amendments, releasing them for public review, and approving them at the local level, as well as preparing or assembling all proposed NOID components, including drafting PSAs, public noticing of NOIDs, submitting NOIDs to the Coastal Commission, and preparing and submitting any other project materials to the Coastal Commission. Marin Wildfire shall, through contractual agreements with other agencies, landowners, contractors, and others, initiate individual projects in coordination with Coastal Commission and County staff and in compliance with the PWP and CalVTP PEIR. Marin Wildfire shall be responsible for the monitoring of project conditions. Marin Wildfire shall partner with other agencies, landowners, contractors, and others to implement the responsibilities above and shall maintain oversight to confirm that all work is consistent with the PWP and NOID processes.

6.2 Procedures for PWP Filing and Certification

For convenience and clarity, this section summarizes relevant statutory and regulatory requirements that apply to the adoption, amendment, and implementation of PWPs. It does not modify those requirements nor preclude their amendment by the Coastal Commission through statutory and regulatory means.

A PWP is a land use planning document that plans for and sets a framework for implementing a specific public works project or array of public works-related activities. A PWP provides a land use planning alternative to an LCP for obtaining approval of large or phased public works projects, as well as any development proposed by a special district, and remains under the authority of the Coastal Commission irrespective of coastal permit jurisdictional boundaries. A PWP is an alternative to project-by-project review for public works, which would otherwise require multiple coastal development permits for different components of the public works project. A PWP must be sufficiently detailed regarding the size, kind, intensity, and location of development to allow the Coastal Commission to determine its consistency with the policies in Chapter 3 of the Coastal Act (pre-LCP certification) or the certified LCP (post-LCP certification). Once the Coastal Commission certifies a PWP, no coastal development permit is required for development that is consistent with the PWP. Instead, Marin Wildfire provides a NOID to the Coastal Commission and other interested persons. The Coastal Commission then reviews the NOID for consistency with the approved PWP; if the Coastal Commission determines that the proposed development described in the NOID is consistent with the PWP, the development may proceed. If the proposed development is not consistent with the PWP, the Coastal Commission will apply conditions to that specific project to achieve consistency with the PWP. If the NOID describes development that is not within the scope of the PWP, the Coastal Commission will not accept the NOID for filing, and Marin Wildfire will need to obtain a PWP amendment before proceeding with it or Marin Wildfire may apply for a CDP for the project instead of or in addition to the NOID for processing in parallel (per the below outlined process).

The Coastal Commission PWP review and approval process does not supplant the review processes required of Marin Wildfire or agencies other than the Coastal Commission by CEQA, National Environmental Policy Act (NEPA), or other laws and regulations. Compliance with the CEQA, NEPA and/or other regulatory requirements are addressed at the project level, such as the CalVTP Program EIR and a project's CalVTP PSA or PSA/Addendum or other required documentation.

Prior to the filing of a PWP for certification by the Coastal Commission, and pursuant to Coastal Act Section 30503 and Sections 13353.5 and 13515 of the Coastal Commission's regulations, maximum opportunities for public participation must be afforded. A public review draft PWP must be made available to the public at least six (6) weeks prior to local adoption of the PWP, including by posting the public draft PWP to the local government's or Marin Wildfire's website and by transmitting it to: members of the public; each local government contiguous with the area subject to the PWP; local governments, special districts, or port or harbor districts that could be directly affected by or whose development plans should be considered in the PWP; relevant regional, state, and federal agencies; and local libraries and media. Posting can be done through electronic means and does not need to be conducted via hard copy. Further, pursuant to Section 13515(d) of the Coastal Commission's Regulations, Marin Wildfire must provide notice of the local hearing on the public draft PWP "not less than ten (10) working days before the hearing". The hearing should also be scheduled for a specific time and, when

feasible, the hearing should be held in the Coastal Zone or in a place easily accessible to residents of the Coastal Zone.

The Public Draft of this PWP was released on July 18, 2025, for public review and comment, which will continue throughout the Coastal Commission review and authorization process. The draft document will be distributed for public review and comment for six (6) weeks, during which time public comment is solicited.

Section 30605 of the Coastal Act allows PWPs to be submitted to the Coastal Commission for review in the same manner prescribed for the review of LCPs as set forth in Chapter 6 (commencing with Section 30500 of the Coastal Act). Sections 13371 and 13356(b)(2) of the Coastal Commission's Regulations require that the Coastal Commission not approve or adopt a PWP unless it finds that there are no feasible alternatives or feasible mitigation measures available that would substantially lessen significant adverse impact that the development may have on the environment. Section 21080.5(a) of CEQA, Section 30605 of the Coastal Act, and Section 13355 of the Coastal Commission's Regulations also require the distribution of environmental information sufficient in detail to enable the Coastal Commission to determine the consistency of the plan with the policies of the Coastal Act or LCP, as applicable.

The Board of Forestry prepared the CalVTP PEIR (November 2019) to evaluate the potential environmental impacts of the proposed CalVTP treatment activities undertaken across the state. The Coastal Commission's environmental analysis for this PWP may draw on facts from the CalVTP PEIR. However, the Coastal Commission has the authority and duty to conduct its own review of the PWP, any amendments, and any project-specific NOIDs under the Coastal Act, and such review will also satisfy any obligations to conduct CEQA review under its certified regulatory program.

This PWP provides for an up to 10- year period in which projects may be carried out consistent with the provisions of the PWP. The Coastal Commission may grant an extension to this timeframe through a future PWP amendment if the Coastal Commission determines that additional time is warranted and that the amendment is consistent with Coastal Act and relevant LCP requirements at that time.

In the event that the PWP needs to be amended following its certification by the Coastal Commission, Sections 13365 – 13371 of the Coastal Commission's Regulations govern the process for such amendments. Section 13366 of the Regulations requires Marin Wildfire (or applicable local government) "to demonstrate that a public hearing at the local level has been held on the proposed amendment within a reasonable time prior to submission of the amendment application to the Commission" consistent with the standards of Section 13353.5 of the California Code of Regulations. Pursuant to Section 13367, a PWP amendment application shall be rejected if it would "lessen or avoid the intended effect, or any conditions, of a certified public works plan." If accepted, the PWP amendment application would be noticed and scheduled for hearing as either a minor amendment (pursuant to Section 13368) and heard at the next regularly scheduled Coastal Commission hearing, or as a regular amendment

(pursuant to Section 13369) and processed in accordance with Sections 13370 – 13371. The hearing requirements for review of the PWP amendment would be the same as provided for review of a PWP, as provided in Section 13356. Any amendments will need to be found consistent with Chapter 3 or the Coastal Act or any relevant LCPs, as they exist at that time.

Lastly, after certification of the PWP, the Coastal Commission continues to retain permit jurisdiction over development on tidelands, submerged lands, and public trust lands, whether filled or unfilled, within the Marin County Coastal Zone. Any PWP-related project that proposes development in such retained jurisdiction areas must obtain a CDP from the Coastal Commission. The Coastal Commission intends to process such CDP applications concurrently with, and to the maximum extent feasible, within the same timeframe as any NOID submitted for the same project. The standard of review for such CDPs is the Chapter 3 policies (PRC §§ 30200 – 30270) of the Coastal Act, and the LCP and PWP may be used as guidance.

Projects included within the scope of the PWP and not located in areas of Coastal Commission retained permit jurisdiction must be processed in accordance with the procedures in this PWP. Proponents of projects that are not within the scope of the PWP (e.g., projects that are not of a type covered by the PWP, or projects proposed by public agencies that are not designed and carried out with Marin Wildfire oversight) may choose (in consultation with the Coastal Commission) to submit a coastal development permit application to the appropriate permitting agency (Marin County or CCC) or to work with Marin Wildfire to have Marin Wildfire submit a PWP amendment, after which point a NOID could be submitted for the project. Private landowners who do not wish to partner with Marin Wildfire to process a project through this PWP must submit a CDP application to the appropriate permitting agency for their project. CDP applications submitted to Marin County will be reviewed for consistency with the County's certified LCP. Under the Federal Coastal Zone Management Act, the Coastal Commission also retains federal consistency review authority over federal agency activities and federally licensed or permitted activities on or adjacent to the project sites. Projects that are fully exempt from the Coastal Act will remain exempt and will not require authorization through the PWP.

6.3 Project Review and Authorization under the PWP

Consistency determinations for individual projects proposed as part of the PWP are made by the Coastal Commission and are subject to public review and comment and a public hearing. Sections 30605 and 30606 of the Coastal Act and Title 14, Section 13359 of the California Code of Regulations govern the Coastal Commission's review process for development proposed pursuant to a certified PWP. Section 30606 of the Coastal Act requires the public agency (i.e. Marin Wildfire for this PWP) proposing the public works project to provide a NOID to the Coastal Commission (and other interested parties, organizations, and governmental agencies), along with data demonstrating the project is consistent with the certified PWP. Once a NOID is deemed complete, it is scheduled for a public hearing within 30 working days, at which time

the Coastal Commission determines whether conditions are required to bring the project into conformance with the approved PWP.

For the purpose of submitting a NOID for an individual project, Marin Wildfire shall comply with the procedures and prepare the documents outlined in the following sections.

6.3.1 Project Development

Prior to starting the Draft PSA, Marin Wildfire shall initiate discussion of a proposed project with Coastal Commission staff by providing the project location and scope and detailing the anticipated benefits and impacts of the project, including expected impacts to coastal resources and potential SPRs and mitigation measures that may be applicable.

6.3.2 Site Visits

To the extent feasible, Marin Wildfire, local government(s), and relevant Coastal Commission staff shall visit the areas proposed for vegetation treatment proposed for inclusion in the PSA, as specified below. At a minimum, Coastal Commission staff shall provide preliminary comments on proposed projects to identify potential issues of concern or suggest project alternatives to explore.

6.3.3 Draft Project-Specific Analysis

Marin Wildfire shall oversee the drafting of a PSA for each project as required by the CalVTP PEIR. The Draft PSA shall be completed in accordance with the requirements of the CalVTP PEIR to determine whether the project qualifies as within the scope of the PEIR, or that the project will not result in any new or substantially more significant impacts than as described in the PEIR or CalVTP. For projects that fall fully outside the treatable landscape or for projects that are too small in scope to warrant use of the PEIR for CEQA compliance,[4] Marin Wildfire will still be required to develop a PSA-equivalent document that includes equivalent data and analysis with all relevant sections of the PSA and a description of how the project adheres to the Coastal VTS in order to be included under this PWP. Projects that fall partially outside the treatable landscape may be addressed through a PSA and addendum to the CalVTP PEIR in compliance with CEQA Guidelines Section 15164. All discussion of PSAs is inclusive of PSAs and addendums or equivalent documents. All PSAs or equivalent documents will include the following:

- A description of the proposed project, including a narrative description of the size, kind, intensity and location of each proposed development and the supporting site plans and elevations or other appropriate maps thereof;
- Environmental documentation for the project(s) including information and CEQA discretionary actions prepared pursuant to or in addition to the CalVTP PEIR, and

[4] Projects that are deemed too small for inclusion in the CalVTP PEIR will still be required to comply with CEQA through project specific Categorical Exemptions, Negative Declarations, or other appropriate review.

an analysis of alternative locations for each proposed development activity, if warranted, due to significant impacts on ESHA or other coastal resources that could be avoided or minimized by implementing in a different location;
- All technical reports associated with the project(s) (e.g., biological reports, geotechnical reports, traffic analyses), including all reports and plans required by the PEIR and PWP;
- The results of consultation with parties interested in, with jurisdiction over, and/or affected by the project(s), including consultations with concerned public entities and agencies, and any additional consultation that might be required or needed;
- All implementing mechanisms associated with the project(s) (including but not limited to CEQA mitigation monitoring reports, legal documents, landowner authorization, etc.);
- The Coastal VTS in this PWP will be explicitly addressed for proposed projects as an exhibit to each PSA; and
- All written public comments received regarding the project(s).

6.3.4 Final Project-Specific Analysis

Following review of the Draft PSA by Coastal Commission staff and any other interested parties that were consulted, Marin Wildfire shall prepare a Final PSA for each project as required by the CalVTP PEIR that incorporates requested revisions, as appropriate, and includes the components required under the Draft PSA (Section 3 above). The Final PSA (or relevant sections, if a project will not be utilizing the PEIR for CEQA compliance) shall be completed in accordance with the requirements of the CalVTP PEIR to determine whether the project qualifies as within the scope of the PEIR and shall additionally provide an analysis of consistency with the Coastal VTS.

6.3.5 Preparation and Submittal of a Notice of Impending Development

Following development of the Final PSA, or in conjunction with preparation of the Final PSA, Marin Wildfire shall prepare a NOID for each project or batch of projects for Coastal Commission review and approval consistent with the PWP. Unless there are unusual or exigent circumstances, Marin Wildfire shall give advanced written notice to the Executive Director of its intent to submit a NOID prior to submitting the NOID. Marin Wildfire shall coordinate with the Executive Director to ensure that a NOID is not submitted at a time when it would be legally infeasible for the Coastal Commission to bring the item to hearing within 30 working days from being submitted and filed as complete (e.g., when the Coastal Commission is not holding a hearing in a particular month). The NOID shall adhere to and include the following procedures and materials:

- **Mailed/Emailed Notice**. At least 30 working days prior to undertaking development activities, Marin Wildfire shall give written notice of its intent to implement a project by submitting a NOID. Marin Wildfire shall send the NOID via first-class mail, e-mail, or other reasonable means, to the following persons, parties and agencies: the Coastal Commission's Executive Director; owners of

record of each property within 100 feet (excluding road rights-of-way) of the proposed project(s); persons residing on properties located within 100 feet (excluding road rights-of-way) of the proposed project(s), as well as those persons residing in greater distances that may need to be noticed pursuant to the CalVTP SPRs and mitigation measures; all local governments and special districts that could be affected; all regional, state, and federal agencies that may have an interest in or be affected; all other persons, parties, and agencies who have requested to receive such notice, either for the project(s) that is the subject of the notice or for all PWP projects; and persons, parties, and agencies that are known by Marin Wildfire to be interested in the specific project(s) that is the subject of the notice and for which Marin Wildfire has a feasible means of reaching that person or entity. Marin Wildfire should also post the NOID on its website in a downloadable format.

- **Notice Content.** The NOID shall be clearly titled as such and shall, at a minimum, include the following information:
  - The description of the proposed project(s), including a narrative description of the size, kind, intensity and location of each proposed development as well as an identification of the existence of the Final PSA, including the existence of supporting materials and documentation (e.g., maps technical documents), and information regarding where and when the NOID and supporting material is available for public review (including where the Final PSA and supporting materials and documentation can be downloaded);
  - Marin Wildfire's and any partner agencies' approval of the project(s), including any locally-adopted resolutions or identification numbers for filing purposes if available; The anticipated date of commencement of development of the project(s);
  - The anticipated date of commencement of development of the project(s);
  - The appropriate Marin Wildfire contact person(s) and their contact information; and,
  - The process for Coastal Commission review of the project(s) (including Coastal Commission contact information and proposed Coastal Commission date of action on the NOID).
- **Posted Notice.** Marin Wildfire shall post the NOID in conspicuous locations at the proposed project(s) site(s) no later than the date that the NOID is sent at least 30 working days prior to commencement of development activities. The Notice shall comply with the following requirements:
  - Notices that are posted shall be printed, clearly visible, and laminated or otherwise weatherproofed so as to be legible at all times.
  - Notices shall be posted at locations on the perimeter (and/or within the perimeter as appropriate) of the proposed project site where the site intersects public use areas (streets, paths, parking lots, etc.). Where project sites do not contain intersections with public use areas, at least one notice shall be posted at

the project site entryway. Notices shall also be posted at the Marin Wildfire office and sent to the Coastal Commission's North Central Coast District office.
  - Notices shall indicate that a NOID has been submitted to the Coastal Commission for the proposed development and shall contain a general description of the nature of the proposed development, as well as Coastal Commission contact information and the date of proposed Coastal Commission action on the NOID.
  - Notices that do not meet the criteria listed above, that otherwise become illegible, or that otherwise are not visible to pedestrians or disappear shall be replaced. All notices shall remain posted until the effective date of authorized commencement of development.
- **Supporting Materials.** Supporting information sufficient to allow the reviewer to determine whether the proposed project is consistent with the certified PWP shall accompany the NOID sent to the Executive Director. At a minimum, the supporting information shall include:
  - The Final PSA;
  - Any final authorization documents from Marin Wildfire and any partner agencies (e.g., resolutions, minute orders, certifications) not included in the Final PSA;
  - Copies of any written public comments received regarding the proposed PWP project;
  - The proposed method of financing the activity, including any grants provided by a public entity; and
  - For the Executive Director only: (a) A mailing list (per the description above under "Mailed/Emailed Notice") with names and addresses for each of the persons, parties, and agencies, where the list is labeled and organized by each of the categories listed; (b) One set of plain (i.e., unadorned with no return address) regular business size (9½ inches by 4⅛ inches) envelopes stamped with first class postage (metered postage is not acceptable) addressed to each of the listed addressees per the mailing list, for each Coastal Commission hearing (if applicable) on the matter (i.e., if there are multiple Coastal Commission hearings on the matter, then multiple envelope sets shall be provided as directed by the Executive Director); alternately, Marin Wildfire may provide a combination of valid email addresses, media, and envelopes or postcards/flyers in a manner acceptable to the Executive Director of the Coastal Commission to ensure transmittal of the Coastal Commission hearing notice to all parties identified in the mailing list, and, (c) Evidence that the NOID has been posted pursuant to the parameters described under "Posted Notice", above (e.g., a site plan with the notice locations noted and/or photos of the notice locations attached).

Any proposed development that is exempt from permitting requirements pursuant to the certified LCP and its provisions carrying out Section 30610 of the Coastal Act and Sections 13250

through 13253 of the Coastal Commission's regulations is also exempt from needing to obtain any authorization through the NOID process. Likewise, consistent with the certified LCP and its provisions carrying out Sections 13250 – 13253 of the Coastal Commission's regulations, development that would be exempt except for its location in a sensitive area – such as repair and maintenance work taking place in environmentally sensitive habitat area – requires authorization through a NOID. Development that is categorically excluded from needing a coastal development permit pursuant to the certified LCP also does not require authorization through a NOID.

6.4 Coastal Commission Review of PWP Components, Including NOIDs

The Coastal Commission shall review project(s) for consistency with the PWP in accordance with the procedures of this section.

6.4.1 Filing the Notice of Impending Development.

Consistent with 14 CCR Sections 13357(a)(5), 13359(a), and 13353-13354, unless there are unusual circumstances, within 5 working days of receipt of the NOID and all applicable supporting information of the project(s), the Executive Director shall review the submittal and shall determine whether additional information is necessary to determine if the proposed project(s) is/are consistent with the PWP, and if additional information is deemed necessary, shall request such information from Marin Wildfire.

- The NOID shall only be deemed filed if the Executive Director determines that the information supplied is consistent with the information requirements of Coastal Act Section 30606 and 14 CCR Sections 13357(a)(5), 13359(a), 13353, and 13354 and is sufficient to allow the Coastal Commission to determine whether the proposed project is consistent with the certified PWP.
- If the Executive Director has requested additional supporting information needed to determine consistency with the PWP, then the notice shall be deemed filed when the Executive Director determines that all necessary supporting information has been received.

6.4.2 Coastal Commission Hearing Deadline

Consistent with 14 CCR Sections 13357(a)(5) and 13359, the thirtieth working day following the day the NOID is deemed filed is the Hearing Deadline. The Hearing Deadline may be extended if, on or before the Hearing Deadline, Marin Wildfire waives its right to a hearing within 30 working days and agrees to an extension to a date certain, no more than 3 months from the Hearing Deadline, to allow for Coastal Commission review of the proposed project(s) at a later hearing.

6.4.3 Coastal Commission Review and Determination of Consistency with PWP

The Executive Director shall report in writing to the Coastal Commission regarding any pending proposed project(s). The Coastal Commission shall review the proposed project(s) at a scheduled public hearing on or before the Hearing Deadline. The Executive Director's report to the Coastal Commission shall include a description sufficient to allow the Coastal Commission to understand the location, nature, and extent of the project(s), and a recommendation regarding the consistency of the proposed project(s) with the certified PWP. On or before the Hearing Deadline the Coastal Commission shall make one of the following determinations:

- Determine that the proposed project(s) is/are consistent with the certified PWP, or
- Determine that conditions are required to render the proposed project(s) consistent with the certified PWP, including identification and adoption of the required conditions.

Following the Coastal Commission's determination, the Executive Director shall inform Marin Wildfire of the Coastal Commission's determination and shall forward any conditions associated with it. If the Coastal Commission has identified conditions required to render the project(s) consistent with the PWP, development shall not be undertaken until the conditions have been incorporated into the project(s).

Coastal Commission review of a proposed project(s) shall be deemed complete on the date of a Coastal Commission determination that the project(s) is/are consistent with the PWP with or without conditions.

Upon completion of Coastal Commission review, Marin Wildfire may commence with project activities provided that any conditions imposed by the Coastal Commission to render the project(s) consistent with the PWP have been incorporated into the project(s).

6.4.4 Effective Date and Expiration Date of PWP Authorizations; Extension of Authorizations

Unless expressly stated otherwise in the approval documents, the effective date of a project authorization shall be the date the Coastal Commission's review of the proposed project is deemed complete pursuant to Section 6.4.3, above.

Unless expressly stated otherwise in the approval documents, project implementation must begin within 2 years following authorization and the expiration date of a project authorization pursuant to this PWP shall be 5 years following its effective date for initial implementation. Thereafter, implementation of the project may not commence unless the authorization has been extended as provided herein, or a new authorization and review by the Coastal Commission has been completed in accordance with PWP provisions for initial review of a proposed project.

6.5 Monitoring Requirements

Following implementation of individual projects under the PWP, Marin Wildfire shall provide monitoring reports in accordance with the requirements (i.e., SPRs and Mitigation Measures) of the CalVTP PEIR. Marin Wildfire shall maintain a record of monitoring reports in Marin Wildfire's office, which shall be made available for public review. Marin Wildfire shall submit a copy of each monitoring report to the Executive Director within 10 working days of its completion.

6.6 Enforcement

In addition to all other available remedies, the provisions of the PWP, NOID authorizations, and the Coastal Act shall be enforceable pursuant to Chapter 9 of PRC Division 20. Any person who performs or undertakes CalVTP-related activities inconsistent with the PWP, any NOID issued pursuant thereto, or the Coastal Act, or who fails to act as required by the PWP, a NOID or the Coastal Act, may, in addition to any other penalties or remedies, be subject to (i) an order pursuant to PRC Sections 30809, 30810, 30811, or 30812 or (ii) civil or administrative liability in accordance with the provisions of PRC Sections 30820, 30821, 30821.6 and 30822.

Marin Wildfire shall require that PWP-related activities are consistent with the PWP and with the terms and conditions of NOID authorizations issued pursuant to the PWP. Marin Wildfire shall investigate in a reasonable time allegations regarding PWP-related activities being undertaken inconsistent with the provisions of the PWP or NOID authorizations, and shall attempt to resolve any such inconsistencies discovered. The Executive Director or the Coastal Commission, may also enforce the terms of the PWP, NOIDs, and the Coastal Act.

