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SHELLY SCOTT
MARIN COUNTY CLERK
BY: J. GILARDI, Deputy

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# Notice of Exemption

**To:** Office of Planning and Research
P.O. Box 3044, Room 113
Sacramento, CA 95812-3044

County Clerk County of: Marin
Marin Civic Center
3501 Civic Center Dr., Suite 234,
San Rafael, CA 94903

**From** (Public Agency):
City of San Rafael
1400 Fifth Ave.
San Rafael, CA 94901

**Project Title:** San Rafael Zone South San Pedro Mountain Fuel Reduction Zone Project

**Project Applicant:** City of San Rafael

**Project Location – Specific:** Three general fuel reduction zones across land managed by the City of San Rafael, China Camp State Park, and private landholdings (refer to Figure 1).

**Project Location – City:**
City of San Rafael

**Project Location – County:**
Marin County

**Description of Nature, Purpose and Beneficiaries of Project:**
The purpose of the project would be to create fuel reduction zones between occupied structures and open space areas with the intention of reducing wildfire intensity and rate of spread in the event of ignition in the wildland or built environment. By creating a contiguous buffer between neighborhoods and open space lands, the project would also provide defensible space for fire suppression crews to safely defend communities from wildfire.

**Name of Public Agency Approving Project:** City of San Rafael

**Name of Person or Agency Carrying Out Project:** City of San Rafael

**Exempt Status (check one):**

- ☐ Ministerial (Sec. 21080(b)(1); 15268);
- ☐ Declared Emergency (Sec. 21080(b)(3); 15269(a));
- ☐ Emergency Project (Sec. 21080(b)(4); 15269(b)(c));
- ☐ Common Sense Exemption (Sec. 15061(b)(3));
- ☒ Categorical Exemption. State type and section number: 15304(i). Minor alterations to land for fuel management activities.
- ☐ Statutory Exemptions. State code number:_____

**Reasons why project is exempt:**
The project is categorically exempt under California Environmental Quality Act (CEQA) Guidelines Section 15304, Class 4 Minor Alterations to Land. A Class 4 exempt project consists of minor public or private alterations in the condition of land, water, and/or vegetation which do not involve removal of healthy, mature, scenic trees except for forestry or agricultural purposes. The project would involve vegetation reduction activities through the vegetation clearance and removal up to 150 feet around occupied structures. The scope of the project is

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consistent with a minor alteration to the condition of the vegetation around these structures. Additionally, no healthy, mature, scenic trees would be removed; no work would take place within sensitive habitat, including wetlands or waterways; and no ground disturbance, such as excavation, would take place. There are no facts or circumstances specific to this project that would support a finding that any of the potential exceptions to categorical exemptions listed under Section 15300.2 apply.

| **Lead Agency Contact Person:** | **Area Code/Telephone/Extension:** |
|---|---|
| Alicia Giudice, City of San Rafael | (415)-385-3092 |

**If filed by applicant:**

1. Attach certified document of exemption finding.
2. Has a Notice of Exemption been filed by the public agency approving the project?
   Yes☐ No☐