6.7 PWP Programmatic Review

Five years following certification of this PWP, Marin Wildfire shall prepare a 5-year programmatic review identifying at a minimum: the status of individual projects implemented under the PWP, as well as projects expected to be implemented under the PWP; level of program completion (e.g., number of acres treated, high priority areas for the subsequent 5 years; collective monitoring results; constraints and lessons learned; and program success). The programmatic review shall be submitted to Marin County and the Coastal Commission. At the 10-year mark following certification of the PWP, a final programmatic review, shall be prepared by Marin Wildfire and submitted to the County and Coastal Commission for review.

7 Glossary of Terms

Term	Definition
"Coastal Commission", or "CCC"	The Coastal Commission is a state agency that regulates the use and development of land and water in the Coastal Zone.
"California Vegetation Treatment Program" and "CalVTP"	The vegetation treatment activities and associated environmental protections developed by the Board of Forestry to reduce the risk of loss of lives and property, reduce fire suppression costs, restore ecosystems, and protect natural resources as well as other assets at risk from wildfire. The CalVTP supports the use of prescribed burning, mechanical treatments, hand crews, herbicides, and prescribed herbivory as tools to reduce hazardous vegetation around communities in the WUI, to construct Fuel Breaks, and to restore healthy ecological fire regimes.
"California Vegetation Treatment Program Environmental Impact Report" and "CalVTP PEIR" and "PEIR"	The certified, final environmental impact report that evaluates the environmental impacts of the CalVTP in accordance with the CEQA and was certified by the Board of Forestry on December 30, 2019, which is available online.
"Coastal Vegetation Treatment Standards" and "Coastal VTS"	The final forest health and fire prevention standards developed by the Coastal Commission, County of Marin, and Marin Wildfire, for the purpose of providing additional standards to or clarification of PEIR SPRs for projects in the Coastal Zone covered by this PWP that fall within the scope of the PEIR.
"development"	On land, in or under water, the placement or erection of any solid material or structure; discharge or disposal of any dredged material or of any gaseous, liquid, solid, or thermal waste; grading, removing, dredging, mining, or extraction of any materials; change in the density or intensity of use of land, including, but not limited to, subdivision pursuant to the Subdivision Map Act (commencing with Section 66410 of the Government Code), and any other division of land, including lot splits, except where the land division is brought about in connection with the purchase of such land by a public agency for public recreational use; change in the intensity of use of water, or of access thereto; construction, reconstruction, demolition, or alteration of the size of any structure, including any facility of any private, public, or municipal utility; and the removal or harvesting of major vegetation other than for agricultural purposes, kelp harvesting, and timber operations which are in accordance with a timber harvesting plan submitted pursuant to the provisions of the Z'berg-Nejedly Forest Practice Act of 1973 (commencing with Section 4511) (PRC § 30106).

Term	Definition
"ESHA"	The California Coastal Act defines environmentally sensitive habitat areas (ESHA) as any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments (California Coastal Act Section 30107.5). Plant or animal life includes assemblages, communities, ecosystem, etc. ESHA includes plant or animal sensitivity to human development and degradation, changing climate, habitat fragmentation, noise or lighting, landform alteration, vulnerability to invasive species, and the removal of major vegetation. **Rarity**: Species and habitats qualify as ESHA in terms of rarity include the following: • Global or State 1, 2, or 3 ranked vegetation communities[5] • Global or State 1, 2, or 3 ranked plant and animal species • Federal (Endangered Species Act) or State (California Endangered Species Act) endangered or threatened species • California Native Plant Society 1B and 2B ranked plants • California Species of Special Concern • California Fully Protected Species • Federal or State candidate endangered or threatened species • Habitats that support any of the above resources Additionally, rarity may also consider genetically-isolated populations, species on watch lists within a specific geography, or other statuses from expert associations such as IUCN, BLM, or USFS. **Especially Valuable**: A special ESHA determination may be made based on an area constituting "especially valuable habitat" when it is of a special nature, such as providing a pristine example of a habitat type or representing an unusual species assemblage or ecotone. A special determination may also be made based on an area's special role in the ecosystem (e.g., supporting important ecological linkages, representing the edges of species' ranges that harbor genetic diversity, or tree groves supporting nesting raptors or monarch butterfly colonies).
"Executive Director of the Commission" and "Executive Director"	The Executive Director of the CCC or his/her designee.
"feasible"	That which is capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors.

[5] For sensitive natural communities, ESHA is generally characterized by associations, but alliances may be used at a minimum. Where alliances are considered sensitive, all associations would be considered sensitive and qualify as ESHA. For alliances that are not considered sensitive, associations under the alliance may be considered sensitive and qualify as ESHA.

7 GLOSSARY OF TERMS

Term	Definition
"fire prevention"	The removal of fuels at the interface of communities and wildland areas for the purpose of protecting communities, infrastructure, structures, and people. Fire prevention includes the defensible space clearance area around structures and homes as well as the removal of invasive and non-native vegetation, dead and dying vegetation, and fire hazardous vegetation beyond the defensible space clearance area.
"fuel break"	Linear zones of less dense to significantly less dense vegetation often associated with an existing road, community, or right-of-way with the purpose of slowing the spread of wildfire, creating a staging area for firefighting efforts, and providing ingress/egress during a wildfire. Fuel breaks include shaded fuel breaks, which are one type of fuel break. Shaded fuel breaks, as defined by the CalVTP, are used in forested areas where the tree canopy is thinned to reduce the potential for a crown fire, but shade from the retained canopy remains. In Marin County, typically a fuel break involves understory thinning and removal of ladder fuels, with targeted tree thinning and removal, in forest and woodlands. In grasslands, a fuel break typically involves trimming of grasses and removal of encroaching shrubs and trees.
"forest health"	The restoration of the landscape by reestablishing conditions closer to the overall structure and ecological processes of the landscape prior to the practice of fire exclusion. Forest health applies to the broader landscape and aims to create resilience and sustainable forests.
"fuel reduction"	The thinning or removal of vegetation (e.g., invasive species, hazardous trees, ladder fuels) for the purpose of reducing wildfire risk and improving safety for the public and emergency service providers in the event of a wildfire.
"majority"	Majority is defined as greater than 50 percent.
"mitigation measures"	The measures certified in the CalVTP PEIR, or additional measures required by the CCC, to prevent, reduce, or offset adverse environmental effects of a project.
"Notice of Impending Development" and "NOID"	A notice of a Project Proponent's intention to implement one or more of the projects contained in the PWP, which notice shall be provided by Marin Wildfire to the Coastal Commission and to others, as required by the PWP.
"project"	A development component included in the PWP that requires submittal of a PSA, or relevant sections of the PSA for projects that do not fit within the CalVTP PEIR, and a NOID, as well as incorporation of CalVTP PEIR Standard Project Requirements and Mitigation Measures, as well as Coastal Vegetation Treatment Standards.

7 GLOSSARY OF TERMS

Term	Definition
"Project Proponent"	A public agency providing funding for vegetation treatment or with land ownership, land management, or other responsibility in the treatable landscape and seeking to implement vegetation treatments (i.e., projects) consistent with the PEIR for CEQA compliance, as defined by the CalVTP PEIR. Under this PWP, Marin Wildfire is the Project Proponent, though Marin Wildfire may partner with other public agencies to develop and implement projects
"PSA"	The process developed as part of the CalVTP PEIR for Project Proponents to evaluate each vegetation treatment project intended to implement the CalVTP PEIR to determine whether the activity qualifies as 'within the scope' of the PEIR or requires additional environmental documentation or its own independent environmental review.
"public works"	(a) all production, storage, transmission, and recovery facilities for water, sewerage, telephone, and other similar utilities owned or operated by any public agency or by any utility subject to the jurisdiction of the Public Utilities Commission, except for energy facilities; (b) all public transportation facilities, including streets, roads, highways, public parking lots and structures, ports, harbors, airports, railroads, and mass transit facilities and stations, bridges, trolley wires, and other related facilities and (c) all publicly financed recreational facilities, all projects of the State Coastal Conservancy, and any Development by a special district (PRC § 30114).
"Marin Wildfire Prevention Authority" or "Marin Wildfire"	An agency established by Marin County voters under Measure C to fund proactive, wildfire prevention and preparedness efforts in Marin County. Marin Wildfire was formed through a joint powers agreement among 17 member agencies to coordinate fire prevention and resilience activities including: vegetation management, wildfire detection, evacuation plans, public education, defensible space evaluations, and local and specific wildfire prevention efforts.
"Standard Project Requirements" or "SPRs"	The measures required by the CalVTP PEIR that a proposed project must implement to avoid and minimize environmental impacts and comply with applicable laws and regulations. SPRs are intended to be implemented and enforced in the same way as mitigation measures consistent with Section 15126.4 of the State CEQA Guidelines.
"structure"	Includes, but is not limited to, any building, road, pipe, flume, conduit, siphon, aqueduct, telephone line, and electrical power transmission and distribution line.
"treatable landscape"	The appropriate CalVTP areas within which to implement proposed vegetation treatments (i.e., projects) and which were identified by first dividing the SRA and fuel break areas that extend into local jurisdictions into vegetation types from the California Wildlife Habitat Relationship system and excluding those vegetation types with negligible wildfire risks (e.g., wet meadow, estuarine).

Term	Definition
"WUI fuel reduction area"	The WUI fuel reduction area includes the defensible space zone, which involves maintenance of vegetation 100 feet from structures, or further away from structures, and involves the strategic removal of vegetation to prevent or slow the spread of wildfire between communities and wildlands.

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Exhibit A: Coastal Vegetation Treatment Standards for Projects in the PWP Program Area of Marin County

Coastal Vegetation Treatment Standards for Projects in the PWP Program Area of Marin County

1. All projects shall comply with and carry out the requirements of the CalVTP PEIR, including use of approved treatment methods, treatment activities and all applicable standard project requirements (SPRs) and mitigation measures (MMs) described in Exhibit B.
2. A Project-Specific Analysis (PSA) or equivalent data and analysis shall be submitted to the California Coastal Commission (CCC) for review and approval pursuant to the PWP prior to conducting projects. Coordination between the Marin Wildfire Prevention Authority (Marin Wildfire) and CCC shall occur as early as feasible in the design process in order to avoid delays.
3. A PSA or equivalent data and analysis shall include clear problem and goal statements (e.g., overall project goals, fire prevention goals, ecological goals, etc.) associated with each project proposed pursuant to the public works plan. These statements are intended to assist Marin Wildfire and CCC in developing mutual understanding of the potential impacts and benefits – both short- and long-term – for each project. It is expected that this information will be incorporated into each PSA or equivalent document.
4. In the Coastal Zone covered by the PWP, vegetation treatment projects fall into two categories: (1) forest health projects and (2) fire prevention projects. The purpose of forest health projects is to restore and enhance ecosystems, including to prevent fire behavior to which the ecosystem is not adapted. The ecosystems that can be treated under this category include forested ecosystems as well as other ecosystems such as woodland and scrub-dominated systems. The purposes of fire prevention projects are to protect existing structures and infrastructure by reducing the spread and intensity of wildfire in the event of an ignition. Fire prevention projects shall be limited to the applicable defensible space requirement, which is typically 100 feet from structures in accordance with Public Resources Code (PRC) § 4291, unless a qualified professional provides findings that additional fuel modification is necessary to reduce fire risk, which could extend defensible space treatments, and any additional treatment areas around structures and communities focused on forest health.
5. In the Coastal Zone, "environmentally sensitive [habitat] area" (ESHA) is defined as *any area in which plant or animal life, or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and that could be easily disturbed or degraded by human activities and developments* (see Coastal Act Section 30107.5; Land Use Plan Section C-BIO-1). Rarity determinations for habitats and species are made by the California Department of Fish and Wildlife (CDFW), the United States Fish and Wildlife Service (USFWS), and the California Native Plant

Society (CNPS), and are used to support a CCC ESHA determination[6]. In addition, an ESHA determination may be made on the basis of an area constituting 'especially valuable habitat' where it is of a special nature and/or serves a special role in the ecosystem, such as providing a pristine example of a habitat type or supporting important ecological linkages. The Coastal Act and certified Local Coastal Program (LCP) require that environmentally sensitive habitat areas be protected against any significant disruption of habitat values and only allow uses dependent on the ESHA resources within those areas (see Coastal Act Section 30240; Land Use Plan Section C-BIO-2). It is anticipated that many of the forest health and fire prevention activities pursued within the Coastal Zone of Marin County will take place within natural communities that qualify as ESHA (e.g., maritime chaparral, Bishop pine forest, coast live oak woodland and forest).

6. In the Coastal Zone, wetlands are defined as where *lands may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens* (see Coastal Act Section 30121; Local Implementation Plan Section 22.130.030). Administrative Regulations (Section 13577(b)) and the Local Implementation Plan (Section 22.130.030) further elaborate on this definition as *where the water table is at, near, or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes*, and goes on to establish what is effectively a single-parameter rule, meaning that only one of the three parameters used by the U.S. Army Corps of Engineers and various other agencies – hydric soils, hydrophytic vegetation, or hydrology – need be present to delineate a coastal wetland feature. Under the Coastal Act, poorly functioning or degraded areas that meet the definition of wetlands are nonetheless subject to wetland protection policies. Though it is not necessarily anticipated that forest health and fire prevention projects will occur around coastal wetlands, it is important to recognize that they can and do occur as part of the landscape mosaic. Wetlands as referenced in the CalVTP are more narrowly defined than would be recognized under the Coastal Act and LCP. The Coastal Act and LCP generally protect wetlands and allow for impacts in only specific situations (see Coastal Act Section 30233; Land Use Plan Section C-BIO-15).
7. In addition to the requirements of the CalVTP PEIR, the following standards shall also be met in the Marin County Coastal Zone, not only in ESHA but in all habitats:

    a. **Protect Ecosystems**. Forest health projects shall:

[6] CDFW defines natural communities, animals, and plants with a global or state ranking of 1, 2, or 3 as rare and the CCC typically finds these to be ESHA. CCC also typically considers plant and animal species listed by the federal and state endangered species acts (ESA and CESA, respectively) and/or identified under other special status categories (e.g., California Species of Special Concern) and/or identified by the California Native Plant Society (CNPS) as '1B' and '2' plant species as constituting ESHA.

i. proactively restore and enhance ecosystems, protect watersheds, and promote long-term storage of carbon, including through the minimization of forest carbon loss from large and intense wildfires;
ii. restore and maintain vegetation cover to a threshold that reflects appropriate fire frequencies and fire-return intervals on the landscape, considering estimated pre-European settlement conditions as well as future climate change, and the maintenance or improvement of ecosystem health;
iii. maintain vegetation cover and composition to comply with the standards (membership rules) set forth in the online edition of the Manual of California Vegetation (MCV) to avoid unintended habitat conversion[7]; and provide for an appropriate mosaic of native plants by age, size, and class that support the specific habitat being treated. Fire prevention projects shall meet all of the above requirements to the maximum extent feasible, while achieving overall project goals and necessary fire prevention goals, and any deviations shall be clearly explained and identified in the PSA or equivalent document.

b. **Protect Wetlands.** Coastal wetland boundaries and 100-foot buffers around them shall be delineated, within which the following shall apply:
i. limit treatment activities within wetland boundaries to those that would restore ecological benefits to the wetlands or would maintain wetland habitat quality while improving surrounding ecosystems, including ESHAs, and limit activities to the implementation of prescribed (broadcast) burning, and allow for this only where determined by a qualified RPF or qualified professional that:
    a. no special-status species are present;
    b. habitat function would be maintained or enhanced/restored;
    c. the burn shall occur within the expected fire return interval for the vegetation communities present;
    d. no soil disturbance, mechanical treatments, or equipment or vehicle access shall occur;
    e. no pile burning shall occur; and,
    f. no broadcast burn ignition (including the associated use of accelerants) shall occur within wetlands.
ii. limit treatment activities within wetland buffers to those that would restore ecological benefits to the wetlands or would maintain wetland habitat quality while improving surrounding ecosystems, including ESHAs. Within the wetland buffer:

[7] Membership rules are quantitative definitions used to assign field samples to vegetation types based on data analysis and can include species constancy, cover values, and the presence of indicator species.

a. no broadcast burn ignition (including the associated use of accelerants) shall occur, and
b. hand containment lines intended to facilitate prescribed (broadcast) burns are the only type of containment lines that shall be allowed within the wetland buffer. Prohibit any hand containment lines within a minimum of 50 feet from any wetland unless avoidance of 50 feet would make broadcast burning for ecological restoration infeasible, in which case, buffer encroachment shall be limited to the maximum extent feasible while allowing for necessary burn implementation

c. **Use Vegetation Removal Hierarchy.** Except for prescribed fire project components, a vegetation removal hierarchy shall be identified and implemented for each project to obtain the vegetation cover threshold identified by a Registered Professional Forester or qualified professional as necessary while ensuring that unintended habitat conversion does not occur and that vegetation cover is sufficient to support the project's ecological goals. In order of priority and application, the hierarchy shall be as follows:

i. thinning and removal of dead, dying and diseased foliage, shrubs (except that some snags should be retained to provide wildlife shelter, dens, etc.);
ii. removal of invasive species (with consideration regarding whether the community provides habitat for sensitive species); and
iii. removal of native species that are not listed as endangered, threatened, rare, or otherwise especially valuable, with the end goal of having appropriate species composition in the plant community with a mix of vegetation age, height and density.

In all cases, indicator species and diagnostic species appropriate to the vegetation community type shall be maintained in accordance with the standards (membership rules) set forth by the online edition of the MCV, with the intention of maintaining cover and composition consistent with meeting project ecological goals. For Fire prevention projects, additional vegetation removal may be allowed if maintaining such vegetation consistent with project ecological goals would result in an unacceptable fire risk to existing structures and infrastructure, and the removal is the minimum necessary to protect existing structures and infrastructure. Any such additional removal shall be clearly explained and identified in the PSA or equivalent document. Lastly, if vegetation cover threshold goals, as articulated in the online edition of the MCV, cannot be met, then removal of endangered, threatened, rare or otherwise especially valuable species and habitats that would be otherwise prohibited may be considered only if: such removal is critical to reduce the area's fire risk or improving ecological resilience to catastrophic fire; removal is accompanied by restoration or enhancement such that the overall project provides net benefits to the habitat; and no other less damaging alternative exists that meets the project goals.

d. **Limit Treatment within Chaparral and Coastal Sage Scrub.** Treatment activities (as defined under the CalVTP) shall not occur within chaparral and coastal sage scrub habitat unless designed to avoid type conversion and maintain habitat function and required to establish and/or maintain the minimum defensible space of a building or structure within the County's WUI. Such treatment shall be designed to protect chaparral and coastal sage scrub habitat and its indicator species to the maximum extent feasible while meeting the minimum defensible space requirements pursuant to PRC 4291.

e. **Determine Suitable Use of Prescribed Fire.** Prescribed fire may be allowed if it is found to be the least environmentally damaging feasible alternative to achieving project goals and/or most ecologically beneficial. Broadcast burning may be used in combination with other treatment methods to restore the natural fire return interval prior to fire exclusion.

f. **Control Invasive Species.** Treatment activities and treatment types shall limit the spread of invasive species and prevent the spread of plant pathogens in all habitats, including those habitats that are not determined to be sensitive natural communities, riparian habitats, or oak woodlands.

g. **Limit Equipment Types.** All projects shall be carried out using the least invasive type of equipment feasible. Projects shall avoid the use of large masticators, track vehicles, and other heavy equipment, where feasible. When such heavy equipment is used, it shall remain on existing roads to the extent feasible. In riparian habitat, the use of heavy equipment shall be prohibited, except when there is no feasible alternative and when authorized through a valid Lake and Streambed Alteration Agreement and/or, if applicable, Clean Water Act 401 Certification, and when reviewed and approved by the Executive Director.

h. **Limit Herbicide Use.** Herbicides shall be avoided to the maximum extent feasible and may be used only if such treatment activities are the least environmentally damaging feasible alternative, while still achieving project objectives, and will not result in significant adverse impacts to sensitive ecological resources (e.g., when used to control of invasive species). Dab or paint methods of herbicide application shall be preferentially used over wand or other targeted spray methods of application, where feasible.

i. **Protect Coastal Viewshed.** All treatment-related equipment and vehicles shall be stored outside of major public viewing areas, if stored for longer than 2 continuous weeks and may rely on existing vegetation to screen visibility. Treatments shall be planned and implemented to avoid significant breaks in the coastal viewshed, relying on techniques such as feathering and gradients along treatment area peripheries to blend with the surrounding landscape.

j. **Limit Accelerants.** Accelerants shall only be allowed for use in prescribed fire applications. The use of accelerants that could significantly disrupt or degrade ESHA or wetlands is prohibited.

k. **Limit the Need for Soil Stabilization.** The use of riprap and/or chemical soil stabilizers that could significantly disrupt or degrade ESHA or wetlands is prohibited.

l. **Protect Coastal Public Access and Recreation.** Coastal public access and recreational opportunities shall be preserved during project operations to the maximum extent feasible, including by, but not limited to, minimizing trail closures, limiting the use of public parking spaces for staging operations, posting accessway signage and using flaggers, and designing construction access corridors in a manner that has the least impact on coastal public access. Following the completion of forest health projects and fire prevention projects, all affected coastal public access and recreational amenities shall be restored to existing conditions, in a manner that maximizes coastal public access and recreation.