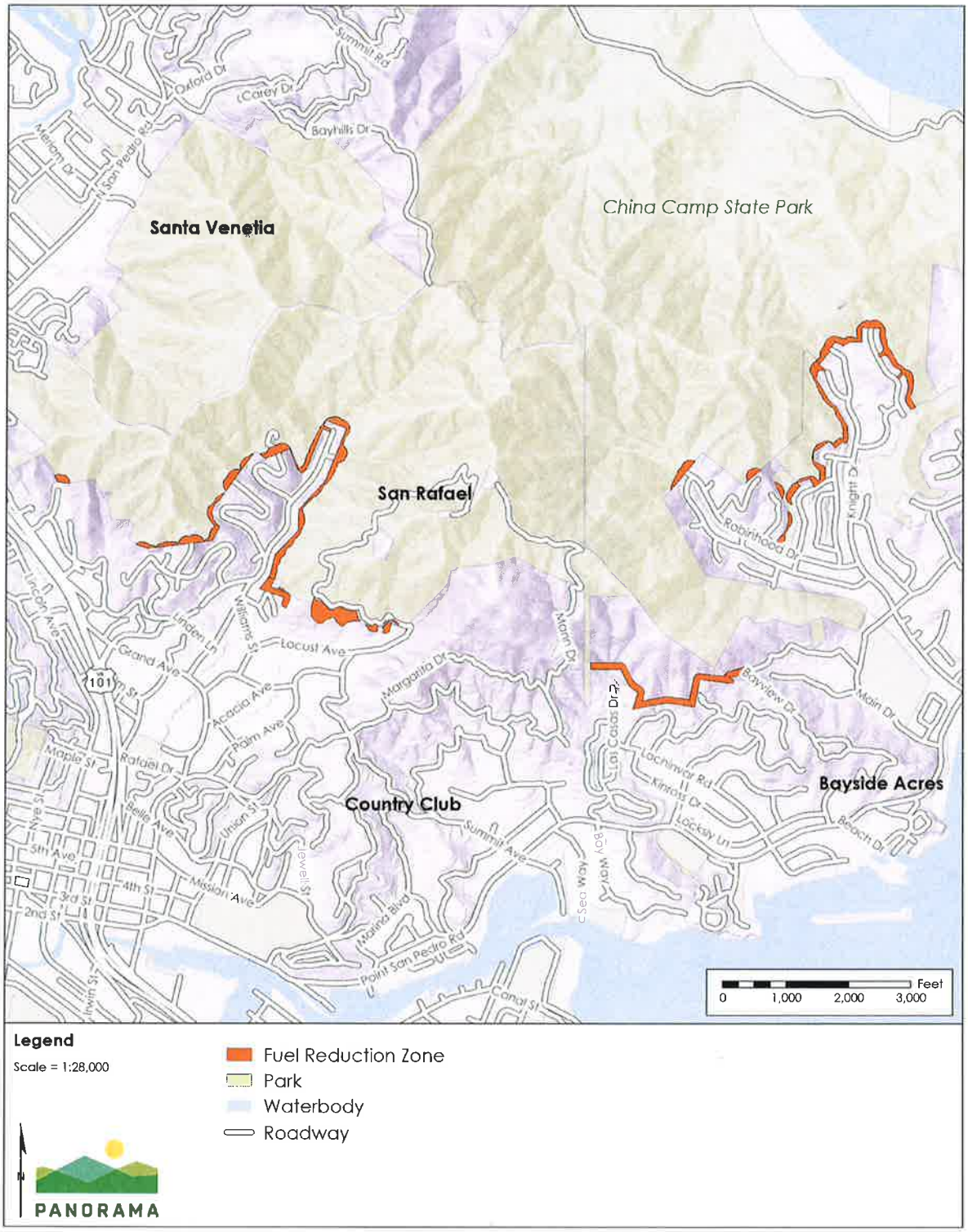
Signature:  Date: August 24, 2021 Title: CDD Director

☒ Signed by Lead Agency ☐ Signed by Applicant

Authority cited: Sections 21083 and 21110, Public Resources Code.
Reference: Sections 21108, 21152, and 21152.1, Public Resources Code.

Date Received for filing at OPR: _____

**Figure 1 Fuel Reduction Zones**



MARIN WILDFIRE PREVENTION AUTHORITY

**California Environmental Quality Act**
**Categorical Exemption Determination**
**Memorandum**

**Date:** August 19, 2021

**Project:** San Rafael Zone South San Pedro Mountain Fuel Reduction Zone Project

## Categorical Exemption Summary

The Marin Wildfire Prevention Authority (MWPA) has determined that the San Rafael Zone South San Pedro Mountain Fuel Reduction Zone Project (project) is categorically exempt under the California Environmental Quality Act (CEQA) Guidelines Section 15304, Class 4 for Minor Alterations to Land. A Class 4 exempt project consists of minor public or private alterations in the condition of land, water, and/or vegetation which do not involve removal of healthy, mature, scenic trees except for forestry or agricultural purposes. The project would involve vegetation reduction activities through the vegetation clearance and removal up to 150 feet around occupied structures. The scope of the project is consistent with a minor alteration to the condition of the vegetation around these structures shown in Figure 1.

The following analysis demonstrates the project would not result in adverse environmental effects, supporting the MWPA's determination that the proposed activities are categorically exempt under CEQA. The project would be conducted in compliance with applicable federal, State, and local regulations and under contractual provisions prohibiting work in violation of applicable regulations and plans.