Exhibit B: CalVTP Standard Project Requirements and Mitigation Measures

CalVTP Standard Project Requirements and Mitigation Measures

Marin Wildfire shall perform or cause to be performed the following in accordance with Table B-1 and Table B-2 for all projects proposed under the PWP:

Table B-1 Summary of CalVTP Standard Project Requirements (SPR) Description

Standard Project Requirements		SPR Description
Administrative		
SPR AD-1	Project Proponent Coordination	For treatments coordinated with CAL FIRE, CAL FIRE will meet with the project proponent to discuss all natural and environmental resources that must be protected using SPRs and any applicable mitigation measures; identify any sensitive resources onsite; and discuss resource protection measures. For any prescribed burn treatments, CAL FIRE will also discuss the details of the burn plan in the incident action plan (IAP). This SPR applies to all treatment activities and treatment types.
SPR AD-2	Delineate Protected Resources	The project proponent will clearly define the boundaries of the treatment area and protected resources on maps for the treatment area and with highly-visible flagging or clear, existing landscape demarcations (e.g., edge of a roadway) prior to beginning any treatment to avoid disturbing the resource. "Protected Resources" refers to environmentally sensitive places within or adjacent to the treatment areas that would be avoided or protected to the extent feasible during planned treatment activities to sustain their natural qualities and processes. This work will be performed by a qualified person, as defined for the specific resource (e.g., qualified Registered Professional Forester or biologist). This SPR applies to all treatment activities and treatment types.
SPR AD-3	Consistency with Local Plans, Policies, and Ordinances	The project proponent will design and implement the treatment in a manner that is consistent with applicable local plans (e.g., general plans, Community Wildfire Protection Plans, CAL FIRE Unit Fire Plans), policies, and ordinances to the extent the project is subject to them. This SPR applies to all treatment activities and treatment types, including treatment maintenance.
SPR AD-4	Public Notifications for Prescribed Burning	At least 3 days prior to the commencement of prescribed burning operations, the project proponent will: 1) post signs along the closest public roadway to the treatment area describing the activity and timing, and requesting persons in the area to contact a designated representative of the project proponent (contact information will be provided with the notice) if they have questions or smoke concerns; 2) publish a public interest notification in a local

Standard Project Requirements		SPR Description
		newspapers or other widely distributed media source describing the activity, timing, and contact information; 3) send the local county supervisor and county administrative officer (or equivalent official responsible for distribution of public information) a notification letter describing the activity, its necessity, timing, and measures being taken to protect the environment and prevent prescribed burn escape. This SPR applies only to prescribed burn treatment activities and all treatment types, including treatment maintenance.
SPR AD-5	Maintain Site Cleanliness	If trash receptacles are use on-site, the project proponent will use fully covered trash receptacles with secure lids (wildlife proof) to contain all food, food scraps, food wrappers, beverages, and other worker generated miscellaneous trash. Remove all temporary non-biodegradable flagging, trash, debris, and barriers from the project site upon completion of project activities. This SPR applies to all treatment activities and all treatment types.
SPR AD-6	Public Notifications for Treatment Projects	One to three days prior to the commencement of a treatment activity, the project proponent will post signs in a conspicuous location near the treatment area describing the activity and timing, and requesting persons in the area to contact a designated representative of the project proponent (contact information will be provided with the notice) if they have questions or concerns. This SPR applies to all treatment activities and all treatment types. Prescribed burning is subject to the additional notification requirements of SPR AD-4.
SPR AD-7	Provide Information on Proposed, Approved, and Completed Treatment Projects	For any vegetation treatment project using the CalVTP PEIR for CEQA compliance, the project proponent will provide the information listed below to the Board or CAL FIRE during the proposed, approved, and completed stages of the project. The Board or CAL FIRE will make this information available to the public via an online database or other mechanism. Information on proposed projects (PSA in progress): • GIS data that include project location (as a point); • Project size (acres); • Treatment types and activities; and • Contact information for a representative of the project proponent. • Information on approved projects (PSA complete): • A completed PSA Environmental Checklist; • A completed Mitigation Monitoring and Reporting Program (using Attachment A to the Environmental Checklist);

Standard Project Requirements		SPR Description
		• GIS data that include a polygon(s) of the project area, showing the extent of each treatment type included in the project (ecological restoration, fuel break, WUI fuel reduction) • Information on completed projects: • GIS data that include a polygon(s) of the treated area, showing the extent of each treatment type implemented (ecological restoration, fuel break, WUI fuel reduction) • A post-project implementation report (referred to by CAL FIRE as a Completion Report) that includes – Size of treatment area (typically acres); – Treatment types and activities; – Dates of work; – A list of the SPRs and mitigation measures that were implemented – Any explanations regarding implementation if required by SPRs and mitigation measures (e.g., explanation for feasibility determination required by SPR BIO-12; explanation for reduction of a no-disturbance buffer below the general minimum size described in Mitigation Measures BIO-1a and BIO-2b). This SPR applies to all treatment activities and all treatment types.
SPR AD-8	Request Access for Post-Treatment Assessment	During contract development, CAL FIRE will include access to the treated area over a prescribed period (usually up to three years) to assess treatment effectiveness in achieving desired fuel conditions and other CalVTP objectives as well as any necessary maintenance, as a contract term for consideration by the landowner. For public landowners, access to the treated area over a prescribed period will be a requirement of the executed contract. This SPR applies to all treatment activities and all treatment types.
SPR AD-9	Obtain a Coastal Development Permit for Proposed Treatment Within the Coastal Zone Where Required	All treatment projects in the Coastal Zone will be reviewed by the local Coastal Commission district office or local government with a certified LCP
Aesthetic and Visual Resource		
SPR AES-1	Vegetation Thinning and Edge Feathering	The project proponent will thin and feather adjacent vegetation to break up or screen linear edges of the clearing and mimic forms of natural clearings as reasonable or appropriate for vegetation conditions. In general, thinning and feathering in irregular patches of varying

Standard Project Requirements		SPR Description
		densities, as well as a gradation of tall to short vegetation at the clearing edge, will achieve a natural transitional appearance. The contrast of a distinct clearing edge will be faded into this transitional band. This SPR only applies to mechanical and manual treatment activities and all treatment types, including treatment maintenance.
SPR AES-2	Avoid Staging within Viewsheds	The project proponent will store all treatment-related materials, including vehicles, vegetation treatment debris, and equipment, outside of the viewshed of public trails, parks, recreation areas, and roadways to the extent feasible. The project proponent will also locate materials staging and storage areas outside of the viewshed of public trails, parks, recreation areas, and roadways to the extent feasible. This SPR applies to all treatment activities and treatment types, including treatment maintenance.
SPR AES-3	Provide Vegetation Screening	The project proponent will preserve sufficient vegetation within, at the edge of, or adjacent to treatment areas to screen views from public trails, parks, recreation areas, and roadways as reasonable or appropriate for vegetation conditions. This SPR applies to all treatment activities and all treatment types, including treatment maintenance.
Air Quality		
SPR AQ-1	Comply with Air Quality Regulations	The project proponent will comply with the applicable air quality requirements of air districts within whose jurisdiction the project is located. This SPR applies to all treatment activities and all treatment types, including treatment maintenance.
SPR AQ-2	Submit Smoke Management Plan	The project proponent will submit a smoke management plan for all prescribed burns to the applicable air district, in accordance with 17 CCR Section 80160. Pursuant to this regulation a smoke management plan will not be required for burns less than 10 acres that also will not be conducted near smoke sensitive areas, unless otherwise directed by the air district. Burning will only be conducted in compliance with the burn authorization program of the applicable air district(s) having jurisdiction over the treatment area. Example of a smoke management plan is in Appendix PD-2. This SPR applies only to prescribed burning treatment activities and all treatment types, including treatment maintenance.
SPR AQ-3	Create Burn Plan	The project proponent will create a burn plan using the CAL FIRE burn plan template for all prescribed burns. The burn plan will include a fire behavior model output of First Order Fire Effects Model and BEHAVE or other fire behavior modeling simulation and that is performed by a qualified fire behavior technical specialist that predicts fire behavior, calculates consumption of fuels, tree mortality, predicted emissions, greenhouse gas emissions, and soil heating. The

Standard Project Requirements		SPR Description
		project proponent will minimize soil burn severity from broadcast burning to reduce the potential for runoff and soil erosion. The burn plan will be created with input from a qualified technician or certified State burn boss. This SPR applies only to prescribed burning treatment activities and all treatment types, including treatment maintenance.
SPR AQ-4	Minimize Dust	To minimize dust during treatment activities, the project proponent will implement the following measures: • Limit the speed of vehicles and equipment traveling on unpaved areas to 15 miles per hour to reduce fugitive dust emissions, in accordance with the California Air Resources Board (CARB) Fugitive Dust protocol. • If road use creates excessive dust, the project proponent will wet appurtenant, unpaved, dirt roads using water trucks or treat roads with a non-toxic chemical dust suppressant (e.g., emulsion polymers, organic material) during dry, dusty conditions. Any dust suppressant product used will be environmentally benign (i.e., non-toxic to plants and will not negatively impact water quality) and its use will not be prohibited by ARB, EPA, or the State Water Resources Control Board (SWRCB). The project proponent will not over-water exposed areas such that the water results in runoff. The type of dust suppression method will be selected by the project proponent based on soil, traffic, site-specific conditions, and air quality regulations. • Remove visible dust, silt, or mud tracked-out on to public paved roadways where sufficient water supplies and access to water is available. The project proponent will remove dust, silt, and mud from vehicles at the conclusion of each workday, or at a minimum of every 24 hours for continuous treatment activities, in accordance with Vehicle Code Section 23113. • Suspend ground-disturbing treatment activities, including land clearing and bulldozer lines, when there is visible dust transport (particulate pollution) outside the treatment boundary, if the particulate emissions may "cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any of those persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property," per Health and Safety Code Section 41700. • This SPR applies to all treatment activities and treatment types, including treatment maintenance.
SPR AQ-5	Avoid Naturally Occurring Asbestos	The project proponent will avoid ground-disturbing treatment activities in areas identified as likely to contain naturally occurring asbestos (NOA) per maps and guidance published by the California Geological Survey, unless an Asbestos Dust Control Plan (17 CCR Section 93105) is

Standard Project Requirements		SPR Description
		prepared and approved by the air district(s) with jurisdiction over the treatment area. Any NOA-related guidance provided by the applicable air district will be followed. This SPR applies to all treatment activities and treatment types, including treatment maintenance.
SPR AQ-6	Prescribed Burn Plan Safety Measures	Prescribed burns planned and managed by non-CAL FIRE crews will follow all safety procedures required of CAL FIRE crew, including the implementation of an approved Incident Action Plan (IAP). The IAP will include the burn dates; burn hours; weather limitations; the specific burn prescription; a communications plan; a medical plan; a traffic plan; and special instructions such as minimizing smoke impacts to specific local roadways. The IAP will also assign responsibilities for coordination with the appropriate air district, such as conducting onsite briefings, posting notifications, weather monitoring during burning, and other burn related preparations. This SPR applies only to prescribed burning treatment activities and all treatment types, including treatment maintenance.
Archaeological, Historical, and Tribal Cultural Resources		
SPR CUL-1	Conduct Records Search	An archaeological and historical resource record search will be conducted per the applicable state or local agency procedures. Instead of conducting a new search, the project proponent may use recent record searches containing the treatment area requested by a landowner or other public agency in accordance applicable agency guidance. This SPR applies to all treatment activities and treatment types, including treatment maintenance.
SPR CUL-2	Contact Geographically Affiliated Native American Tribes	The project proponent will obtain the latest Native American Heritage Commission (NAHC) provided Native Americans Contact List. Using the appropriate Native Americans Contact List, the project proponent will notify the California Native American Tribes in the counties where the treatment activity is located. The notification will contain the following: • A written description of the treatment location and boundaries. • Brief narrative of the treatment objectives. • A description of the activities used (e.g., prescribed burning, mastication) and associated acreages. • A map of the treatment area at a sufficient scale to indicate the spatial extent of activities. • A request for information regarding potential impacts to cultural resources from the proposed treatment. • A detailed description of the depth of excavation, if ground disturbance is expected.

Standard Project Requirements		SPR Description
		In addition, the project proponent will contact the NAHC for a review of their Sacred Lands File. This SPR applies to all treatment activities and treatment types, including treatment maintenance.
SPR CUL-3	Pre-field Research	The project proponent will conduct research prior to implementing treatments as part of the cultural resource investigation. The purpose of this research is to properly inform survey design, based on the types of resources likely to be encountered within the treatment area, and to be prepared to interpret, record, and evaluate these findings within the context of local history and prehistory. The qualified archaeologist and/or archaeologically-trained resource professional will review records, study maps, read pertinent ethnographic, archaeological, and historical literature specific to the area being studied, and conduct other tasks to maximize the effectiveness of the survey. This SPR applies to all treatment activities and treatment types, including treatment maintenance.
SPR CUL-4	Archaeological Surveys	The project proponent will coordinate with an archaeologically trained resource professional and/or qualified archaeologist to conduct a site-specific survey of the treatment area. The survey methodology (e.g., pedestrian survey, subsurface investigation) depends on whether the area has a low, moderate, or high sensitivity for resources, which is based on whether the records search, pre-field research, and/or Native American consultation identifies archaeological or historical resources near or within the treatment area. A survey report will be completed for every cultural resource survey completed. The specific requirements will comply with the applicable state or local agency procedures. This SPR applies to all treatment activities and treatment types, including treatment maintenance.
SPR CUL-5	Treatment of Archaeological Resources	If cultural resources are identified within a treatment area, and cannot be avoided, a qualified archaeologist will notify the culturally affiliated tribe(s) based on information provided by NAHC and assess, whether an archaeological find qualifies as a unique archaeological resource, an historical resource, or in coordination with said tribe(s), as a tribal cultural resource. The project proponent, in consultation with culturally affiliated tribe(s), will develop effective protection measures for important cultural resources located within treatment areas. These measures may include adjusting the treatment location or design to entirely avoid cultural resource locations or changing treatment activities so that damaging effects to cultural resources will not occur. These protection measures will be written in clear, enforceable language, and will be included in the survey report in accordance with applicable state or local agency procedures. This SPR applies to all treatment activities and treatment types, including treatment maintenance.

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

Standard Project Requirements	SPR Description
	where the treatment will occur. It will also include review of the best available, current data for the area, including vegetation mapping data, species distribution/range information, CNDDB, California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California, relevant BIOS queries, and relevant general and regional plans. Reconnaissance-level biological surveys will be general surveys that include visual and auditory inspection for biological resources to help determine the environmental setting of a project site. The qualified surveyor will 1.) identify and document sensitive resources, such as riparian or other sensitive habitats, sensitive natural community, wetlands, or wildlife nursery site or habitat (including bird nests), and 2.) assess the suitability of habitat for special-status plant and animal species. The surveyor will also record any incidental wildlife observations. For each treatment project, habitat assessments will be completed at a time of year that is appropriate for identifying habitat and no more than one year prior to the submittal of the PSA, unless it can be demonstrated in the PSA that habitat assessments older than one year remain valid (e.g., site conditions are unchanged and no treatment activity has occurred since the assessment). If more than one year passes between completion of the PSA and initiation of the treatment project, the project proponent will verify the continued accuracy of the PSA prior to beginning the treatment project by reviewing for any data updates and/or visiting the site to verify conditions. Based on the results of the data review and reconnaissance-level survey, the project proponent, in consultation with a qualified RPF or biologist, will determine which one of the following best characterizes the treatment: 1. **Suitable Habitat Is Present but Adverse Effects Can Be Clearly Avoided.** If, based on the data review and reconnaissance-level survey, the qualified RPF or biologist determines that suitable habitat for sensitive biological resources is present but adverse effects on the suitable habitat can clearly be avoided through one of the following methods, the avoidance mechanism will be implemented prior to initiating treatment and will remain in effect throughout the treatment: a. by physically avoiding the suitable habitat, or b. by conducting treatment outside of the season when a sensitive resource could be present within the suitable habitat or outside the season of sensitivity (e.g., outside of special-status bird nesting season, during dormant season of sensitive annual or geophytic plant species, or outside of maternity and rearing season at wildlife nursery sites). Physical avoidance will include flagging, fencing, stakes, or clear, existing landscape demarcations (e.g., edge of a roadway) to delineate the boundary of the avoidance area

Standard Project Requirements		SPR Description
		around the suitable habitat. For physical avoidance, a buffer may be implemented as determined necessary by the qualified RPF or biologist. 2. **Suitable Habitat is Present and Adverse Effects Cannot Be Clearly Avoided.** Further review and surveys will be conducted to determine presence/absence of sensitive biological resources that may be affected, as described in the SPRs below. Further review may include contacting USFWS, NOAA Fisheries, CDFW, CNPS, or local resource agencies as necessary to determine the potential for special-status species or other sensitive biological resources to be affected by the treatment activity. Focused or protocol-level surveys will be conducted as necessary to determine presence/absence. If protocol surveys are conducted, survey procedures will adhere to methodologies approved by resource agencies and the scientific community, such as those that are available on the CDFW webpage at: https://www.wildlife.ca.gov/Conservation/Survey-Protocols. Specific survey requirements are addressed for each resource type in relevant SPRs (e.g., additional survey requirements are presented for special-status plants in SPR BIO-7). This SPR applies to all treatment activities and treatment types, including treatment maintenance.
SPR BIO-2	Require Biological Resource Training for Workers	The project proponent will require crew members and contractors to receive training from a qualified RPF or biologist prior to beginning a treatment project. The training will describe the appropriate work practices necessary to effectively implement the biological SPRs and mitigation measures and to comply with the applicable environmental laws and regulations. The training will include the identification, relevant life history information, and avoidance of pertinent special-status species; identification and avoidance of sensitive natural communities and habitats with the potential to occur in the treatment area; impact minimization procedures; and reporting requirements. The training will instruct workers when it is appropriate to stop work and allow wildlife encountered during treatment activities to leave the area unharmed and when it is necessary to report encounters to a qualified RPF, biologist, or biological technician. The qualified RPF, biologist, or biological technician will immediately contact CDFW or USFWS, as appropriate, if any wildlife protected by the California Endangered Species Act (CESA) or Federal Endangered Species Act (ESA) is encountered and cannot leave the site on its own (without being handled). This SPR applies to all treatment activities and treatment types, including treatment maintenance.

Standard Project Requirements		SPR Description
SPR BIO-3	Survey Sensitive Natural Communities and Other Sensitive Habitats	If SPR BIO-1 determines that sensitive natural communities or sensitive habitat may be present and adverse effects cannot be avoided, the project proponent will: • require a qualified RPF or biologist to perform a protocol-level survey following the CDFW "Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities" (current version dated March 20, 2018) of the treatment area prior to the start of treatment activities for sensitive natural communities and sensitive habitats. Sensitive natural communities will be identified using the best means possible, including keying them out using the most current edition of *A Manual of California Vegetation* (including updated natural communities data at https://vegetation.cnps.org/), or referring to relevant reports (e.g., reports found on the VegCAMP website). • map and digitally record, using a Global Positioning System (GPS), the limits of any potential sensitive habitat and sensitive natural community identified in the treatment area. This SPR applies to all treatment activities and treatment types, including treatment maintenance.
SPR BIO-4	Design Treatment to Avoid Loss or Degradation of Riparian Habitat Function	Project proponents, in consultation with a qualified RPF or qualified biologist, will design treatments in riparian habitats to retain or improve habitat functions by implementing the following within riparian habitats: • Retain at least 75 percent of the overstory and 50 percent of the understory canopy of native riparian vegetation within the limits of riparian habitat identified and mapped during surveys conducted pursuant to SPR BIO-3. Native riparian vegetation will be retained in a well distributed multi-storied stand composed of a diversity of species similar to that found before the start of treatment activities. • Treatments will be limited to removal of uncharacteristic fuel loads (e.g., removing dead or dying vegetation), trimming/limbing of woody species as necessary to reduce ladder fuels, and select thinning of vegetation to restore densities that are characteristic of healthy stands of the riparian vegetation types characteristic of the region. This includes hand removal (or mechanized removal where topography allows) of dead or dying riparian trees and shrubs, invasive plant removal, selective thinning, and removal of encroaching upland species. • Removal of large, native riparian hardwood trees (e.g., willow, ash, maple, oak, alder, sycamore, cottonwood) will be minimized to the extent feasible and 75 percent of the pretreatment native riparian hardwood tree canopy will be retained. Because tree size varies depending on vegetation type present and site conditions, the tree size retention parameter will be determined

Standard Project Requirements	SPR Description
	on a site-specific basis depending on vegetation type present and setting; however, live, healthy, native trees that are considered large for that type of tree and large relative to other trees in that location will be retained. A scientifically-based, project-specific explanation substantiating the retention size parameter for native riparian hardwood tree removal will be provided in the Biological Resources Discussion of the PSA. Consideration of factors such as site hydrology, erosion potential, suitability of wildlife habitat, presence of sufficient seed trees, light availability, and changes in stream shading may inform the tree size retention requirements. • Removed trees will be felled away from adjacent streams or waterbodies and piled outside of the riparian vegetation zone (unless there is an ecological reason to do otherwise that is approved by applicable regulatory agencies, such as adding large woody material to a stream to enhance fish habitat, e.g., see Accelerated Wood Recruitment and Timber Operations: Process Guidance from the California Timber Harvest Review Team Agencies and National Marine Fisheries Service). • Vegetation removal that could reduce stream shading and increase stream temperatures will be avoided. • Ground disturbance within riparian habitats will be limited to the minimum necessary to implement effective treatments. This will consist of the minimum disturbance area necessary to reduce hazardous fuels and return the riparian community to a natural fire regime (i.e., Condition Class 1) considering historic fire return intervals, climate change, and land use constraints. • Only hand application of herbicides approved for use in aquatic environments will be allowed and only during low-flow periods or when seasonal streams are dry. • The project proponent will notify CDFW when required by California Fish and Game Code Section 1602 prior to implementing any treatment activities in riparian habitats. Notification will identify the treatment activities, map the vegetation to be removed, identify the impact avoidance identification methods to be used (e.g., flagging), and appropriate protections for the retention of shaded riverine habitat, including buffers and other applicable measures to prevent erosion into the waterway. • In consideration of spatial variability of riparian vegetation types and condition and consistent with California Forest Practice Rules Section 916.9(v) (February 2019 version), a different set of vegetation retention standards and protection measures from those specified in the above bullets may be implemented on a site-specific basis if the qualified RPF and the project proponent demonstrate through substantial evidence that alternative design measures provide a more effective means of achieving the treatment goals objectives and would result in effects to

Standard Project Requirements		SPR Description
		the Beneficial Functions of Riparian Zones equal or more favorable than those expected to result from application of the above measures. Deviation from the above design specifications, different protection measures and design standards will only be approved when the treatment plan incorporates an evaluation of beneficial functions of the riparian habitat and with written concurrence from CDFW. This SPR applies to all treatment activities and treatment types, including treatment maintenance.
SPR BIO-5	Avoid Environmental Effects of Type Conversion and Maintain Habitat Function in Chaparral and Coastal Sage Scrub	The project proponent will design treatment activities to avoid type conversion where native coastal sage scrub and chaparral are present. An ecological definition of type conversion is used in the CalVTP PEIR for assessment of environmental effects: a change from a vegetation type dominated by native shrub species that are characteristic of chaparral and coastal sage scrub vegetation alliances to a vegetation type characterized predominantly by weedy herbaceous cover or annual grasslands. For the PEIR, type conversion is considered in terms of habitat function, which is defined here as the arrangement and capability of habitat features to provide refuge, food source, and reproduction habitat to plants and animals, and thereby contribute to the conservation of biological and genetic diversity and evolutionary processes (de Groot et al. 2002). Some modification of habitat characteristics may occur provided habitat function is maintained (i.e., the location, essential habitat features, and species supported are not substantially changed). During the reconnaissance-level survey required in SPR BIO-1, a qualified RPF or biologist will identify chaparral and coastal sage scrub vegetation to the alliance level and determine the condition class and fire return interval departure of the chaparral and/or coastal sage scrub present in each treatment area. For all treatment types in chaparral and coastal sage scrub, the project proponent, in consultation with a qualified RPF or qualified biologist will: • Develop a treatment design that avoids environmental effects of type conversion in chaparral and coastal sage scrub vegetation alliances, which will include evaluating and determining the appropriate spatial scale at which the proponent would consider type conversion, and substantiating its appropriateness. The project proponent will demonstrate with substantial evidence that the habitat function of chaparral and coastal sage scrub would be at least maintained within the identified spatial scale at which type conversion is evaluated for the specific treatment project. Consideration of factors such as site hydrology, erosion potential, suitability of wildlife habitat, spatial needs of sensitive species, presence of sufficient seed

Standard Project Requirements	SPR Description
	plants and nurse plants, light availability, and edge effects may inform the determination of an appropriate spatial scale. • The treatment design will maintain a minimum percent cover of mature native shrubs within the treatment area to maintain habitat function; the appropriate percent cover will be identified by the project proponent in the development of treatment design and be specific to the vegetation alliances that are present in the identified spatial scale used to evaluate type conversion. Mature native shrubs that are retained will be distributed contiguously or in patches within the stand. If the stand consists of multiple age classes, patches representing a range of middle to old age classes will be retained to maintain and improve heterogeneity, to the extent needed to avoid type conversion. These SPR requirements apply to all treatment activities and all treatment types, including treatment maintenance. Additional measures will be applied to ecological restoration treatment types: • For ecological restoration treatment types, complete removal of the mature shrub layer will not occur in native chaparral and coastal sage scrub vegetation types. • Ecological restoration treatments will not be implemented in vegetation types that are within their natural fire return interval (i.e., time since last burn is less than the average time listed as the fire return interval range in Table 3.6-1) unless the project proponent demonstrates with substantial evidence that the habitat function of chaparral and coastal sage scrub would be improved. • A minimum of 35 percent relative cover of existing shrubs and associated native vegetation will be retained at existing densities in patches distributed in a mosaic pattern within the treated area or the shrub canopy will be thinned by no more than 20 percent from baseline density (i.e., if baseline shrub canopy density is 60 percent, post treatment shrub canopy density will be no less than 40 percent). A different percent relative cover can be retained if the project proponent demonstrates with substantial evidence that alternative treatment design measures would result in effects on the habitat function of chaparral and coastal sage scrub that are equal or more favorable than those expected to result from application of the above measures. Biological considerations that may inform a deviation from the minimum 35 percent relative cover retention include but are not limited to soil moisture requirements, increased soil temperatures, changes in light/shading, presence of sufficient seed plants and nurse plants, erosion potential, and site hydrology.

Standard Project Requirements		SPR Description
		• If the stand within the treatment area consists of multiple age classes, patches representing a range of middle to old age classes will be retained to maintain and improve heterogeneity. These SPR requirements apply to all treatment activities and only the ecosystem restoration treatment type, including treatment maintenance. A determination of compliance with the SB 1260 prohibition of type conversion in chaparral and coastal sage scrub is a statutory issue separate from CEQA compliance that may involve factors additional to the ecological definition and habitat functions presented in the PEIR, such as geographic context. It is beyond the legal scope of the PEIR to define SB 1260 type conversion and statutory compliance. The project proponent, acting as lead agency for the proposed later treatment project, will be responsible for defining type conversion in the context of the project and making the finding that type conversion would not occur, as required by SB 1260. The project proponent will determine its criteria for defining and avoiding type conversion and, in making its findings, may draw upon information presented in this PEIR.
SPR BIO-6	Prevent Spread of Plant Pathogens	When working in sensitive natural communities, riparian habitats, or oak woodlands that are at risk from plant pathogens (e.g., Ione chaparral, blue oak woodland), the project proponent will implement the following best management practices to prevent the spread of Phytopthora and other plant pathogens (e.g., pitch canker (Fusarium), goldspotted oak borer, shot hole borer, bark beetle): • clean and sanitize vehicles, equipment, tools, footwear, and clothes before arriving at a treatment site and when leaving a contaminated site, or a site in a county where contamination is a risk; • include training on *Phytopthora* diseases and other plant pathogens in the worker awareness training; • minimize soil disturbance as much as possible by limiting the number of vehicles, avoiding off-road travel as much as possible, and limiting use of mechanized equipment; • minimize movement of soil and plant material within the site, especially between areas with high and low risk of contamination; • clean soil and debris from equipment and sanitize hand tools, buckets, gloves, and footwear when moving from high risk to low risk areas or between widely separated portions of a treatment area; and

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		• follow the procedures listed in Guidance for plant pathogen prevention when working at contaminated restoration sites or with rare plants and sensitive habitat (Working Group for *Phytoptheras* in Native Habitats 2016). This SPR applies to all treatment activities and treatment types, including treatment maintenance.
SPR BIO-7	Survey for Special-Status Plants	If SPR BIO-1 determines that suitable habitat for special-status plant species is present and cannot be avoided, the project proponent will require a qualified RPF or botanist to conduct protocol-level surveys for special-status plant species with the potential to be affected by a treatment prior to initiation of the treatment. The survey will follow the methods in the current version of CDFW's "Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities." Surveys to determine the presence or absence of special-status plant species will be conducted in suitable habitat that could be affected by the treatment and timed to coincide with the blooming or other appropriate phenological period of the target species (as determined by a qualified RPF or botanist), or all species in the same genus as the target species will be assumed to be special-status. If potentially occurring special-status plants are listed under CESA or ESA, protocol-level surveys to determine presence/absence of the listed species will be conducted in all circumstances, unless determined otherwise by CDFW or USFWS. For other special-status plants not listed under CESA or ESA, as defined in Section 3.6.1 of this PEIR, surveys will not be required under the following circumstances: • If protocol-level surveys, consisting of at least two survey visits (e.g., early blooming season and later blooming season) during a normal weather year, have been completed in the 5 years before implementation of the treatment project and no special-status plants were found, and no treatment activity has occurred following the protocol-level survey, treatment may proceed without additional plant surveys. • If the target special-status plant species is an herbaceous annual, stump-sprouting, or geophyte species, the treatment may be carried out during the dormant season for that species or when the species has completed its annual lifecycle without conducting presence/absence surveys provided the treatment will not alter habitat or destroy seeds, stumps, or roots, rhizomes, bulbs and other underground parts in a way that would make it unsuitable for the target species to reestablish following treatment.

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		This SPR applies to all treatment activities and treatment types, including treatment maintenance.
SPR BIO-8	Identify and Avoid or Minimize Impacts in Coastal Zone ESHAs	When planning a treatment project within the Coastal Zone, the project proponent will, in consultation with the Coastal Commission or a local government with a certified Local Coastal Program (LCP) (as applicable), identify the habitat types and species present to determine if the area qualifies as an Environmentally Sensitive Habitat Area (ESHA). If the area is an ESHA, the treatment project may be allowed pursuant to this PEIR, if it meets the following conditions. If a project requires a CDP by the Coastal Commission or a local government with a certified LCP (as applicable), the CDP approval may require modification to these conditions to further avoid and minimize impacts: • The treatment will be designed, in compliance with the Coastal Act or LCP, if a site is within a certified LCP area, to protect the habitat function of the affected ESHA, protect habitat values, and prevent loss or type conversion of habitat and vegetation types that define the ESHA, or loss of special-status species that inhabit the ESHA. • Treatment actions will be limited to eradication or control of invasive plants, removal of uncharacteristic fuel loads (e.g., removing dead, diseased, or dying vegetation), trimming/limbing of woody species as necessary to reduce ladder fuels, and select thinning of vegetation to restore densities that are characteristic of healthy stands of the vegetation types present in the ESHA. • A qualified biologist or RPF familiar with the ecology of the treatment area will monitor all treatment activities in ESHAs. • Appropriate no-disturbance buffers will be developed in compliance with the Coastal Act or relevant LCP policies for treatment activities in the vicinity of ESHAs to avoid adverse direct and indirect effects to ESHAs. This SPR applies to all treatment activities and all treatment types, including treatment maintenance.
SPR BIO-9	Prevent Spread of Invasive Plants, Noxious Weeds, and Invasive Wildlife	The project proponent will take the following actions to prevent the spread of invasive plants, noxious weeds, and invasive wildlife (e.g., New Zealand mudsnail): • clean clothing, footwear, and equipment used during treatments of soil, seeds, vegetative matter, other debris or seed-bearing material, or water (e.g., rivers, streams, creeks, lakes) before

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		entering the treatment area or when leaving an area with infestations of invasive plants, noxious weeds, or invasive wildlife; • for all heavy equipment and vehicles traveling off road, pressure wash, if feasible, or otherwise appropriately decontaminate equipment at a designated weed-cleaning station prior to entering the treatment area from an area with infestations of invasive plants, noxious weeds, or invasive wildlife. Anti-fungal wash agents will be specified if the equipment has been exposed to any pathogen that could affect native species; • inspect all heavy equipment, vehicles, tools, or other treatment-related materials for sand, mud, or other signs that weed seeds or propagules could be present prior to use in the treatment area. If the equipment is not clean, the qualified RPF or biological technician will deny entry to the work areas; • stage equipment in areas free of invasive plant infestations unless there are no uninfested areas present within a reasonable proximity to the treatment area; • identify significant infestations of invasive plant species (i.e., those rated as invasive by Cal-IPC or designated as noxious weeds by California Department of Food and Agriculture) during reconnaissance-level surveys and target them for removal during treatment activities. Treatment methods will be selected based on the invasive species present and may include herbicide application, manual or mechanical treatments, prescribed burning, and/or herbivory, and will be designed to maximize success in killing or removing the invasive plants and preventing reestablishment based on the life history characteristics of the invasive plant species present. Treatments will be focused on removing invasive plant species that cause ecological harm to native vegetation types, especially those that can alter fire cycles; • treat invasive plant biomass onsite to eliminate seeds and propagules and prevent reestablishment or dispose of invasive plant biomass offsite at an appropriate waste collection facility (if not kept on site); transport invasive plant materials in a closed container or bag to prevent the spread of propagules during transport; and • implement Fire and Fuel Management BMPs outlined in the "Preventing the Spread of Invasive Plants: Best Management Practices for Land Mangers" (Cal-IPC 2012, or current version). This SPR applies to all treatment activities and treatment types, including treatment maintenance.
SPR BIO-10	Survey for Special-Status Wildlife and Nursery Sites	If SPR BIO-1 determines that suitable habitat for special-status wildlife species or nurseries of any wildlife species is present and cannot be avoided, the project proponent will require a

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		qualified RPF or biologist to conduct focused or protocol-level surveys for special-status wildlife species or nursery sites (e.g., bat maternity roosts, deer fawning areas, heron or egret rookeries, monarch overwintering sites) with potential to be directly or indirectly affected by a treatment activity. The survey area will be determined by a qualified RPF or biologist based on the species and habitats and any recommended buffer distances in agency protocols. The qualified RPF or biologist will determine if following an established protocol is required, and the project proponent may consult with CDFW and/or USFWS for technical information regarding appropriate survey protocols. Unless otherwise specified in a protocol, the survey will be conducted no more than 14 days prior to the beginning of treatment activities. Focused or protocol surveys for a special-status species with potential to occur in the treatment area may not be required if presence of the species is assumed. This SPR applies to all treatment activities and treatment types, including treatment maintenance.
SPR BIO-11	Install Wildlife-Friendly Fencing (Prescribed Herbivory)	If temporary fencing is required for prescribed herbivory treatment, a wildlife-friendly fencing design will be used. The project proponent will require a qualified RPF or biologist to review and approve the design before installation to minimize the risk of wildlife entanglement. The fencing design will meet the following standards: • Minimize the chance of wildlife entanglement by avoiding barbed wire, loose or broken wires, or any material that could impale or snag a leaping animal; and, if feasible, keeping electric netting-type fencing electrified at all times or laid down while not in use. • Charge temporary electric fencing with intermittent pulse energizers; continuous output fence chargers will not be permitted. • Allow wildlife to jump over easily without injury by installing fencing that can flex as animals pass over it and installing the top wire low enough (no more than approximately 40 inches high on flat ground) to allow adult ungulates to jump over it. The determination of appropriate fence height will consider slope, as steep slopes are more difficult for wildlife to pass. • Be highly visible to birds and mammals by using high-visibility tape or wire, flagging, or other markers. This SPR applies only to prescribed herbivory and all treatment types, including treatment maintenance.

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SPR BIO-12	Protect Common Nesting Birds, Including Raptors	The project proponent will schedule treatment activities to avoid the active nesting season of common native bird species, including raptors, that could be present within or adjacent to the treatment site, if feasible. Common native birds are species not otherwise treated as special status in the CalVTP PEIR. The active nesting season will be defined by the qualified RPF or biologist. If active nesting season avoidance is not feasible, a qualified RPF or biologist will conduct a survey for common nesting birds, including raptors. Existing records (e.g., CNDDB, eBird database, State Wildlife Action Plan) should be reviewed in advance of the survey to identify the common nesting birds, including raptors, that are known to occur in the vicinity of the treatment site. The survey area will encompass reasonably accessible areas of the treatment site and the immediately surrounding vicinity viewable from the treatment site. The survey area will be determined by a qualified RPF or biologist, based on the potential species in the area, location of suitable nesting habitat, and type of treatment. For vegetation removal or project activities that would occur during the nesting season, the survey will be conducted at a time that balances the effectiveness of detecting nests and the reasonable consideration of potential avoidance strategies. Typically, this timeframe would be up to 3 weeks before treatment. The survey will occur in a single survey period of sufficient duration to reasonably detect nesting birds, including raptors, typically one day for most treatment projects (depending on the size, configuration, and vegetation density in the treatment site), and conducted during the active time of day for target species, typically close to dawn and/or dusk. The survey may be conducted concurrently with other biological surveys, if they are required by other SPRs. Survey methods will be tailored by the qualified RPF or biologist to site and habitat conditions, typically involving walking throughout the survey area, visually searching for nests and birds exhibiting behavior that is typical of breeding (e.g., delivering food). If an active nest is observed (i.e., presence of eggs and/or chicks) or determined to likely be present based on nesting bird behavior, the project proponent will implement a feasible strategy to avoid disturbance of active nests, which may include, but is not limited to, one or more of the following: • **Establish Buffer.** The project proponent will establish a temporary, species-appropriate buffer around the nest sufficient to reasonably expect that breeding would not be disrupted. Treatment activities will be implemented outside of the buffer. The buffer location will be determined by a qualified RPF or biologist. Factors to be considered for determining buffer location will include: presence of natural buffers provided by vegetation or topography, nest height above ground,

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	baseline levels of noise and human activity, species sensitivity, and expected treatment activities. Nests of common birds within the buffer need not be monitored during treatment. However, buffers will be maintained until young fledge or the nest becomes inactive, as determined by the qualified RPF, biologist, or biological technician. • **Modify Treatment.** The project proponent will modify the treatment in the vicinity of an active nest to avoid disturbance of active nests (e.g., by implementing manual treatment methods, rather than mechanical treatment methods). Treatment modifications will be determined by the project proponent in coordination with the qualified RPF or biologist. • **Defer Treatment.** The project proponent will defer the timing of treatment in the portion(s) of the treatment site that could disturb the active nest. If this avoidance strategy is implemented, treatment activity will not commence until young fledge or the nest becomes inactive, as determined by the qualified RPF, biologist, or biological technician. Feasible actions will be taken by the project proponent to avoid loss of common native bird nests. The feasibility of implementing the avoidance strategies will be determined by the project proponent based on whether implementation of this SPR will preclude completing the treatment project within the reasonable period of time necessary to meet CalVTP program objectives, including, but not limited to, protection of vulnerable communities. Considerations may include limitations on the presence of environmental and atmospheric conditions necessary to execute treatment prescriptions (e.g., the limited seasonal windows during which prescribed burning can occur when vegetation moisture, weather, wind, and other physical conditions are suitable). If it is infeasible to avoid loss of common bird nests (not including raptor nests), the project proponent will document the reasons implementation of the avoidance strategies is infeasible in the PSA. After completion of the PSA and prior to or during treatment implementation, if there is any change in the feasibility of avoidance strategies from those explained in the PSA, this will be documented in the post-project implementation report (referred to by CAL FIRE as a Completion Report). The following avoidance strategies may also be considered together with or in lieu of other actions for implementation by a project proponent to avoid disturbance to raptor nests: • **Monitor Active Raptor Nest During Treatment**. A qualified RPF, biologist, or biological technician will monitor an active raptor nest during treatment activities to identify signs of agitation, nest defense, or other behaviors that signal disturbance of the active nest is likely (e.g., standing up from a brooding position, flying off the nest). If breeding raptors are showing signs of nest disturbance, one of the other avoidance strategies (establish buffer, modify treatment or defer

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		treatment) will be implemented or a pause in the treatment activity will occur until the disturbance behavior ceases. • **Retention of Raptor Nest Tree**s. Trees with visible raptor nests, whether occupied or not, will be retained. This SPR applies to all treatment activities and treatment types, including treatment maintenance.
Geology, Soils, and Mineral Resource		
SPR GEO-1	Suspend Disturbance during Heavy Precipitation	The project proponent will suspend mechanical, prescribed herbivory, and herbicide treatments if the National Weather Service forecast is a "chance" (30 percent or more) of rain within the next 24 hours. Activities that cause mechanical soil disturbance may resume when precipitation stops and soils are no longer saturated (i.e., when soil and/or surface material pore spaces are filled with water to such an extent that runoff is likely to occur). Indicators of saturated soil conditions may include, but are not limited to: (1) areas of ponded water, (2) pumping of fines from the soil or road surfacing, (3) loss of bearing strength resulting in the deflection of soil or road surfaces under a load, such as the creation of wheel ruts, (4) spinning or churning of wheels or tracks that produces a wet slurry, or (5) inadequate traction without blading wet soil or surfacing materials. This SPR applies only to mechanical, prescribed herbivory, and herbicide treatment activities and all treatment types, including treatment maintenance.
SPR GEO-2	Limit High Ground Pressure Vehicles	The project proponent will limit heavy equipment that could cause soil disturbance or compaction to be driven through treatment areas when soils are wet and saturated to avoid compaction and/or damage to soil structure. Saturated soil means that soil and/or surface material pore spaces are filled with water to such an extent that runoff is likely to occur. If use of heavy equipment is required in saturated areas, other measures such as operating on organic debris, using low ground pressure vehicles, or operating on frozen soils/snow covered soils will be implemented to minimize soil compaction. Existing compacted road surfaces are exempted as they are already compacted from use. This SPR applies only to mechanical treatment activities and all treatment types, including treatment maintenance.
SPR GEO-3	Stabilize Disturbed Soil Areas	The project proponent will stabilize soil disturbed during mechanical, prescribed herbivory treatments, and prescribed burns that result in exposure of bare soil over 50 percent or more of the treatment area with mulch or equivalent immediately after treatment activities, to the maximum extent practicable, to minimize the potential for substantial sediment discharge. If

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		mechanical, prescribed herbivory, or prescribed burn treatment activities could result in substantial sediment discharge from soil disturbed by machinery, animal hooves, or being bare, organic material from mastication or mulch will be incorporated onto at least 75 percent of the disturbed soil surface where the soil erosion hazard is moderate or high, and 50 percent of the disturbed soil surface where soil erosion hazard is low to help prevent erosion. Where slash mulch is used, it will be packed into the ground surface with heavy equipment so that it is sufficiently in contact with the soil surface. This SPR only applies to mechanical, prescribed herbivory, and prescribed burns that result in exposure of bare soil over 50 percent of the project area treatment activities and all treatment types, including treatment maintenance.
SPR GEO-4	Erosion Monitoring	The project proponent will inspect treatment areas for the proper implementation of erosion control SPRs and mitigations prior to the rainy season. If erosion control measures are not properly implemented, they will be remediated prior to the first rainfall event per SPR GEO-3 and GEO-8. Additionally, the project proponent will inspect for evidence of erosion after the first large storm or rainfall event (i.e., ≥ 1.5 inches in 24 hours) as soon as is feasible after the event. Any area of erosion that will result in substantial sediment discharge will be remediated within 48 hours per the methods stated in SPRs GEO-3 and GEO-8. This SPR applies only to mechanical, prescribed herbivory, and prescribed burning treatment activities and all treatment types, including treatment maintenance.
SPR GEO-5	Drain Stormwater via Water Breaks	The project proponent will drain compacted and/or bare linear treatment areas capable of generating storm runoff via water breaks using the spacing and erosion control guidelines contained in Sections 914.6, 934.6, and 954.6(c) of the California Forest Practice Rules (February 2019 version). Where waterbreaks cannot effectively disperse surface runoff, including where waterbreaks cause surface run-off to be concentrated on downslopes, other erosion controls will be installed as needed to maintain site productivity by minimizing soil loss. This SPR applies only to mechanical, manual, and prescribed burn treatment activities and all treatment types, including treatment maintenance.
SPR GEO-6	Minimize Burn Pile Size	The project proponent will not create burn piles that exceed 20 feet in length, width, or diameter, except when on landings, road surfaces, or on contour to minimize the spatial extent of soil damage. In addition, burn piles will not occupy more than 15 percent of the total treatment area (Busse et al. 2014). The project proponent will not locate burn piles in a Watercourse and Lake Protection Zone as defined in SPR HYD-4. This SPR applies to mechanical, manual, and

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		prescribed burning treatment activities and all treatment types, including treatment maintenance.
SPR GEO-7	Minimize Erosion: To minimize erosion, the project proponent will:	1. Prohibit use of heavy equipment where any of the following conditions are present: i. Slopes steeper than 65 percent. ii. Slopes steeper than 50 percent where the erosion hazard rating is high or extreme. iii. Slopes steeper than 50 percent that lead without flattening to sufficiently dissipate water flow and trap sediment before it reaches a watercourse or lake. 2. On slopes between 50 percent and 65 percent where the erosion hazard rating is moderate, and all slope percentages are for average slope steepness based on sample areas that are 20 acres, or less, heavy equipment will be limited to: iv. Existing tractor roads that do not require reconstruction, or v. New tractor roads flagged by the project proponent prior to the treatment activity. 3. Prescribed herbivory treatments will not be used in areas with over 50 percent slope. This SPR applies to all treatment activities and all treatment types, including treatment maintenance.
SPR GEO-8	Steep Slopes	The project proponent will require a Registered Professional Forester (RPF) or licensed geologist to evaluate treatment areas with slopes greater than 50 percent for unstable areas (areas with potential for landslide) and unstable soils (soil with moderate to high erosion hazard). If unstable areas or soils are identified within the treatment area, are unavoidable, and will be potentially directly or indirectly affected by the treatment, a licensed geologist (P.G. or C.E.G.) will determine the potential for landslide, erosion, of other issue related to unstable soils and identity measures (e.g., those in SPR GEO-7) that will be implemented by the project proponent such that substantial erosion or loss of topsoil would not occur. This SPR applies only to mechanical treatment activities and WUI fuel reduction, non-shaded fuel breaks, and ecological restoration treatment types, including treatment maintenance.
Greenhouse Gas Emissions		
SPR GHG-1	Contribute to the AB 1504 Carbon Inventory Process	The project proponent of treatment projects subject to the AB 1504 process will provide all necessary data about the treatment that is needed by the U.S. Forest Service and FRAP to fulfill requirements of the AB 1504 carbon inventory, and to aid in the ongoing research about the

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		long-term net change in carbon sequestration resulting from treatment activity, including treatment maintenance.
Hazardous Material and Public Health and Safety		
SPR HAZ-1	Maintain All Equipment	The project proponent will maintain all diesel- and gasoline-powered equipment per manufacturer's specifications, and in compliance with all state and federal emissions requirements. Maintenance records will be available for verification. Prior to the start of treatment activities, the project proponent will inspect all equipment for leaks and inspect everyday thereafter until equipment is removed from the site. Any equipment found leaking will be promptly removed. This SPR applies to all treatment activities and treatment types, including treatment maintenance.
SPR HAZ-2	Require Spark Arrestors	The project proponent will require mechanized hand tools to have federal- or state-approved spark arrestors. This SPR applies only to manual treatment activities and all treatment types, including treatment maintenance.
SPR HAZ-3	Require Fire Extinguishers	The project proponent will require tree cutting crews to carry one fire extinguisher per chainsaw. Each vehicle would be equipped with one long-handled shovel and one axe or Pulaski consistent with PRC Section 4428. This SPR applies only to manual treatment activities and all treatment types, including treatment maintenance.
SPR HAZ-4	Prohibit Smoking in Vegetated Areas	The project proponent will require that smoking is only permitted in designated smoking areas barren or cleared to mineral soil at least 3 feet in diameter (PRC Section 4423.4). This SPR applies to all treatment activities and treatment types, including treatment maintenance.
SPR HAZ-5	Spill Prevention and Response Plan	The project proponent or licensed Pest Control Advisor (PCA) will prepare a Spill Prevention and Response Plan (SPRP) prior to beginning any herbicide treatment activities to provide protection to onsite workers, the public, and the environment from accidental leaks or spills of herbicides, adjuvants, or other potential contaminants. The SPRP will include (but not be limited to): • a map that delineates staging areas, and storage, loading, and mixing areas for herbicides; • a list of items required in an onsite spill kit that will be maintained throughout the life of the activity; • procedures for the proper storage, use, and disposal of any herbicides, adjuvants, or other chemicals used in vegetation treatment.

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		This SPR applies only to herbicide treatment activities and all treatment types, including treatment maintenance.
SPR HAZ-6	Comply with Herbicide Application Regulations	The project proponent will coordinate pesticide use with the applicable County Agricultural Commissioner(s), and all required licenses and permits will be obtained prior to herbicide application. The project proponent will prepare all herbicide applications to do the following: • Be implemented consistent with recommendations prepared annually by a licensed PCA. • Comply with all appropriate laws and regulations pertaining to the use of pesticides and safety standards for employees and the public, as governed by the EPA, DPR, and applicable local jurisdictions. • Adhere to label directions for application rates and methods, storage, transportation, mixing, container disposal, and weather limitations to application such as wind speed, humidity, temperature, and precipitation. • Be applied by an applicator appropriately licensed by the State. This SPR applies only to herbicide treatment activities and all treatment types, including treatment maintenance.
SPR HAZ-7	Triple Rinse Herbicide Containers	The project proponent will triple rinse all herbicide and adjuvant containers with clean water at an approved site, and dispose of rinsate by placing it in the batch tank for application per 3 CCR Section 6684. The project proponent will puncture used containers on the top and bottom to render them unusable, unless said containers are part of a manufacturer's container recycling program, in which case the manufacturer's instructions will be followed. Disposal of non-recyclable containers will be at legal dumpsites. Equipment will not be cleaned, and personnel will not be washed in a manner that would allow contaminated water to directly enter any body of water within the treatment area or adjacent watersheds. Disposal of all herbicides will follow label requirements and waste disposal regulations. This SPR applies only to herbicide treatment activities and all treatment types, including treatment maintenance.
SPR HAZ-8	Minimize Herbicide Drift to Public Areas	The project proponent will employ the following herbicide application parameters during herbicide application to minimize drift into public areas: • application will cease when weather parameters exceed label specifications or when sustained winds at the site of application exceeds 7 miles per hour (whichever is more conservative);

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		• low nozzle pressures (30-70 pounds per square inch) will be utilized to minimize drift; and • spray nozzles will be kept within 24 inches of vegetation during spraying. This SPR applies only to herbicide treatment activities and all treatment types, including treatment maintenance.
SPR HAZ-9	Notification of Herbicide Use in the Vicinity of Public Areas	For herbicide applications occurring within or adjacent to public recreation areas, residential areas, schools, or any other public areas within 500 feet, the project proponent will post signs at each end of herbicide treatment areas and any intersecting trails notifying the public of the use of herbicides. The signs will include the signal word (i.e., Danger, Warning or Caution), product name, and manufacturer; active ingredient; EPA registration number; target pest; treatment location; date and time of application; restricted entry interval, if applicable per the label requirements; date which notification sign may be removed; and a contact person with a telephone number. Signs will be posted prior to the start of treatment and notification will remain in place for at least 72 hours after treatment ceases. This SPR applies only to herbicide treatment activities and all treatment types, including treatment maintenance.
Hydrology and Water Quality		
SPR HYD-1	Comply with Water Quality Regulations	Project proponents must also conduct proposed vegetation treatments in conformance with appropriate RWQCB timber, vegetation, and land disturbance related Waste Discharge Requirements (WDRs) and/or related Conditional Waivers of Waste Discharge Requirements (Waivers), and appropriate Basin Plan Prohibitions. Where these regulatory requirements differ, the most restrictive will apply. If applicable, this includes compliance with the conditions of general waste discharge requirements (WDR) and waste discharge requirement waivers for timber or silviculture activities where these waivers are designed to apply to non-commercial fuel reduction and forest health projects. In general, WDR and Waivers of waste discharge requirements for fuel reduction and forest health activities require that wastes, including but not limited to petroleum products, soil, silt, sand, clay, rock, felled trees, slash, sawdust, bark, ash, and pesticides must not be discharged to surface waters or placed where it may be carried into surface waters; and that Water Board staff must be allowed reasonable access to the property in order to determine compliance with the waiver conditions. The specifications for each WDR and Waiver vary by region. Regions 2 (San Francisco Bay), 4 (Los Angeles), 8 (Santa Ana), and 7 (Colorado River) are highly urban or minimally forested and do not offer WDRs or Waivers for fuel reduction or vegetation management activities. The current applicable WDRs and Waivers

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		for timber and vegetation management activities are included in Appendix HYD-1. This SPR applies to all treatment activities and treatment types, including treatment maintenance.
SPR HYD-2	Avoid Construction of New Roads	The project proponent will not construct or reconstruct (i.e., cutting or filling involving less than 50 cubic yards/0.25 linear road miles) any new roads (including temporary roads). This SPR applies to all treatment activities and treatment types, including treatment maintenance.
SPR HYD-3	Water Quality Protections for Prescribed Herbivory	The project proponent will include the following water quality protections for all prescribed herbivory treatments: • Environmentally sensitive areas such as waterbodies, wetlands, or riparian areas will be identified in the treatment prescription and excluded from prescribed herbivory project areas using temporary fencing or active herding. A buffer of approximately 50 feet will be maintained between sensitive and actively grazed areas. • Water will be provided for grazing animals in the form of an on-site stock pond or a portable water source located outside of environmentally sensitive areas. • Treatment prescriptions will be designed to protect soil stability. Grazing animals will be herded out of an area if accelerated soil erosion is observed. This SPR applies to prescribed herbivory treatment activities and all treatment types, including treatment maintenance.
SPR HYD-4	Identify and Protect Watercourse and Lake Protection Zones	The project proponent will establish Watercourse and Lake Protection Zones (WLPZs) on either side of watercourses, which is based on 14 CCR Section 916 .5 of the California Forest Practice Rules (February 2019 version). See CalVTP EIR for Procedures for Determining WLPZ widths. WLPZ's are classified based on the uses of the stream and the presence of aquatic life. Wider WLPZs are required for steep slopes. The following WLPZ protections will be applied for all treatments: • Treatment activities with WLPZs will retain at least 75 percent surface cover and undisturbed area to act as a filter strip for raindrop energy dissipation and for wildlife habitat. If this percentage is reduced a qualified RPF will provide the project proponent with a site- and/or treatment activity-specific explanation for the percent surface cover reduction, which will be included in the PSA. After completion of the PSA and prior to or during treatment implementation, if there is any deviation (e.g., further reduction) from the reduced percent as explained in the PSA, this will be documented in the post-project implementation report (referred to by CAL FIRE as a Completion Report). This requirement is based on 14 CCR Section

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	916.4 [936.4, 956.4] Subsection (b)(6) (February 2019 version) and 14 CCR Section 916.5 (February 2019 version). • Equipment, including tractors and vehicles, must not be driven in wet areas or WLPZs, except over existing roads or watercourse crossings where vehicle tires or tracks remain dry. • Equipment used in vegetation removal operations will not be serviced in WLPZs, within wet meadows or other wet areas, or in locations that would allow grease, oil, or fuel to pass into lakes, watercourses, or wet areas. • WLPZs will be kept free of slash, debris, and other material that harm the beneficial uses of water. Accidental deposits will be removed immediately. • Burn piles will be located outside of WLPZs. • No fire ignition (nor use of associated accelerants) will occur within WLPZs however low intensity backing fires may be allowed to enter or spread into WLPZs. • Within Class I and Class II WLPZs, locations where project operations expose a continuous area of mineral soil 800 square feet or larger shall be treated for reduction of soil loss. Treatment shall occur prior to Octob^{er} 15th and disturbances that are created after Octob^{er} 15th shall be treated within 10 days. Stabilization measures shall be selected that will prevent significant movement of soil into water bodies and may include but are not limited to mulching, rip-rap, grass seeding, or chemical soil stabilizers. • Where mineral soil has been exposed by project operations on approaches to watercourse crossings of Class I, II, or III within a WLPZ, the disturbed area shall be stabilized to the extent necessary to prevent the discharge of soil into watercourses or lakes in amounts that would adversely affect the quality and beneficial uses of the watercourse. • Where necessary to protect beneficial uses of water from project operations, protection measures such as seeding, mulching, or replanting shall be used to retain and improve the natural ability of the ground cover within the WLPZ to filter sediment, minimize soil erosion, and stabilize banks of watercourses and lakes. • Equipment limitation zones (ELZs) will be designated adjacent to Class III and Class IV watercourses with minimum widths of 25 feet where side-slope is less than 30 percent and 50 feet where side-slope is 30 percent or greater. An RPF will describe the limitations of heavy equipment within the ELZ and, where appropriate, will include additional measures to protect the beneficial uses of water.

Standard Project Requirements		SPR Description
		This SPR applies to all treatment activities and treatment types, including treatment maintenance.
SPR HYD-5	Protect Non-Target Vegetation and Special-status Species from Herbicides	The project proponent will implement the following measures when applying herbicides: • Locate herbicide mixing sites in areas devoid of vegetation and where there is no potential of a spill reaching non-target vegetation or a waterway. • Use only herbicides labeled for use in aquatic environments when working in riparian habitats or other areas where there is a possibility the herbicide could come into direct contact with water. Only hand application of herbicides will be allowed in riparian habitats and only during low-flow periods or when seasonal streams are dry. • No terrestrial or aquatic herbicides will be applied within WLPZs of Class I and II watercourses, if feasible. If this is not feasible, hand application of herbicides labeled for use in aquatic environments may be used within the WLPZ provided that the project proponent notifies the applicable regional water quality control board no fewer than 15 days prior to herbicide application. The feasibility of avoiding herbicide application within WLPZ of Class I and II watercourses will be determined by the project proponent and may be based on whether doing so will preclude achieving CalVTP program objectives, including, but not limited to, protection of vulnerable communities. The reasons for infeasibility will be documented in the PSA. • No herbicides will be applied within a 50-foot buffer of ESA or CESA listed plant species or within 50 feet of dry vernal pools. • For spray applications in and adjacent to habitats suitable for special-status species, use herbicides containing dye (registered for aquatic use by DPR, if warranted) to prevent overspray. • Application will cease when weather parameters exceed label specifications or when sustained winds at the site of application exceeds 7 miles per hour (whichever is more conservative); • No herbicide will be applied during precipitation events or if precipitation is forecast 24 hours before or after project activities. This SPR applies to herbicide treatment activities and all treatment types, including treatment maintenance.
SPR HYD-6	Protect Existing Drainage Systems	If a treatment activity is adjacent to a roadway with stormwater drainage infrastructure, the existing stormwater drainage infrastructure will be marked prior to ground disturbing activities.

Standard Project Requirements		SPR Description
		If a drainage structure or infiltration system is inadvertently disturbed or modified during project activities, the project proponent will coordinate with owner of the system or feature to repair any damage and restore pre-project drainage conditions. This SPR applies to all treatment activities and treatment types, including treatment maintenance.
Protect Existing Drainage Systems		
SPR NOI-1	Limit Heavy Equipment Use to Daytime Hours	The project proponent will require that operation of heavy equipment associated with treatment activities (heavy off-road equipment, tools, and delivery of equipment and materials) will occur during daytime hours if such noise would be audible to receptors (e.g., residential land uses, schools, hospitals, places of worship). Cities and counties in the treatable landscape typically restrict construction-noise (which would apply to vegetation treatment noise) to particular daytime hours. If the project proponent is subject to local noise ordinance, it will adhere to those to the extent the project is subject to them. If the applicable jurisdiction does not have a noise ordinance or policy restricting the time-of-day when noise-generating activity can occur noise-generating vegetation treatment activity will be limited to the hours of 7:00 a.m. to 6:00 p.m., Monday through Saturday, and between 9:00 a.m. and 6:00 p.m. on Sunday and federal holidays. If the project proponent is not subject to local ordinances (e.g., CAL FIRE), it will adhere to the restrictions stated above or may elect to adhere to the restrictions identified by the local ordinance encompassing the treatment area. This SPR applies to all treatment activities and treatment types, including treatment maintenance.
SPR NOI-2	Equipment Maintenance	The project proponent will require that all powered treatment equipment and power tools will be used and maintained according to manufacturer specifications. All diesel- and gasoline-powered treatment equipment will be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturers' recommendations. This SPR applies to all activities and all treatment types, including treatment maintenance.
SPR NOI-3	Engine Shroud Closure	The project proponent will require that engine shrouds be closed during equipment operation. This SPR applies only to mechanical treatment activities and all treatment types, including treatment maintenance.
SPR NOI-4	Locate Staging Areas Away from Noise-Sensitive Land Uses	The project proponent will locate treatment activities, equipment, and equipment staging areas away from nearby noise-sensitive land uses (e.g., residential land uses, schools, hospitals,

Standard Project Requirements		SPR Description
		places of worship), to the extent feasible, to minimize noise exposure. This SPR applies to all treatment activities and treatment types, including treatment maintenance.
SPR NOI-5	Restrict Equipment Idle Time	The project proponent will require that all motorized equipment be shut down when not in use. Idling of equipment and haul trucks will be limited to 5 minutes. This SPR applies to all treatment activities and all treatment types, including treatment maintenance.
SPR NOI-6	Notify Nearby Off-Site Noise-Sensitive Receptors	For treatment activities utilizing heavy equipment, the project proponent will notify noise-sensitive receptors (e.g., residential land uses, schools, hospitals, places of worship) located within 1,500 feet of the treatment activity. Notification will include anticipated dates and hours during which treatment activities are anticipated to occur and contact information, including a daytime telephone number, of the project representative. Recommendations to assist noise-sensitive land uses in reducing interior noise levels (e.g., closing windows and doors) will also be included in the notification. This SPR applies only to mechanical treatment activities and all treatment types, including treatment maintenance.
Recreation		
SPR REC-1	Notify Recreational Users of Temporary Closures	If a treatment activity would require temporary closure of a public recreation area or facility, the project proponent to will coordinate with the owner/manager of that recreation area or facility. If temporary closure of a recreation area or facility is required, the project proponent will work with the owner/manager to post notifications of the closure at least 2 weeks prior to the commencement of the treatment activities. Additionally, notification of the treatment activity will be provided to the Administrative Officer (or equivalent official responsible for distribution of public information) of the county(ies) in which the affected recreation area or facility is located. This SPR applies to all treatment activities and treatment types, including treatment maintenance.
Transportation		
SPR TRAN-1	Implement Traffic Control during Treatments	Prior to initiating vegetation treatment activities the project proponent will work with the agency(ies) with jurisdiction over affected roadways to determine if a Traffic Management Plan (TMP) is needed. A TMP will be needed if traffic generated by the project would result in obstructions, hazards, or delays exceeding applicable jurisdictional standards along access routes for individual vegetation treatments. If needed, a TMP will be prepared to provide measures to reduce potential traffic obstructions, hazards, and service level degradation along affected roadway facilities. The scope of the TMP will depend on the type, intensity, and

Standard Project Requirements		SPR Description
		duration of the specific treatment activities under the CalVTP. Measures included in the TMP could include (but are not be limited to) construction signage to provide motorists with notification and information when approaching or traveling along the affected roadway facilities, flaggers for lane closures to provide temporary traffic control along affected roadway facilities, treatment schedule restrictions to avoid seasons or time periods of peak vehicle traffic, haul-trip, delivery, and/or commute time restrictions that would be implemented to avoid peak traffic days and times along affected roadway facilities. If the TMP identifies impacts on transportation facilities outside of the jurisdiction of the project proponent, the TMP will be submitted to the agency with jurisdiction over the affected roadways prior to commencement of vegetation treatment projects. This SPR applies to all treatment activities and treatment types, including treatment maintenance. Smoke generated during prescribed burn operations could potentially affect driver visibility and traffic operations along nearby roadways. Direct smoke impacts to roadway visibility and indirect impacts related to driver distraction will be considered during the planning phase of burning operations. Smoke impacts and smoke management practices specific to traffic operations during prescribed fire operations will be identified and addressed within the TMP. The TMP will include measures to monitor smoke dispersion onto public roadways, and traffic control operations will be initiated in the event burning operations could affect traffic safety along any roadways. This SPR applies only to prescribed burn treatment activities and all treatment types, including treatment maintenance.
Public Services and Utilities		
SPR UTIL-1	Solid Organic Waste Disposition Plan	For projects requiring the disposal of material outside of the treatment area, the project proponent will prepare an Organic Waste Disposition Plan prior to initiating treatment activities. The Solid Organic Waste Disposition Plan will include the amount (e.g., tons) of solid organic waste to be managed onsite (i.e., scattering of wood materials, generating unburned piles, and pile burning) and transported offsite for processing (i.e., biomass power plant, wood product processing facility, composting). If the project proponent intends to transport solid organic waste offsite, the Solid Organic Waste Disposition Plan will clearly identify the location and capacity of the intended processing facility, consistent with local and state regulations to demonstrate that adequate capacity exists to accept the treated materials. This SPR applies only to mechanical and manual treatment activities and all treatment types, including treatment maintenance.

Table B-2 Summary of CalVTP Mitigation Measures

Mitigation Measure		Mitigation Measure Description
Air Quality		
MM AQ-1	Implement On-Road Vehicle and Off-Road Equipment Exhaust Emission Reduction Techniques	Where feasible, project proponents will implement emission reduction techniques to reduce exhaust emissions from off-road equipment. It is acknowledged that due to cost, availability, and the limits of current technology, there may be circumstances where implementation of certain emission reduction techniques will not feasible. The project proponent will document the emission reduction techniques that will be applied and will explain the reasons other techniques that could reduce emissions are infeasible. Techniques for reducing emissions may include, but are not limited to, the following: • Diesel-powered off-road equipment used in construction will meet EPA's Tier 4 emission standards as defined in 40 CFR 1039 and comply with the exhaust emission test procedures and provisions of 40 CFR Parts 1065 and 1068. Tier 3 models can be used if a Tier 4 version of the equipment type is not yet produced by manufacturers. This measure can also be achieved by using battery-electric off-road equipment as it becomes available. Prior to implementation of treatment activities, the project proponent will demonstrate the ability to supply the compliant equipment. A copy of each unit's certified tier specification or model year specification and operating permit (if applicable) will be available upon request at the time of mobilization of each unit of equipment. • Use renewable diesel fuel in diesel-powered construction equipment. Renewable diesel fuel must meet the following criteria: – meet California's Low Carbon Fuel Standards and be certified by CARB Executive Officer; – be hydrogenation-derived (reaction with hydrogen at high temperatures) from 100 percent biomass material (i.e., non-petroleum sources), such as animal fats and vegetables; – contain no fatty acids or functionalized fatty acid esters; and – have a chemical structure that is identical to petroleum-based diesel and complies with American Society for Testing and Materials D975 requirements for diesel fuels to ensure compatibility with all existing diesel engines. • Electric- and gasoline-powered equipment will be substituted for diesel-powered equipment. • Workers will be encouraged to carpool to work sites, and/or use public transportation for their commutes.

Mitigation Measure		Mitigation Measure Description
		Off-road equipment, diesel trucks, and generators will be equipped with Best Available Control Technology for emission reductions of NO_X and PM.
Aesthetic and Visual Resources		
MM AES-3	Conduct Visual Reconnaissance for Non-Shaded Fuel Breaks and Relocate or Feather and Screen Publicly Visible Non-Shaded Fuel Breaks	The project proponent will conduct a visual reconnaissance of the treatment area prior to implementing non-shaded fuel breaks to observe the surrounding landscape and determine if public viewing locations, including scenic vistas, public trails, and state scenic highways, have views of the proposed treatment area. If none are identified, the non-shaded fuel break may be implemented without additional visual mitigation If the project proponent identifies public viewing points, including heavily used scenic vistas, public trails, recreation areas, and state scenic highways with lengthy views (i.e., longer than a few seconds) of a proposed non-shaded fuel break treatment area, the project proponent will, prior to implementation, attempt to identify any feasible change in location of the fuel break to reduce its visibility from public viewpoints. If no feasible location changes exist that would reduce impacts to public viewers and achieve the intended wildfire risk reduction objectives of the proposed non-shaded fuel break, the project proponent will implement, where feasible, a shaded fuel break rather than a non-shaded fuel break, if the shaded fuel break would achieve the intended wildfire risk reduction objectives. With the shaded fuel break, the project proponent will thin and feather adjacent vegetation to break up the linear edges of the fuel break and strategically preserve vegetation at the edge of the fuel break, as feasible, to help screen public views and minimize the contrast between the fuel break and surrounding vegetation.
Archaeological, Historical, and Tribal Cultural Resources		
MM CUL-2	Protect Inadvertent Discoveries of Unique Archaeological Resources or Subsurface Historical Resources	If any prehistoric or historic-era subsurface archaeological features or deposits, including locally darkened soil (“midden”), that could conceal cultural deposits, are discovered during ground-disturbing activities, all ground-disturbing activity within 100 feet of the resources will be halted and a qualified archaeologist will assess the significance of the find. The qualified archaeologist will work with the project proponent to develop a primary records report that will comply with applicable state or local agency procedures. If the archaeologist determines that further information is needed to evaluate significance, a data recovery plan will be prepared. If the find is determined to be significant by the qualified archaeologist (i.e., because the find constitutes a unique archaeological resource, subsurface historical resource, or tribal cultural resource), the archaeologist will work with the project proponent to develop appropriate procedures to protect the integrity of the resource. Procedures could include preservation in place (which is the preferred manner of mitigating impacts to archaeological sites), archival research, subsurface testing, or

Mitigation Measure		Mitigation Measure Description
		recovery of scientifically consequential information from and about the resource. Any find will be recorded standard DPR Primary Record forms (Form DPR 523) will be submitted to the appropriate regional information center.
Biological Resources		
MM BIO-1a	Avoid Loss of Special-Status Plants Listed under ESA or CESA	If listed plants are determined to be present through application of SPR BIO-1 and SPR BIO-7, the project proponent will avoid and protect these species by establishing a no-disturbance buffer around the area occupied by listed plants and marking the buffer boundary with high-visibility flagging, fencing, stakes, or clear, existing landscape demarcations (e.g., edge of a roadway), exceptions to this requirement are listed later in this measure. The no-disturbance buffers will generally be a minimum of 50 feet from listed plants, but the size and shape of the buffer zone may be adjusted if a qualified RPF or botanist determines that a smaller buffer will be sufficient to avoid killing or damaging listed plants or that a larger buffer is necessary to sufficiently protect plants from the treatment activity. The appropriate buffer size will be determined based on plant phenology at the time of treatment (e.g., whether the plants are in a dormant, vegetative, or flowering state), the individual species' vulnerability to the treatment method being used, and environmental conditions and terrain. For example, paint-on or wicking application of herbicides to invasive plants may be implemented within 50 feet of listed plant species without posing a risk, especially if the listed plants are dormant at the time of application. Consideration of factors such as site hydrology, changes in light, edge effects, and potential introduction of invasive plants and noxious weeds may inform the determination of buffer width. If a no-disturbance buffer is reduced below 50 feet from a listed plant, a qualified RPF or botanist will provide the project proponent with a site- and/or treatment activity-specific explanation for the buffer reduction, which will be included in the PSA. After completion of the PSA and prior to or during treatment implementation, if there is any deviation (e.g., further reduction) from the reduced buffer as explained in the PSA, this will be documented in the post-project implementation report (referred to by CAL FIRE as a Completion Report) with a science-based justification for the deviation. No fire ignition (nor use of associated accelerants) will occur within 50 feet of listed plants. For species listed under ESA or CESA, if the project proponent cannot avoid loss by implementing no-disturbance buffers, the project proponent will implement Mitigation Measure BIO-1c. The only exception to this mitigation approach is in cases where it is determined by a qualified RPF or botanist, in consultation with CDFW and USFWS, as appropriate depending on species status and location, that the listed plants would benefit from treatment in the occupied habitat area even though some of the listed plants may be lost during treatment activities. For a treatment to be

Mitigation Measure		Mitigation Measure Description
		considered beneficial to listed special-status plants, the qualified RPF or botanist will demonstrate with substantial evidence that habitat function is reasonably expected to improve with implementation of the treatment (e.g., by citing scientific studies demonstrating that the species (or similar species) has benefitted from increased sunlight due to canopy opening, eradication of invasive species, or otherwise reduced competition for resources), and the substantial evidence will be included in the PSA. If it is determined that treatment activities would be beneficial to listed plants, no compensatory mitigation for loss of individuals will be required.
MM BIO-1b	Avoid Loss of Special-Status Plants Not Listed under ESA or CESA	If non-listed special-status plant species (i.e., species not listed under ESA or CESA, but meeting the definition of special-status as stated in Section 3.6.1 of the Program EIR) are determined to be present through application of SPR BIO-1 and SPR BIO-7, the project proponent will implement the following measures to avoid loss of individuals and maintain habitat function of occupied habitat: • Physically avoid the area occupied by the special-status plants by establishing a no-disturbance buffer around the area occupied by species and marking the buffer boundary with high-visibility flagging, fencing, stakes, or clear, existing landscape demarcations (e.g., edge of a roadway). The no-disturbance buffers will generally be a minimum of 50 feet from special-status plants, but the size and shape of the buffer zone may be adjusted if a qualified RPF or botanist determines that a smaller buffer will be sufficient to avoid loss of or damaging to special-status plants or that a larger buffer is necessary to sufficiently protect plants from the treatment activity. The appropriate size and shape of the buffer zone will be determined by a qualified RPF or botanist and will depend on plant phenology at the time of treatment (e.g., whether the plants are in a dormant, vegetative, or flowering state), the individual species' vulnerability to the treatment method being used, and environmental conditions and terrain. Consideration of factors such as site hydrology, changes in light, edge effects, and potential introduction of invasive plants and noxious weeds may inform an appropriate buffer size and shape. • Treatments may be conducted within this buffer if the potentially affected special-status plant species is a geophytic, stump-sprouting, or annual species, and the treatment can be conducted outside of the growing season (e.g., after it has completed its annual life cycle) or during the dormant season using only treatment activities that would not damage the stump, root system or other underground parts of special-status plants or destroy the seedbank. • Treatments will be designed to maintain the function of special-status plant habitat. For example, for a fuel break proposed in treatment areas occupied by special-status plants, if the removal of shade cover would degrade the special-status plant habitat despite the requirement to physically or seasonally avoid the special-status plant itself, habitat function would be diminished and the treatment would need to be modified or precluded from implementation.

Mitigation Measure		Mitigation Measure Description
		• No fire ignition (nor use of associated accelerants) will occur within the special-status plant buffer. A qualified RPF or botanist with knowledge of the special-status plant species habitat and life history will review the treatment design and applicable impact minimization measures (potentially including others not listed above) to determine if the anticipated residual effects of the treatment would be significant under CEQA because implementation of the treatment would not maintain habitat function of the special-status plant habitat (i.e., the habitat would be rendered unsuitable) or because the loss of special-status plants would substantially reduce the number or restrict the range of a special-status plant species. If the project proponent determines the impact on special-status plants would be less than significant, no further mitigation will be required. If the project proponent determines that the loss of special-status plants or degradation of occupied habitat would be significant under CEQA after implementing feasible treatment design alternatives and impact minimization measures, then Mitigation Measure BIO-1c will be implemented. The only exception to this mitigation approach is in cases where it is determined by a qualified RPF or botanist that the special-status plants would benefit from treatment in the occupied habitat area even though some of the non-listed special-status plants may be killed during treatment activities. For a treatment to be considered beneficial to non-listed special-status plants, the qualified RPF or botanist will demonstrate with substantial evidence that habitat function is reasonably expected to improve with implementation of the treatment (e.g., by citing scientific studies demonstrating that the species (or similar species) has benefitted from increased sunlight due to canopy opening, eradication of invasive species, or otherwise reduced competition for resources), and the substantial evidence will be included in the PSA. If it is determined that treatment activities would be beneficial to special-status plants, no compensatory mitigation will be required.
MM BIO-1c	Compensate for Unavoidable Loss of Special-Status Plants	If significant impacts on listed or non-listed special-status plants cannot feasibly be avoided as specified under the circumstances described under Mitigation Measures BIO-1a and 1b, the project proponent will prepare a Compensatory Mitigation Plan that identifies the residual significant impacts that require compensatory mitigation and describes the compensatory mitigation strategy being implemented and how unavoidable losses of special-status plants will be compensated. The project proponent will consult with CDFW and/or any other applicable responsible agency prior to finalizing the Compensatory Mitigation Plan to satisfy that responsible agency's requirements (e.g., permits, approvals) within the plan. If the special-status plant taxa are listed under ESA or CESA, the plan will be submitted to CDFW and/or USFWS (as appropriate) for review and comment. The first priority for compensatory mitigation will be preserving and enhancing existing populations outside of the treatment area in perpetuity, or if that is not an option because existing populations

Mitigation Measure	Mitigation Measure Description
	that can be preserved in perpetuity are not available, one of the following mitigation options will be implemented by the project proponent instead: • creating populations on mitigation sites outside of the treatment area through seed collection and dispersal (annual species) or transplantation (perennial species); • purchasing mitigation credits from a CDFW- or USFWS-approved conservation or mitigation bank in sufficient quantities to offset the loss of occupied habitat; and • if the affected special-status plants are not listed under ESA or CESA, compensatory mitigation may include restoring or enhancing degraded habitats so that they are made suitable to support special-status plant species in the future. If relocation efforts are part of the Compensatory Mitigation Plan, the plan will include details on the methods to be used, including collection, storage, propagation, receptor site preparation, installation, long-term protection and management, monitoring and reporting requirements, success criteria, and remedial action responsibilities should the initial effort fail to meet long-term monitoring requirements. The following performance standards will be applied for relocation: • the extent of occupied area will be substantially similar to the affected occupied habitat and will be suitable for self-producing populations. Re-located/re-established populations will be considered suitable for self-producing when: • habitat conditions allow for plants to reestablish annually for a minimum of 5 years with no human intervention, such as supplemental seeding; and • reestablished habitats contain an occupied area comparable to existing occupied habitat areas in similar habitat types in the region. If preservation of existing populations or creation of new populations is part of the mitigation plan, the Compensatory Mitigation Plan will include a summary of the proposed compensation lands and actions (e.g., the number and type of credits, location of mitigation bank or easement, restoration or enhancement actions), parties responsible for the long-term management of the land, and the legal and funding mechanisms (e.g., holder of conservation easement or fee title). The project proponent will submit evidence that the necessary mitigation has been implemented or that the project proponent has entered into a legal agreement to implement it and that compensatory plant populations will be preserved in perpetuity. If mitigation includes dedication of conservation easements, purchase of mitigation credits, or other offsite conservation measures, the details of these measures will be included in the mitigation plan, including information on responsible parties for long-term management, conservation easement holders, long-term management requirements, funding assurances, and success criteria such as

Mitigation Measure		Mitigation Measure Description
		those listed above and other details, as appropriate to target the preservation of long term viable populations. If mitigation includes restoring or enhancing habitat within the treatment area or outside of the treatment area, the Compensatory Mitigation Plan will include a description of the proposed habitat improvements, success criteria that demonstrate the performance standard of maintained habitat function has been met, legal and funding mechanisms, and parties responsible for long-term management and monitoring of the restored habitat. If the loss of occupied habitat cannot be offset (e.g., if preservation of existing populations or creation of new populations through relocation efforts are not available for a certain species), and as a result treatment activities would substantially reduce the number or restrict the range of listed plant species, then the treatment will not qualify as within the scope of this PEIR. Compensatory mitigation may be satisfied through compliance with permit conditions, or other authorizations obtained by the project proponent (e.g., incidental take permit for state-listed plants), if these requirements are equally or more effective than the mitigation identified above.
MM BIO-2a	Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Listed Wildlife Species and California Full Protected Species	If California Fully Protected Species or species listed under ESA or CESA are observed during reconnaissance surveys (conducted pursuant to SPR BIO-1) or focused or protocol-level surveys (conducted pursuant to SPR BIO-10), the project proponent will avoid adverse effects to the species by implementing the following. <u>Avoid Mortality, Injury, or Disturbance of Individuals</u> The project proponent will implement one of the following 2 measures to avoid mortality, injury, or disturbance of individuals: – Treatment will not be implemented within the occupied habitat. Any treatment activities outside occupied habitat will be a sufficient distance from the occupied habitat such that mortality, injury, or disturbance of the species will not occur, as determined by a qualified RPF or biologist using the most current and commonly-accepted science and considering published agency guidance; OR – Treatment will be implemented outside the sensitive period of the species' life history (e.g., outside the breeding or nesting season) during which the species may be more susceptible to disturbance, or disturbance could result in loss of eggs or young. For species present year-round, CDFW and/or USFWS/NOAA Fisheries will be consulted to determine if there is a period of time within which treatment could occur that would avoid mortality, injury, or disturbance of the species.

Mitigation Measure		Mitigation Measure Description
		- For species listed under ESA or CESA, if the project proponent cannot avoid mortality, injury or disturbance by implementing one of the two options listed above, the project proponent will implement Mitigation Measure BIO-2c. - Injury or mortality of California Fully Protected Species is prohibited pursuant to Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code and will be avoided. <u>Maintain Habitat Function</u> The project proponent will design treatment activities to maintain the habitat function, by implementing the following: – While performing review and surveys for SPR BIO-1 and SPR BIO-10, a qualified RPF or biologist will identify any habitat features that are necessary for survival (e.g., habitat necessary for breeding, foraging, shelter, movement) of the affected wildlife species (e.g., trees with complex structure, trees with large cavities, trees with nesting platforms; dens; tree snags; large raptor nests [including inactive nests]; downed woody debris; food sources). These habitat features will be marked and treatments applied to the features will be designed to minimize or avoid the loss or degradation of suitable habitat for listed species during treatments. Identification and treatment of these features will be based on the life history and habitat requirements of the affected species and the most current, commonly accepted science. – If it is determined during implementation of SPR BIO-1 and SPR BIO-10 that listed or fully protected wildlife with specific requirements for high canopy cover (e.g., Humboldt marten, fisher, spotted owl, coastal California gnatcatcher, riparian woodrat) are present within a treatment area, then tree or shrub canopy cover within existing suitable areas will be retained at the percentage preferred by the species (as determined by expert opinion, published habitat association information, or other documented standards that are commonly accepted [e.g., 50 percent for coastal California gnatcatcher]) such that habitat function is maintained. A qualified RPF or biologist will determine if, after implementation of the impact avoidance measures listed above, the habitat function will remain for the affected species after implementation of the treatment. Because this measure pertains to species listed under CESA or ESA or are fully protected, the qualified RPF or biologist will consult with CDFW and/or USFWS/NOAA Fisheries regarding the determination that habitat function is maintained. If consultation determines that the treatment will not maintain habitat function for the special-status species, the project proponent will implement Mitigation Measure BIO-2c.
MM BIO-2b	Avoid Mortality, Injury, or Disturbance and Maintain Habitat	If other special-status wildlife species (i.e., species not listed under CESA or ESA or California Fully Protected but meeting the definition of special status as stated in Section 3.6.1 of the Program EIR)

Mitigation Measure		Mitigation Measure Description
	Function for Other Special-Status Wildlife Species	are observed during reconnaissance surveys (conducted pursuant to SPR BIO-1) or focused or protocol-level surveys (conducted pursuant to SPR BIO-10), the project proponent will avoid or minimize adverse effects to the species by implementing the following. Avoid Mortality, Injury, or Disturbance of Individuals The project proponent will implement the following to avoid mortality, injury, or disturbance of individuals: For all treatment activities except prescribed burning, the project proponent will establish a no-disturbance buffer around occupied sites (e.g., nests, dens, roosts, middens, burrows, nurseries). Buffer size will be determined by a qualified RPF or biologist using the most current, commonly accepted science and will consider published agency guidance; however, buffers will generally be a minimum of 100 feet, unless site conditions indicate a smaller buffer would be sufficient for protection or a larger buffer would be needed. Factors to be considered in determining buffer size will include, but not be limited to, the species' tolerance to disturbance; the presence of natural buffers provided by vegetation or topography; nest height; locations of foraging territory; baseline levels of noise and human activity; and treatment activity. Buffer size may be adjusted if the qualified RPF or biologist determines that such an adjustment would not be likely to adversely affect (i.e., cause mortality, injury, or disturbance to) the species within the nest, den, burrow, or other occupied site. If a no-disturbance buffer is reduced below 100 feet from an occupied site, a qualified RPF or biologist will provide the project proponent with a site- and/or treatment activity-specific explanation for the buffer reduction, which will be included in the PSA. After completion of the PSA and prior to or during treatment implementation, if there is any deviation (e.g., further reduction) from the reduced buffer as explained in the PSA, this will be documented in the post-project implementation report (referred to by CAL FIRE as a Completion Report). • No-disturbance buffers will be marked with high-visibility flagging, fencing, stakes, or clear, existing landscape demarcations (e.g., edge of a roadway). No activity will occur within the buffer areas until the qualified RPF or biologist has determined that the young have fledged or dispersed; the nest, den, or other occurrence is no longer active; or reducing the buffer would not likely result in disturbance, mortality, or injury. A qualified RPF, biologist, or biological technician will be required to monitor the effectiveness of the no-disturbance buffer around the nest, den, burrow, or other occurrence during treatment. If treatment activities cause agitated behavior of the individual(s), the buffer distance will be increased, or treatment activities modified until the agitated behavior stops. The qualified RPF, biologist, or biological technician will have the authority to stop any treatment activities that could result in mortality, injury or disturbance to special-status species.

Mitigation Measure	Mitigation Measure Description
	• For prescribed burning, the project proponent will implement the treatment outside the sensitive period of the species' life history (e.g., outside the breeding or nesting season) during which the species may be more susceptible to disturbance, or disturbance could result in loss of eggs or young. For species present year-round, the qualified RPF or biologist will determine the period of time within which prescribed burning could occur that will avoid or minimize mortality, injury, or disturbance of the species. The project proponent may consult with CDFW and/or USFWS for technical information regarding appropriate limited operating periods. Maintain Habitat Function For all treatment activities, the project proponent will design treatment activities to maintain the habitat function by implementing the following: – While performing review and surveys for SPR BIO-1 and SPR BIO-10, a qualified RPF or biologist will identify any habitat features that are necessary for survival (e.g., habitat necessary for breeding, foraging, shelter, movement) of the affected wildlife species (e.g., trees with complex structure, trees with large cavities, trees with nesting platforms; tree snags; large raptor nests [including inactive nests]; downed woody debris). These habitat features will be marked and treatments applied to the features will be designed to minimize or avoid the loss or degradation of suitable habitat for listed species during treatments. Identification and treatment of these features will be based on the life history and habitat requirements of the affected species and the most current, commonly accepted science. – If it is determined during implementation of SPR BIO-1 and SPR BIO-10 that special-status wildlife with specific requirements for high canopy cover (e.g., northern goshawk, Sierra Nevada snowshoe hare) are present within a treatment area, then tree or shrub canopy cover within existing suitable areas will be retained at the percentage preferred by the species (as determined by expert opinion, published habitat association information, or other documented standards that are commonly accepted) such that the habitat function is maintained. – A qualified RPF or biologist will determine if, after implementation of the impact avoidance measures listed above, the habitat function will remain for the affected species after implementation of the treatment. The qualified RPF or biologist may consult with CDFW and/or USFWS for technical information regarding habitat function. A qualified RPF or biologist with knowledge of the special-status wildlife species habitat and life history will review the treatment design and applicable impact minimization measures (potentially including others not listed above) to determine if the anticipated residual effects of the treatment would be significant under CEQA because implementation of the treatment will not maintain habitat function of the special-status wildlife species' habitat or because the loss of special-status wildlife

Mitigation Measure		Mitigation Measure Description
		would substantially reduce the number or restrict the range of a special-status wildlife species. If the project proponent determines the impact on special-status wildlife would be less than significant, no further mitigation will be required. If the project proponent determines that the loss of special-status wildlife or degradation of occupied habitat would be significant under CEQA after implementing feasible treatment design alternatives and impact minimization measures, then Mitigation Measure BIO-2c will be implemented. The only exception to this mitigation approach is in cases where it is determined by a qualified RPF or biologist that the non-listed special-status wildlife would benefit from treatment in the occupied habitat area even though some of the non-listed special-status wildlife may be killed, injured, or disturbed during treatment activities. For a treatment to be considered beneficial to non-listed special-status wildlife, the qualified RPF or biologist will demonstrate with substantial evidence that habitat function is reasonably expected to improve with implementation of the treatment (e.g., by citing scientific studies demonstrating that the species (or similar species) has benefitted from increased sunlight due to canopy opening, eradication of invasive species, or otherwise reduced competition for resources), and the substantial evidence will be included in the PSA. If it is determined that treatment activities would be beneficial to special-status wildlife, no compensatory mitigation will be required. The qualified RPF or biologist may consult with CDFW and/or USFWS for technical information regarding the determination that a non-listed special-status species would benefit from the treatment.
MM BIO-2c	TITLE?	If the provisions of Mitigation Measure BIO-2a, BIO-2b, BIO-2d, BIO-2e, BIO-2f, or BIO-2g cannot be implemented and the project proponent determines that additional mitigation is necessary to reduce significant impacts, the project proponent will compensate for such impacts to species or habitat by acquiring and/or protecting land that provides (or will provide in the case of restoration) habitat function for affected species that is at least equivalent to the habitat function removed or degraded as a result of the treatment. Compensation may include: 1. Preserving existing habitat outside of the treatment area in perpetuity; this may entail purchasing mitigation credits and/or lands from a CDFW- or USFWS-approved entity in sufficient quantity to offset the residual significant impacts, generally at a ratio of 1:1 for habitat; and 2. Restoring or enhancing existing habitat within the treatment area or outside of the treatment area (including decommissioning roads, adding perching structures, removing existing

Mitigation Measure	Mitigation Measure Description
	perching structures, or removing existing movement barriers or other existing features that are adversely affecting the species). The project proponent will prepare a Compensatory Mitigation Plan that identifies the residual significant effects that require compensatory mitigation and describes the compensatory mitigation strategy being implemented to reduce residual effects, and: 1. For preserving existing habitat outside of the treatment area in perpetuity, the Compensatory Mitigation Plan will include a summary of the proposed compensation lands (e.g., the number and type of credits, location of mitigation bank or easement), parties responsible for the long-term management of the land, and the legal and funding mechanisms for long-term conservation (e.g., holder of conservation easement or fee title). The project proponent will submit evidence that the necessary mitigation has been implemented or that the project proponent has entered into a legal agreement to implement it and that compensatory habitat will be preserved in perpetuity. 2. For restoring or enhancing habitat within the treatment area or outside of the treatment area, the Compensatory Mitigation Plan will include a description of the proposed habitat improvements, success criteria that demonstrate the performance standard of maintained habitat function has been met, legal and funding mechanisms, and parties responsible for long-term management and monitoring of the restored habitat. Review requirements are as follows: • The project proponent will consult with CDFW and/or any other applicable responsible agency prior to finalizing the Compensatory Mitigation Plan in order to satisfy that responsible agency's requirements (e.g., permits, approvals) within the plan. • For species listed under ESA or CESA or a California Fully Protected Species, the project proponent will submit the mitigation plan to CDFW and/or USFWS/NOAA Fisheries for review and comment. • For other special-status wildlife species the project proponent may consult with CDFW and/or USFWS regarding the availability and applicability of compensatory mitigation and other related technical information. Compensatory mitigation may be satisfied through compliance with permit conditions, or other authorizations obtained by the project proponent (e.g., incidental take permit), if these requirements are equally or more effective than the mitigation identified above.

Mitigation Measure		Mitigation Measure Description
MM BIO-2d	Implement Protective Measures for Valley Elderberry Longhorn Beetle	If elderberry shrubs within the documented range of valley elderberry longhorn beetle are identified during review and surveys for SPR BIO-1, and valley elderberry longhorn beetle or likely occupied suitable elderberry habitat (e.g., within riparian, within historic riparian, containing exit holes) is confirmed to be present during protocol-level surveys following the protocol outlined in USFWS Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle (USFWS 2017) per SPR BIO-10, the following protective measures will be implemented to avoid and minimize impacts to valley elderberry longhorn beetle: • If elderberry shrubs are 165 feet or more from the treatment area, and treatment activities would not encroach within this distance, direct or indirect impacts are not expected and further mitigation is not required. • If elderberry shrubs are located within 165 feet of the treatment area, the following measures will be implemented: – A minimum avoidance area of at least 20 feet from the dripline of each elderberry plant will be fenced or flagged and maintained to avoid direct impacts (e.g., damage to root system) that could damage or kill the plant, with the exception of the following activities: - Manual trimming of elderberry shrubs will only occur between November and February and will avoid removal of any branches or stems that are greater than or equal to 1 inch in diameter to avoid and minimize adverse effects on valley elderberry longhorn beetle. - Manual or mechanical vegetation treatment within the drip-line of any elderberry shrub will be limited to the season when adults are not active (August – February), will be limited to methods that do not cause ground disturbance, and will avoid damaging the elderberry. – A qualified RPF, biologist, or biological technician familiar with valley elderberry longhorn beetle and its life history will monitor the work area to verify the avoidance and minimization measures are implemented. The qualified RPF, biologist, or biological technician will have the authority to stop any treatment activities that could result in potential adverse effects to valley elderberry longhorn beetle. If the project proponent cannot implement the measures above to avoid mortality, injury, or disturbance of VELB or degradation of occupied habitat such that its function would not be maintained, the project proponent will implement Mitigation Measure BIO-2c.
MM BIO-2e	Design Treatment to Retain Special-Status Butterfly Host Plants	If federally listed butterflies are identified as occurring or having potential to occur during review and surveys for SPR BIO-1 and confirmed during protocol-level surveys per SPR BIO-10, then the following measures will be implemented:

Mitigation Measure	Mitigation Measure Description
	• Treatment areas within the range of these species will be surveyed for the host plant for each species (Table 3.6-34). • Host plants for federally listed butterflies within the occupied habitat will be marked with high-visibility flagging, fencing, or stakes, and no treatment activities will occur within 10 feet of these plants. • Because prescribed herbivory could result in the indiscriminate removal of the host plants for federally listed butterflies, this treatment type will not be used within occupied habitat of any federally listed butterfly species, unless it is known that the host plant is unpalatable to the herbivore. • Treatment areas that are not occupied but are within the range of the federally listed butterfly will be divided into as many treatment units as feasible such that the entirety of the habitat is not treated within the same year. • Treatments will be conducted in a patchy pattern to the extent feasible in areas that are not occupied but are within the range of the federally listed butterfly, such that the entirety of the habitat is not burned or removed and untreated portions of suitable habitat are retained. If the project proponent cannot implement the measures above to avoid mortality, injury, or disturbance of federally listed butterflies or degradation of occupied habitat (host plants) such that its function would not be maintained, the project proponent will implement Mitigation Measure BIO-2c. **CESA and ESA Listed Species**. A qualified RPF or biologist will determine if, after implementation of any feasible impact avoidance measures (potentially including others not listed above), the treatment will result in mortality, injury, or disturbance, or if after implementation of the treatment, habitat function will remain for the affected species. For species listed under CESA or ESA or that are fully protected, the qualified RPF or biologist will consult with CDFW and/or USFWS regarding this determination. If consultation determines that mortality, injury, or disturbance of listed butterflies or degradation of occupied habitat such that its function would not be maintained would occur, the project proponent will implement Mitigation Measure BIO-2c. **Other Special-status Species**. A qualified RPF or biologist with knowledge of the special-status species' habitat and life history will review the treatment design and applicable impact minimization measures (potentially including others not listed above) to determine if the anticipated residual effects of the treatment would be significant under CEQA, because implementation of the treatment will not maintain habitat function of the special-status species' habitat or because the loss of special-status individuals would substantially reduce the number or restrict the range of a special-status species. If the project proponent determines the impact on special-status butterflies would

Mitigation Measure		Mitigation Measure Description
		be less than significant, no further mitigation will be required. If the project proponent determines that the loss of special-status butterflies or degradation of occupied habitat would be significant under CEQA after implementing feasible treatment design alternatives and impact minimization measures, then Mitigation Measure BIO-2c will be implemented. The only exception to this mitigation approach is in cases where it is determined by a qualified RPF or biologist that the special-status butterfly species would benefit from treatment in the occupied habitat area even though some may be killed, injured or disturbed during treatment activities. For a treatment to be considered beneficial to special-status butterfly species, the qualified RPF or biologist will demonstrate with substantial evidence that habitat function is reasonably expected to improve with implementation of the treatment (e.g., by citing scientific studies demonstrating that the species (or similar species) has benefitted from increased sunlight due to canopy opening, eradication of invasive species, or otherwise reduced competition for resources), and the substantial evidence will be included in the PSA. If it is determined that treatment activities would be beneficial to special-status butterflies, no compensatory mitigation will be required.
MM BIO-2f	Avoid Habitat for Special-Status Beetles, Flies, Grasshoppers, and Snails	If treatment activities would occur within the limited range of any state or federally listed beetle, fly, grasshopper, or snail, and these species are identified as occurring or having potential to occur due to the presence of potentially suitable habitat during review and surveys for SPR BIO-1 and surveys for SPR BIO-10, then the following measures will be implemented: • To avoid and minimize impacts to Mount Hermon June beetle and Zayante band-winged grasshopper, treatment activities will not occur within "Sandhills" habitat in Santa Cruz County, the only suitable habitat for these species. • To avoid and minimize impacts to Casey's June beetle, Delhi Sands flower-loving fly (Rhaphiomidas terminates abdominalis), Delta green ground beetle (Elaphrus virisis), Morro shoulderband snail, Ohlone tiger beetle (Cicindela ohlone), and Trinity bristle snail, treatment activities will not occur within habitat in the range of these species that is deemed suitable by a qualified RPF or biologist with familiarity of the species. If the project proponent cannot implement the measures above to avoid mortality, injury or disturbance to listed beetles, flies, grasshoppers, and snails, or degradation of suitable habitat such that its function would not be maintained, the project proponent will implement Mitigation Measure BIO-2c.
MM BIO-2g	Design Treatment to Avoid Mortality, Injury, or Disturbance	If special-status bumble bees are identified as occurring during review and surveys under SPR BIO-1 and confirmed during protocol-level surveys per SPR BIO-10, or if suitable habitat for special-status bumble bees is identified during review and surveys under SPR BIO-1 (e.g., wet meadow,

Mitigation Measure		Mitigation Measure Description
	and Maintain Habitat Function for Special-Status Bumble Bees	forest meadow, riparian, grassland, or coastal scrub habitat containing sufficient floral resources within the range of the species), then the project proponent will implement the following measures, as feasible: • Prescribed burning within occupied or suitable habitat for special-status bumble bees will occur from October through February to avoid the bumble bee flight season. • Treatment areas in occupied or suitable habitat will be divided into a sufficient number of treatment units such that the entirety of the habitat is not treated within the same year; the objective of this measure is to provide refuge for special-status bumble bees during treatment activities and temporary retention of suitable floral resources proximate to the treatment area. • Treatments will be conducted in a patchy pattern to the extent feasible in occupied or suitable habitat, such that the entirety of the habitat is not burned or removed and untreated portions of occupied or suitable habitat are retained (e.g., fire breaks will be aligned to allow for areas of unburned floral resources for special-status bumble bees within the treatment area). • Herbicides will not be applied to flowering native plants within occupied or suitable habitat to the extent feasible during the flight season (March through September). **CESA and ESA Listed Species**. A qualified RPF or biologist will determine if, after implementation of feasible avoidance measures (potentially including others not listed above), the treatment will result in mortality, injury, or disturbance to the species, or if after implementation of the treatment, habitat function will remain for the affected species. For species listed under CESA or ESA or that are fully protected, the qualified RPF or biologist will consult with CDFW and/or USFWS regarding this determination. If consultation determines that mortality, injury, or disturbance of listed bumble bees (in the event the Candidate listing is confirmed) or degradation of occupied (or assumed to be occupied) habitat such that its function would not be maintained would occur, the project proponent will implement Mitigation Measure BIO-2c. **Other Special-status Species**. A qualified RPF or biologist with knowledge of the special-status species' habitat and life history will review the treatment design and applicable impact minimization measures (potentially including others not listed above) to determine if the anticipated residual effects of the treatment would be significant under CEQA because implementation of the treatment will not maintain habitat function of the special-status species' habitat or because the loss of special-status individuals would substantially reduce the number or restrict the range of a special-status species. If the project proponent determines the impact on special-status bumble bees would be less than significant, no further mitigation will be required. If the project proponent determines that the loss of special-status bumble bees or degradation of occupied (or assumed to be occupied)

Mitigation Measure		Mitigation Measure Description
		habitat would be significant under CEQA after implementing feasible treatment design alternatives and impact minimization measures, then Mitigation Measure BIO-2c will be implemented. The only exception to this mitigation approach is in cases where it is determined by a qualified RPF or biologist that the special-status bumble bee species would benefit from treatment in the occupied (or assumed to be occupied) habitat area even though some of the non-listed special-status bumble bees may be killed, injured, or disturbed during treatment activities. For a treatment to be considered beneficial to special-status bumble bee species, the qualified RPF or biologist will demonstrate with substantial evidence that habitat function is reasonably expected to improve with implementation of the treatment (e.g., by citing scientific studies demonstrating that the species (or similar species) has benefitted from increased sunlight due to canopy opening, eradication of invasive species, or otherwise reduced competition for resources), and the substantial evidence will be included in the PSA. If it is determined that treatment activities would be beneficial to special-status bumble bees, no compensatory mitigation will be required.
MM BIO-2h		The project proponent will implement the following measure if treatment activities are planned within the range of desert bighorn sheep, peninsular bighorn sheep, Sierra Nevada bighorn sheep, or pronghorn: • Prescribed herbivory activities will be prohibited within a 14-mile buffer around suitable habitat for any species of bighorn sheep within the range of these species consistent with the more stringent recommendations in the Recovery Plan for Sierra Nevada bighorn sheep (USFWS 2007). • Prescribed herbivory activities will be avoided within the range of pronghorn where feasible (where this range does not overlap with the range of any species of bighorn sheep).
MM BIO-3a	Design Treatments to Avoid Loss of Sensitive Natural Communities and Oak Woodlands	The project proponent will implement the following measures when working in treatment areas that contain sensitive natural communities identified during surveys conducted pursuant to SPR BIO-3: • Reference the *Manual of California Vegetation*, Appendix 2, Table A2, *Fire Characteristics* (Sawyer et al. 2009 or current version, including updated natural communities' data at https://vegetation.cnps.org/) or other best available information to determine the natural fire regime of the specific sensitive natural community type (i.e., alliance) present. The condition class and fire return interval departure of the vegetation alliances present will also be determined. • Design treatments in sensitive natural communities and oak woodlands to restore the natural fire regime and return vegetation composition and structure to their natural condition to maintain or improve habitat function of the affected sensitive natural community. Treatments will be designed to replicate the fire regime attributes for the affected sensitive natural community or oak woodland type including seasonality, fire return interval, fire size, spatial complexity, fireline intensity,

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	severity, and fire type as described in *Fire in California's Ecosystems* (Van Wagtendonk et al. 2018) and the *Manual of California Vegetation* (Sawyer et al. 2009 or current version, including updated natural communities data at http://vegetation.cnps.org/). Treatments will not be implemented in sensitive natural communities that are within their natural fire return interval (i.e., time since last burn is less than the average time required for that vegetation type to recover from fire) or within Condition Class 1. • To the extent feasible, no fuel breaks will be created in sensitive natural communities with rarity ranks of S1 (critically imperiled) and S2 (imperiled). • To the extent feasible, fuel breaks will not remove more than 20 percent of the native vegetation relative cover from a stand of sensitive natural community vegetation in sensitive natural communities with a rarity rank of S3 (vulnerable) or in oak woodlands. In forest and woodland sensitive natural communities with a rarity rank of S3, and in oak woodlands, only shaded fuel breaks will be installed, and they will not be installed in more than 20 percent of the stand of sensitive natural community or oak woodland vegetation (i.e., if the sensitive natural community covers 100 acres, no more than 20 acres will be converted to create the fuel break). • Use prescribed burning as the primary treatment activity in sensitive natural communities that are fire dependent (e.g., closed-cone forest and woodland alliances, chaparral alliances characterized by fire-stimulated, obligate seeders), to the extent feasible and appropriate based on the fire regime attributes as described in *Fire in California's Ecosystems* (Van Wagtendonk et al. 2018) and the *Manual of California Vegetation* (Sawyer et al. 2009 or current version, including updated natural communities data at https://vegetation.cnps.org/. • Time prescribed herbivory to occur when non-target vegetation is not susceptible to damage (e.g. non-target vegetation is dormant or has completed its reproductive cycle for the year). For example, use herbivores to control invasive plants growing in sensitive habitats or sensitive natural communities when sensitive vegetation is dormant but invasive plants are growing. Timing of herbivory to avoid non-target vegetation will be determined by a qualified botanist, RPF, or biologist based on the specific vegetation alliance being treated, the life forms and life conditions of its characteristic plant species, and the sensitivity of the non-target vegetation to the effects of herbivory. The feasibility of implementing the avoidance measures will be determined by the project proponent based on whether implementation of this mitigation measure will preclude completing the treatment project within the reasonable period of time necessary to meet CalVTP program objectives, including, but not limited to, protection of vulnerable communities. If the avoidance measures are determined by the project proponent to be infeasible, the project proponent will document the

Mitigation Measure		Mitigation Measure Description
		reasons implementation of the avoidance strategies are infeasible in the PSA. After completion of the PSA and prior to or during treatment implementation, if there is any change in the feasibility of avoidance strategies from those explained in the PSA, this will be documented in the post-project implementation report (referred to by CAL FIRE as a Completion Report). A qualified RPF or botanist with knowledge of the affected sensitive natural community will review the treatment design and applicable impact minimization measures (potentially including others not listed above) to determine if the anticipated residual effects of the treatment would be significant under CEQA because implementation of the treatment will not maintain habitat functions of the sensitive natural community or oak woodland. If the project proponent determines the impact on sensitive natural communities or oak woodlands would be less than significant, no further mitigation will be required. If the project proponent determines that the loss or degradation of sensitive natural communities or oak woodlands would be significant under CEQA after implementing feasible treatment design alternatives and impact minimization measures, then Mitigation Measure BIO-3b will be implemented. The only exception to this mitigation approach is in cases where it is determined by a qualified RPF or botanist that the sensitive natural community or oak woodland would benefit from treatment in the occupied habitat area even though some loss may occur during treatment activities. For a treatment to be considered beneficial to a sensitive natural community or oak woodland, the qualified RPF or botanist will demonstrate with substantial evidence that habitat function is reasonably expected to improve with implementation of the treatment (e.g., by citing scientific studies demonstrating that the community (or similar community) has benefitted from increased sunlight due to canopy opening, eradication of invasive species, or otherwise reduced competition for resources), and the substantial evidence will be included in the PSA. If it is determined that treatment activities would be beneficial to sensitive natural communities or oak woodlands, no compensatory mitigation will be required.
MM BIO-3b	Compensate for Loss of Sensitive Natural Communities and Oak Woodlands	If significant impacts on sensitive natural communities or oak woodlands cannot feasibly be avoided or reduced as specified under Mitigation Measure BIO-3a, the project proponent will implement the following actions: • Compensate for unavoidable losses of sensitive natural community and oak woodland acreage and function by: – restoring sensitive natural community or oak woodland functions and acreage within the treatment area;

Mitigation Measure		Mitigation Measure Description
		– restoring degraded sensitive natural communities or oak woodlands outside of the treatment area at a sufficient ratio to offset the loss of acreage and habitat function; or – preserving existing sensitive natural communities or oak woodlands of equal or better value to the sensitive natural community lost through a conservation easement at a sufficient ratio to offset the loss of acreage and habitat function. • The project proponent will prepare a Compensatory Mitigation Plan that identifies the residual significant effects on sensitive natural communities or oak woodlands that require compensatory mitigation and describes the compensatory mitigation strategy being implemented to reduce residual effects, and: 1. For preserving existing habitat outside of the treatment area in perpetuity, the Compensatory Mitigation Plan will include a summary of the proposed compensation lands (e.g., the number and type of credits, location of mitigation bank or easement), parties responsible for the long-term management of the land, and the legal and funding mechanism for long-term conservation (e.g., holder of conservation easement or fee title). The project proponent will submit evidence that the necessary mitigation has been implemented or that the project proponent has entered into a legal agreement to implement it and that compensatory habitat will be preserved in perpetuity. 2. For restoring or enhancing habitat within the treatment area or outside of the treatment area, the Compensatory Mitigation Plan will include a description of the proposed habitat improvements, success criteria that demonstrate the performance standard of maintained habitat function has been met, legal and funding mechanisms, and parties responsible for long-term management and monitoring of the restored or enhanced habitat. The project proponent will consult with CDFW and/or any other applicable responsible agency prior to finalizing the Compensatory Mitigation Plan in order to satisfy that responsible agency's requirements (e.g., permits, approvals) within the plan.
MM BIO-3c	Compensate for Unavoidable Loss of Riparian Habitat	If, after implementation of SPR BIO-4, impacts to riparian habitat remain significant under CEQA, the project proponent will implement the following: • Compensate for unavoidable losses of riparian habitat acreage and function by: – restoring riparian habitat functions and acreage within the treatment area; – restoring degraded riparian habitat outside of the treatment area; – purchasing riparian habitat credits at a CDFW-approved mitigation bank; or

Mitigation Measure		Mitigation Measure Description
		– preserving existing riparian habitat of equal or better value to the riparian habitat lost through a conservation easement at a sufficient ratio to offset the loss of riparian habitat function and value. • The project proponent will prepare a Compensatory Mitigation Plan that identifies the residual significant effects on riparian habitat that require compensatory mitigation and describes the compensatory mitigation strategy being implemented to reduce residual effects, and: 1. For preserving existing riparian habitat outside of the treatment area in perpetuity, the Compensatory Mitigation Plan will include a summary of the proposed compensation lands (e.g., the number and type of credits, location of mitigation bank or easement), parties responsible for the long-term management of the land, and the legal and funding mechanism for long-term conservation (e.g., holder of conservation easement or fee title). The project proponent will submit evidence that the necessary mitigation has been implemented or that the project proponent has entered into a legal agreement to implement it and that compensatory plant populations will be preserved in perpetuity. 2. For restoring or enhancing riparian habitat within the treatment area or outside of the treatment area, the Compensatory Mitigation Plan will include a description of the proposed habitat improvements, success criteria that demonstrate the performance standard of maintained habitat function has been met, legal and funding mechanisms, and parties responsible for long-term management and monitoring of the restored or enhanced habitat. The project proponent will consult with CDFW and/or any other applicable responsible agency prior to finalizing the Compensatory Mitigation Plan to satisfy that responsible agency's requirements (e.g., permits, approvals) within the plan. Compensatory mitigation may be satisfied through compliance with permit conditions, or other authorizations obtained by the project proponent (e.g., Lake and Streambed Alteration Agreement), if these requirements are equally or more effective than the mitigation identified above.
MM BIO-4	Avoid State and Federally Protected Wetlands	Impacts to wetlands will be avoided using the following measures: • The qualified RPF or biologist will delineate the boundaries of federally protected wetlands according to methods established in the USACE wetlands delineation manual (Environmental Laboratory 1987) and the appropriate regional supplement for the ecoregion in which the treatment is being implemented. • The qualified RPF or biologist will delineate the boundaries of wetlands that may not meet the definition of waters of the United States, but would qualify as waters of the state, according to the state wetland procedures (California Water Boards 2019 or current procedures).

Mitigation Measure		Mitigation Measure Description
		• A qualified RPF or biologist will establish a buffer around wetlands and mark the buffer boundary with high-visibility flagging, fencing, stakes, or clear, existing landscape demarcations (e.g., edge of a roadway). The buffer will be a minimum width of 25 feet but may be larger if deemed necessary. The appropriate size and shape of the buffer zone will be determined in coordination with the qualified RPF or biologist and will depend on the type of wetland present (e.g., seasonal wetland, wet meadow, freshwater marsh, vernal pool), the timing of treatment (e.g., wet or dry time of year), whether any special-status species may occupy the wetland and the species' vulnerability to the treatment activities, environmental conditions and terrain, and the treatment activity being implemented. • A qualified RPF or biological technician will periodically inspect the materials demarcating the buffer to confirm that they are intact and visible, and wetland impacts are being avoided. • Within this buffer, herbicide application is prohibited. • Within this buffer, soil disturbance is prohibited. Accordingly, the following activities are not allowed within the buffer zone: mechanical treatments, prescribed herbivory, equipment and vehicle access or staging. • Only prescribed (broadcast) burning may be implemented in wetland habitats if it is determined by a qualified RPF or biologist that: – No special-status species are present in the wetland habitat – The wetland habitat function would be maintained. – The prescribed burn is within the normal fire return interval for the wetland vegetation types present – Fire containment lines and pile burning are prohibited within the buffer No fire ignition (and associated use of accelerants) will occur within the wetland buffer
MM BIO-5	Retain Nursery Habitat and Implement Buffers to Avoid Nursery Sites	The project proponent will implement the following measures while working in treatment areas that contain nursery sites identified in surveys conducted pursuant to SPR BIO-10: **Retain Known Nursery Sites**. A qualified RPF or biologist will identify the important habitat features of the wildlife nursery and, prior to treatment activities, will mark these features for avoidance and retention during treatment **Establish Avoidance Buffers**. The project proponent will establish a non-disturbance buffer around the nursery site if activities are required while the nursery site is active/occupied. The appropriate size and shape of the buffer will be determined by a qualified RPF or biologist, based on potential effects of project-related habitat disturbance, noise, visual disturbance, and other factors. No

Mitigation Measure		Mitigation Measure Description
		treatment activity will commence within the buffer area until a qualified RPF or biologist confirms that the nursery site is no longer active/occupied. Monitoring of the effectiveness of the non-disturbance buffer around the nursery site by a qualified RPF, biologist, or biological technician during and after treatment activities will be required. If treatment activities cause agitated behavior of the individual(s), the buffer distance will be increased, or treatment activities modified until the agitated behavior stops. The qualified RPF, biologist, or biological technician will have the authority to stop any treatment activities that could result in potential adverse effects to special-status species.
Greenhouse Gas Emissions		
MM GHG-2	Implement GHG Emission Reduction Techniques During Prescribed Burns	When planning for and conducting a prescribed burn, project proponents implementing a prescribed burn will incorporate feasible methods for reducing GHG emissions, including the following, which are identified in the National Wildfire Coordinating Group Smoke Management Guide for Prescribed Fire (NWCG 2018): • reduce the total area burned by isolating and leaving large fuels (e.g., large logs, snags) unburned; • reduce the total area burned through mosaic burning; • burn when fuels have a higher fuel moisture content; • reduce fuel loading by removing fuels before ignition. Methods to remove fuels include mechanical treatments, manual treatments, prescribed herbivory, and biomass utilization; and • schedule burns before new fuels appear. As the science evolves, other feasible methods or technologies to sequester carbon could be incorporated, such as conservation burning, a technique for burning woody material that reduces the production of smoke particulates and carbon released into the atmosphere and generates more biochar. Biochar is produced from the material left over after the burn and spread with compost to increase soil organic matter and soil carbon sequestration. Technologies to reduce greenhouse gas emissions may also include portable units that perform gasification to produce electricity or pyrolysis that produces biooil that can be used as liquid fuel and/or syngas that can be used to generate electricity. The project proponent will document in the Burn Plan required pursuant to SPR AQ-3 which methods for reducing GHG emissions can feasibly be integrated into the treatment design.

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

Exhibit C: Special-Status Species with Potential to Occur in PWP Program Area

Special-Status Species with Potential to Occur in the PWP Program Area

The potential for the special-status species that were identified in the literature and database review to occur in the PWP Program area was evaluated according to the following criteria:

- *No Potential.* Habitat in the study area is clearly unsuitable for the species' requirements (i.e. foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
- *Low Potential.* Few of the habitat components meeting the species' requirements are present, and/or the majority of habitat in and adjacent to the study area is unsuitable or very poor quality. Observation records are lacking or are more than 50 years old. The species is not likely to occur on the site.
- *Moderate Potential.* Some of the habitat components meeting the species' requirements are present, and/or only limited suitable habitat exists in or adjacent to the study area. The species has a moderate probability of being found on the site, and observations have been recorded within the past 50 years.
- *High Potential.* All of the habitat components meeting the species' requirements are present and/or most of the habitat in or adjacent to the study area is highly suitable. The species has a high probability of being found on the site, and observations have been recorded in the project vicinity within the past 25 years.
- *Present.* Species is observed on the site or has been recorded (i.e. CNDDB, CalFlora) on the site within the past 25 years.

Table C-1 Special-Status Plant Species with Potential to Occur in Program Area

Scientific Name, Common Name	Listed Status	Habitat Requirements	Potential for Occurrence
Bent-flowered fiddleneck *Amsinckia lunaris*	1B.2	Occurs in open, sometimes moist, wooded slopes within foothill/cismontane woodland, coastal bluff scrub, and valley grassland communities at elevations from 3-500m.	Present. Several occurrence records in the program area.
Blasdale's bent grass *Agrostis blasdalei*	1B.2	Occurs in coastal bluff scrub, coastal dunes, and coastal prairie from 5-150m elevation.	Present Two occurrence records in the program area.
Blue coast gilia *Gilia capitata* ssp. *Chamissonis*	1B.1	Coastal sand hills at elevations less than 185m.	Present. Several occurrence records in the program area.
Bluff wallflower *Erysimum concinnum*	1B.2	Prairies, coastal bluffs and dunes, at elevations up to 400m.	Moderate potential. Limited suitable habitat present in the program area. Last documented observation in 1979 outside of the program area.

Scientific Name, Common Name	Listed Status	Habitat Requirements	Potential for Occurrence
Bolander's water-hemlock *Cicuta maculata* var. *bolanderi*	2B.1	Coastal wetlands, marshes, edges of ponds, streambanks and ditches.	Present. Two occurrence records in the program area.
Clover (tidestrom's) lupine *Lupinus tidestromii*	FE; SE; 1B.1	Partially stabilized coastal dunes up to ~8m high, in association with Menzies' wallflower, sand gilia, beach sagewort, sand verbena, and mock heather.	Moderate potential. One CNDDB occurrence from 1994. Limited suitable habitat exists in the program area.
Coast Lily *Lilium maritimum*	1B.1	Coastal prairie and north coastal scrub communities; gaps in coniferous forests. Often found in wetland or marshy areas, roadside ditches and sandy soils.	Low potential. Last CNDDB documented observation in 1957.
Coastal bluff morning-glory *Calystegia purpurata* ssp. *saxicola*	1B.2	Rocky coastal scrub at elevations up to 100m.	Present. Several recent occurrence records in the program area.
Coastal triquetrella *Triquetrella californica*	1B.2	Sandy habitats on soil or rock, typically adjacent to the coast. Also found in inland chaparral on north-facing slopes. Grows on exposed to shaded soil, rocks or sand, in dry or moist situations.	Present. Two occurrence records in the program area.
Congested-headed hayfield tarplant *Hemizonia congesta* ssp. *congesta*	1B.2	Grasslands, meadows, fallow fields, and marsh edges in valley and foothill grassland communities at elevations from 5-520m. Sometimes found on roadsides.	Present. Several recent occurrence records in the program area.
Contra Costa goldfields *Lasthenia conjugens*	FE	Vernal pools in open grassy areas at elevations up to 470m.	Present. One recorded observation in 2013 in the program area. Program location does not overlap critical habitat.
Dark-eyed gilia *Gilia millefoliata*	1B.2	Occurs on semi-stabilized coastal sand dunes along coast, at elevations up to 22m.	Present. Two recent occurrence records in the program area.
Fragrant fritillary *Fritillaria liliacea*	1B.2	Open grassy hills and fields near the coast, often in heavy clay soil, sometimes on serpentine substrates up to 200m. Sometimes occurs in or near claypan vernal pools.	Present. Several recent occurrence records in the program area. Suitable habitat exists in the program area.

Scientific Name, Common Name	Listed Status	Habitat Requirements	Potential for Occurrence
Franciscan thistle *Cirsium andrewsii*	1B.2	Bluffs, ravines, canyons, and slopes near the coast. On moist to wet ground, often around seepages or along streams. Sometimes on serpentine. At elevations up to 150m.	High potential. Several occurrence records in the program area, but most recent is from 1997. Suitable habitat exists in the program area.
Golden larkspur *Delphinium luteum*	FE; SR; 1B.1	Rocky outcroppings within coastal scrub and coastal prairie communities.	Present. Several recent occurrence records in the program area.
Humboldt Bay owl's-clover *Castilleja ambigua* var. *humboldtiensis*	1B.2	Coastal salt marshes and coastal swamps.	Present. Several recent occurrence records in the program area.
Island tube lichen *Hypogymnia schizidiata*	1B.3	Epiphytic growth. Found in coastal scrub, conifer bark, and rock substrate within four miles of the ocean.	Present. One occurrence record from 2017 near Mt. Vision.
Lyngbye's sedge *Carex lyngbyei*	2B.2	Coastal salt mashes and brackish marshes, typically in fine-grained sand to silt. Colonizes tidal mudflats.	Present. Several recent occurrence records in the program area.
Marin checker lily *Fritillaria lanceolata* var. *tristulis*	1B.1	Oak or pine scrub or open woods and thickets near the coast, at low- to mid-elevation. Prefers shade or partial shade and good drainage. Endemic to Marin County.	Present. Several recent occurrence records in the program area.
Marin dwarf-flax *Hesperolinon congestum*	FT	Occurs in bunchgrass grasslands and chaparral on serpentine soils.	Low potential. No recorded occurrences. Limited suitable habitat exists within the program area.
Marin knotweed *Polygonum marinense*	3.1	Salt marshes and occasionally brackish marshes along the coast, below 10m elevation. Rarely found in coastal swamps.	Present. Several recent occurrence records in the program area.
Marin manzanita *Arctostaphylos virgata*	1B.2	Bishop pine, mixed evergreen and redwood forests. On sandstone or granitic soil at 60-700m elevation.	Present. Several recent occurrence records in the program area.
Mt. Vision ceanothus *Ceanothus gloriosus* var. *porrectus*	1B.3	Closed-cone conifer forest, coastal prairie and scrub, valley and foothill grasslands, and coastal bluffs at elevations below 300m	Present. Several recent occurrence records in the program area.

Scientific Name, Common Name	Listed Status	Habitat Requirements	Potential for Occurrence
Pacific Grove clover *Trifolium polyodon*	SR; 1B.1	Seasonally moist sites in coniferous forest, coastal prairie, meadows, and grasslands, from 5-120m.	Moderate potential. One documented observation outside of the program area (Limantour Beach) via photo in 2009. Limited habitat exists in the program area.
Perennial goldfields *Lasthenia californica* ssp. *macrantha*	1B.2	Coastal bluff scrub, coastal dunes, coastal scrub, at elevations 5-520m.	Present. Several recent occurrence records in the program area.
Pink sand-verbena *Abronia umbellata* var. *breviflora*	1B.1	Sandy soils, coastal scrub, leeward side of dunes below 100m elevation.	Present. Several recent occurrence records in the program area.
Point Reyes horkelia *Horkelia marinensis*	1B.2	Sandy coastal flats and dunes, within coastal strand, coastal prairie, and northern coastal scrub, from 5-350m elevation.	Moderate potential. Last documented observation in the program area was in 1986. Limited suitable habitat exists in the program area.
Point Reyes salty bird's-beak *Chloropyron maritimum* ssp. *palustre*	1B.2	Coastal salt marshes just above tidewater in wet areas below 10m elevation.	Present. Several CNDDB occurrence records in the program area.
Raiche's red ribbons *Clarkia concinna* ssp. *raichei*	1B.1	Coastal bluff scrub on vertical rock faces below 100m elevation	Present. Several colonies documented in eastern portion of the program area.
Robust spineflower *Chorizanthe robusta* var. *robusta*	FE	Endemic to Monterey, Santa Cruz, and Marin counties. Occurs in sandy coastal soils on dunes.	Low potential. No recorded occurrences. Program location does not overlap final designated critical habitat.
Rose leptosiphon *Leptosiphon rosaceus*	1B.1	Open coastal bluff scrub and grassy slopes, below 100m elevation,	High potential. Documented observation. Suitable habitat exists in the program area.
San Francisco Bay spineflower *Chorizanthe cuspidata var. cuspidata*	1B.2	Coastal bluff scrub, coastal dunes, coastal prairie and coastal scrub, in sandy substrate below 300m elevation.	Present. Several occurrence records in the program area. .
San Francisco owl's clover *Triphysaria floribunda*	1B.2	Coastal grassland and scrub, typically on serpentine substrates. Between 10-160m elevation,	Moderate potential. Last documented observation was in 1986. Limited suitable habitat exists in the program area.

Scientific Name, Common Name	Listed Status	Habitat Requirements	Potential for Occurrence
Santa Cruz microseris *Stebbinsoseris decipiens*	1B.2	Open areas on sandy, shale, or serpentine substrates, from 10-500m. Found within a variety of plant communities, including valley and foothill grassland, coastal prairie, coastal scrub, chaparral, coniferous and broadleafed forests.	Present. Two recent occurrence records in the program area.
Santa Cruz tarplant *Holocarpha macradenia*	FT	Coastal prairies and grasslands, often with clay or sandy-clay soils, between 10-220m elevation.	Low potential. No documented CNDDB occurrences. Program location does not overlap critical habitat.
Short-leaved evax *Hesperevax sparsiflora* var. *brevifolia*	1B.2	Sandy, grassy, or wooded coastal bluffs, dunes, and terraces, at up to 300m elevation.	High potential. Two documented occurrences adjacent to the program area. Suitable habitat exists in the program area.
Showy Indian clover *Trifolium amoenum*	FE	Typically occurs in low, wet grassland swales or grassy hillsides up to 400m elevation. May require disturbance-created openings for germination. Prefers open, sunny sites. Sometimes on serpentine soil in coastal bluff scrub and valley and foothill grassland.	Present. One recent occurrence record in the program area.
Sonoma Alopecurus *Alopecurus aequalis* var. *sonomensis*	FE; 1B.1	Moist soils in permanent freshwater marshes and riparian scrub, at elevations from 5-365m.	Present. Several occurrence records in the program area.
Sonoma spineflower *Chorizanthe valida*	FE; SE; 1B.1	Sandy soils of the coast-prairie grasslands. Wild populations only occur on Sirdrak sand, a rare substrate of north facing dunes with a 2-5% slope and low nutrient levels.	Present. Several occurrence records in the program area.
Sonoma sunshine *Blennosperma bakeri*	FE	Vernal pools and wet grasslands in Sonoma Valley and Santa Rosa Plain.	Low potential. No occurrence records in the program area. Limited suitable habitat available.
Swamp harebell *Eastwoodiella californica*	1B.2	Bogs and fens, closed-cone coniferous forest, coastal prairie, marshes and freshwater swamps, meadows and seeps.	Present. Several occurrence records in the program area.
Tiburon paintbrush *Castilleja affinis* ssp. *neglecta*	FE	Serpentine grasslands in serpentine bunchgrass communities. On north- to west-facing slopes below 300m elevation.	Low potential. No occurrence records in the program area. Limited suitable habitat available.

Scientific Name, Common Name	Listed Status	Habitat Requirements	Potential for Occurrence
Two-fork clover *Trifolium amoenum*	FE; 1B.1	Low, wet swales in grasslands, and grassy hillsides up to 400m elevation. Open, sunny sites, sometimes on serpentine soil in coastal bluff scrub and valley and foothill grassland. May require disturbance-created openings for germination.	Present. Several occurrence records in the program area. Experimental populations established in 2006.
White-rayed pentachaeta *Pentachaeta bellidiflora*	FE	Bunchgrass communities associated with serpentine soils.	Low potential. No occurrence records in the program area. Limited suitable habitat available.
Whiteworm lichen *Thamnolia vermicularis*	2B.1	Attached to rock and gravelly soils in exposed sites in coastal regions on windswept slopes near sea level.	Present. Occurrence records in the program area, with most recent colonies observed in 2008.
Woolly-headed spineflower *Chorizanthe cuspidata var. villosa*	1B.2	Sandy substrates and coastal scrub communities below 60m elevation.	Present. Occurrence records in the program area.
Yellow larkspur *Delphinium luteum*	FE	Rocky outcrops within coastal scrub and coastal prairie communities.	Present. Occurrence records in the program area.

Notes: FE = federally listed as endangered species; FT = federally listed as threatened species; SE = California endangered; ST = California threatened; SR = California rare

CNPS Rare Plant Ranking: 1A = plants presumed extinct in California and rare/extinct elsewhere; 1B = plants rare, threatened, or endangered in California and elsewhere; 2B = plants rare, threatened, or endangered in California, but more common elsewhere; 3.1 = plants seriously threatened in California

Sources: USFWS, 2023; CDFW, 2023; CNPS, 2023

Table C-2 Special-Status Wildlife Species with Potential to Occur in Program Area

Scientific Name, Common Name	Listed Status	Habitat Requirements	Potential for Occurrence
Fishes			
Coho salmon, central California coast ESU *Oncorhyncus kisutch*	FE; SE	Small rivers and tributaries along the Pacific coast. Spawning habitat in small streams with stable gravel substrates and cool, consistent water flow. Adults forage in shallow coastal waters and return to natal streams for spawning.	Present. CNDDB observations documented through 2004 in several creeks in the program area.

Scientific Name, Common Name	Listed Status	Habitat Requirements	Potential for Occurrence
Longfin Smelt *Spirinchus thaleichthys*	FPE; ST	Nearshore waters of the San Francisco Estuary, as well as estuaries and the downstream portions of freshwater streams. Depends on both fresh and marine waters for spawning and rearing.	Moderate potential. Last documented CNDDB observation was in 1989. Suitable habitat exists in the program area.
Southern coastal roach *Hesperoleucus venustus subditus*	SSC	Small perennial to intermittent freshwater streams, with a wide range of temperature and dissolved oxygen tolerance. Generally intolerant of salinity.	Present. CNDDB observations documented through 2003 in several creeks in the program area.
Steelhead, central California coast DPS *Oncorhyncus mykiss*	FE	Freshwater rivers, streams, and lakes during spawning; estuaries and marine environments during adult non-spawning life stage.	Present. CNDDB observations documented through 2007 in several creeks in the program area.
Tidewater Goby *Eucyclogobius newberryi*	FE	Lagoons, estuaries and muted tidal settings for the majority of the year. Migration through life stages – as much as five miles upstream into freshwater, and downstream into saltwater with salinity up to 75%. Reproduces in low salinity fresh or brackish water.	Present. Most recent documented CNDDB observation was in 1999. Program location overlaps designated final critical habitat.
Invertebrates			
California Freshwater Shrimp *Syncaris pacifica*	FE; SE	Low and moderate gradient streams with clean, clear running water and emergent vegetation.	Present. Multiple CNDDB occurrence records in the program area.
Monarch Butterfly *Danaus plexippus*	FTP	Require milkweed host plant for reproduction. Overwinter in conifer or eucalyptus groves in temperate climates.	Present. Multiple CNDDB occurrence records in the program area.
Myrtle's Silverspot Butterfly *Speyeria zerene myrtleae*	FE	Require western dog violet as host plant for larva. Adults prefer coastal sand dune areas, coastal scrub or coastal prairie at elevations up to 1,000 feet and up to three miles inland.	Present. Multiple CNDDB occurrence records in the program area.
Western bumble bee *Bombus occidentalis*	SC	Mixed woodlands, farmlands, urban areas and montane meadows.	Low potential. Last documented CNDDB observation was in 1968. Suitable habitat exists in the program area.
Reptiles and Amphibians			

Scientific Name, Common Name	Listed Status	Habitat Requirements	Potential for Occurrence
California giant salamander *Dicamptodon ensatus*	SSC	Larvae typically live in clear, cold streams. Adults are usually in humid forests under rocks, logs and other substrates, near mountain streams or rocky shores of mountain lakes. Eggs are typically laid in headwaters of mountain streams	Present. CNDDB observations documented through 2015 in several creeks in the program area.
California Red-legged Frog *Rana draytonii*	FT	Requires aquatic breeding areas embedded within a matrix of riparian and upland dispersal habitats. Breeding sites include pools and backwaters within streams and creeks, ponds, marshes, springs, sag ponds, dune ponds, lagoons, and artificial impoundments.	Present. Multiple CNDDB occurrence records in the program area. Program location overlaps designated final critical habitat.
Foothill Yellow-legged Frog *Rana boylii*	SSC	Partially shaded, rocky streams at low to moderate elevations (300-1000m), in areas of chaparral, open woodland, and forest. Breeding occurs in low-velocity pools of streams, with eggs attached to cobbles and boulders near confluences of tributary drainages in wide, shallow reaches.	Low potential. Last documented occurrence in 1963. Historic populations in Marin County are thought to be extirpated, though suitable habitat exists in the program area.
Western pond turtle *Emys marmorata*	FPT; SSCS	Streams, ponds, lakes, and permanent and ephemeral wetlands. Require terrestrial habitats for nesting	Present. Multiple CNDDB occurrence records in the program area.
Birds			
American Peregrine Falcon *Falco peregrinus*	CDF_S	Prefers to nest in cliffs and ledges with sheltering overhang. Forages in marshes, lakeshores, river mouths, tidal flats, suns and beaches, farmlands, river valleys, and human population centers.	Present. CNDDB occurrence records of nests documented in project area in 2014 and 2015.
Black swift *Cypseloides niger*	SSC	Nests behind or next to waterfalls and wet cliffs, on sea cliffs and in sea caves, and occasionally in limestone caves. Forages over forests and in open areas.	Moderate potential. Rare summer resident. Last documented CNDDB observation was a breeding pair in 1983. Limited suitable habitat exists in the program area.
Burrowing owl *Athene cunicular*	SSC	Open grasslands, especially prairie, plains, and savanna. Nests in abandoned burrows of mammals.	Present. One documented CNDDB location with multiple observations. Last documented in 2014.

Scientific Name, Common Name	Listed Status	Habitat Requirements	Potential for Occurrence
California black rail *Laterallus jamaicensis coturniculus*	FP	Favors coastal marshland with unrestricted tidal influence, including coastal and estuarine saltmarshes and tidal sloughs. Nests in or along marsh edges.	Present. Multiple documented CNDDB detections, with most recent in 2016, likely a nesting population.
California Clapper Rail *Rallus longirostris obsoletus*	FE	Herbaceous wetland. Nests in marshlands near tidal ponds. Prefers coastal salt marshes of pickleweed and cordgrass.	Low potential. No documented CNDDB detections. Suitable habitat exists in the program area.
California Least Tern *Sterna antillarum browni*	FE	Seacoasts, beaches, bays, estuaries, lagoons, lakes and rivers. Nests on open, flat beaches along lagoon or estuary margins. Rests on sandy beaches, mud flats, and salt-pond dikes.	Low potential. No documented CNDDB detections. Suitable habitat exists in the program area.
California ridgeway rail *Rallus obsoletus obsoletus*	FE; FP	Tall pickleweed and cordgrass marshes. Nests in marshlands near tidal ponds, often on higher ground.	Moderate potential. Last documented CNDDB observation in 1994. Suitable habitat exists in the program area.
Marbled Murrelet *Brachyramphus marmoratus*	FT	Coastal areas, mainly in salt water within 2km of shore, including bays and sounds. Occasionally found on rivers and lakes within 20km of ocean. In California, visits old-growth forests year-round, nesting in mature/old growth coniferous forests near the coast.	High potential. No CNDDB observations, but program location overlaps designated final critical habitat.
Northern harrier *Circus hudsonius*	SSC	Sloughs, wet meadows, marshlands, swamps, prairies, plains, grasslands, and shrublands. Nests build on the ground, typically near water, or in tall grass, open fields, clearings or on the water.	Moderate potential. Last documented CNDDB observation was of active nest in 1973. Suitable habitat exists in the program area.
Nothern Spotted Owl *Strix occidentalis caurina*	FT	Prefers old growth and coastal redwood forests with large snags, open space beneath the canopy, and heavy woody debris accumulation on the forest floor. Nests in broken tree tops, cliff ledges, tree cavities, or stick platforms.	Low potential. No CNDDB documented occurrences. Program location does not overlap designated final critical habitat. Suitable habitat exists in the program area.

Scientific Name, Common Name	Listed Status	Habitat Requirements	Potential for Occurrence
Osprey *Pandion haliaetus*	CDF_WL	Primarily along rivers, lakes, reservoirs, and coasts. Nests are usually near or above water, built of large sticks on living or dead trees, as well as man-made structures such as utility poles, wharf pilings and channel markers.	Moderate potential CNDDB documentation of active nest observed in 1979. Suitable habitat exists in the program area.
Saltmarsh common yellowthroat *Geothlypis trichas sinuosa*	SSC	Salt marshes. Nests built just above ground or over water, in thick herbaceous vegetation. Nest is often at the base of a shrub or sapling, sometimes up to 1m high.	Moderate potential Last documented CNDDB observation was in 1985, of 2 breeding pairs. Suitable habitat exists in the program area.
Short-tailed Albatross *Phoebastria albatrus*	FE	Predominantly marine, with ground nest on small oceanic islands. Pairs return to the same site to nest annually	No potential. Program area does not contain marine habitat.
Tricolored blackbird *Agelaius tricolor*	FT; SSC	Freshwater marshes of cattails, tule, bulrushes, and sedges. In winter and during migration, will inhabit open cultivated lands and pastures as well. Nests occur in marsh or ticket vegetation, sometimes on the ground.	Moderate potential. Last documented CNDDB observation was in 1992, subsequent surveys have not located any individuals. Suitable habitat exists in the program area.
Western Snowy Plover *Charadrius nivosus nivosus*	FT; SSC	Barren to sparsely vegetated sand beaches, dry salt flats in lagoons, dredge spoils deposited on beach or dune habitat, levees and flats at salt-evaporation ponds, river bars, along alkaline or saline lakes, reservoirs, and ponds.	Moderate potential. Last documented CNDDB observation was in 1986. Program location overlaps designated final critical habitat.
Yellow-billed Cuckoo *Coccyzus americanus*	FT	Wooded habitat with dense cover and water nearby, including woodlands with low, scrubby vegetation, overgrown orchards, abandoned farmland, and dense thickets along streams and marshes.	Moderate potential. No documented CNDDB occurrence records. Program location does not overlap final critical habitat designation, but suitable habitat exists in the program area.
Yellow rail *Coturnicops noveboracensis*	SSC	Emergent wetlands, grass or sedge marshes and wet freshwater meadows. Preference for shallow water habitats, particularly for nesting.	Present. Several colonies identified in CNDDB occurrence records, with most recent observation in 2013.

Scientific Name, Common Name	Listed Status	Habitat Requirements	Potential for Occurrence
Yellow warbler *Setophaga petechia*	SSC	Open scrub, second-growth woodland, riparian woodlands, thickets, farmlands, and gardens, particularly near water. Nests in forks or crotches of bushes, saplings, or large trees, typically >1m above ground.	Moderate potential. One documented CNDDB nest observation in 1975. Suitable habitat exists in the program area.
Mammals			
American Badger *Taxidea taxus*	SSC	Open areas or brushlands with little ground cover. Occupies underground burrows, where nesting occurs.	Low potential. Last recorded CNDDB observation was in 1957. Suitable habitat exists in the program area.
Pallid bat *Antrozous pallidus*	SSC	Mountainous areas, intermontane basins, and lowland desert scrub; arid deserts and grasslands, often near rocky outcrops and water; open coniferous forest and woodland. Roosting occurs in rock outcrops, caves, mine tunnels, buildings, bridges, and hollows of live and dead trees.	Present. Several CNDDB occurrence records, with most recent a capture & release of 12 individuals in 2003. Suitable habitat exists in the program area.
Salt Marsh Harvest Mouse *Reithrodontomys raviventris*	FE	Herbaceous wetland, tidal flat/shore. Requires dense mats of vegetation cover with a high percentage of *Salicornia* (pickleweed).	Low potential. No documented CNDDB occurrences. Suitable habitat exists in the program area.
Townsend's big-eared bat *Corynorhinus townsendii*	SSC	Forested areas and buildings, in areas with a mosaic of woodland, grassland, and shrubland. In Point Reyes National Seashore, foraging occurs along the edges of redwood and Douglas-fir forests and woodlands, primarily along the edges of riparian vegetation.	Present. Several CNDDB occurrence records, with roosting populations in Point Reyes National Seashore.
Western red bat *Lasiurus frantzii*	SSC	Riparian habitats, forests and woodlands. Foraging habitat includes grasslands, shrublands, open woodlands and forests, and croplands.	Present. CNDDB occurrence records document one capture and release of two individuals in 2003.

Notes: FE = federally listed as endangered species; FT = federally listed as threatened species; FPE = federally proposed for listing as endangered; FPT = federally proposed for listing as threatened; FC = candidate species for federal listing; SE = California endangered; ST = California threatened; FP = California fully protected; SSC = California Species of Special Concern; SC = California candidate species for protection; CDF_S = California Department of Forestry & Fire Protection (CDF) sensitive species; CDF_WL = CDF watch list

Sources: USFWS, 2023; CDFW, 2023; NMFS, n.d.; NatureServe, 2023

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Exhibit D: Fine-Scale Vegetation Maps *(Refer to Separate Document)*