Information regarding the purpose and need for the project, a description of proposed activities, a discussion of why the potential exceptions to a categorical exemption do not apply here, and an assessment of the potential for environmental effects are provided below.

The California Department of Parks and Recreation (State Parks) has an existing, approved Boundary Vegetation Modification and Defensible Space Work Project (State Clearinghouse # 2018098303) that allows entities to conduct vegetation modification and defensible space activities in China Camp State Park within 130 feet of structures with issuance of a Right-of-Entry Permit (State Parks, 2018). Activities conducted on State Parks property would be in accordance with the existing CEQA and Right-of-Entry Permit provisions. The portions of the project that fall on State Parks land are discussed in this document as these areas are part of the project but are covered by an existing State Parks CEQA document.

## Background

Marin County voters passed Measure C in 2020, which established a 17-member Joint Powers Authority, the MWPA, to fund and oversee proactive state-of-the-art wildfire prevention and preparedness efforts within the County. Members include several cities and towns, fire protection districts, and community service districts. The MWPA was formed to develop and implement a comprehensive wildfire prevention and emergency preparedness plan throughout almost all of Marin County. This project is a Core Project that is funded by and within the purview of the MWPA. Core Projects include those projects that focus on

wildfire detection, notification, and evacuation; vegetation management and fire hazard reduction; grants management; and public education.

## Purpose and Need

The purpose of the project would be to create fuel reduction zones between occupied structures and open space areas with the intention of reducing wildfire intensity and rate of spread in the event of ignition in the wildland or built environment. By creating a contiguous buffer between neighborhoods and open space lands, the project would also provide defensible space for fire suppression crews to safely defend communities from wildfire.

## Project Description

### Treatment Area

The project would create fuel reduction zones between open spaces and communities located within the San Rafael Core Zone around San Pedro Mountain. The fuel reduction treatments would be implemented at three general fuel reduction zones across approximately 19 acres of land managed by the City of San Rafael, 8 acres of land managed by State Parks, and 15 acres of private landholdings shown in Figure 1.

The three fuel reduction zones would total approximately 6 miles in length. Fuel reduction would be limited to areas approximately 100 to 150 feet from structures. Treatment would extend out to 130 feet within State Park lands but could extend out to 150 feet on all other lands. Approximately 960 habitable structures are located directly south of the project area, but all the communities in the area would benefit from the project treatments. The project area is primarily characterized by non-native annual grassland and oak woodland. Fuel reduction treatments would avoid all streams, wetlands, and sensitive features within the project area.

### Treatment Method

Project treatments would include manual fuel reduction using chainsaws, loppers, pole pruners, and chippers. Within non-native grassland and chaparral communities, grasses, dead woody vegetation, low-lying shrubs, and coyote brush would be manually removed. Oak woodland communities would be limited to manual thinning treatment by a hand crew. Treatment of trees within oak woodland would include pruning branches 8 to 10 feet above ground (not to exceed 1/3 of the tree's height), removal of dead and downed branches, removal of dead standing trees, and the removal of small diameter (less than 4 inches diameter at breast height [DBH]) live trees for horizontal spacing. Horizontal spacing (trees per acre) would be determined by a wildfire ecologist or other fire professional. Understory ladder fuels including non-native, invasive Scotch broom and French broom, coyote bush shrubs, and shrub-like understory tree saplings would also be removed in oak woodland communities. Hazardous trees (e.g., dead or dying trees) identified by an arborist or qualified fire person may be removed. No healthy, mature, scenic trees would be removed under this project.

### Disposal

Project debris would be disposed of through chipping and hauling, or chipping and broadcasting. Alternatively, an air curtain burner[1] may be used for disposal if (or when) available.

The vegetative material would be fed through the chipper and broadcast at work areas or hauled away for disposal. Chipped material spread on site would be chipped to under 3 inches in size would be applied 2 to 4 inches in depth at most to minimize wildfire risk. Disposed debris would be hauled to West Marin Compost or Marin Resource Recovery Center. Approximately, 20 to 25 cubic yards of material could be disposed of each workday.

If used, an air curtain burner may be staged at Nike Missile site at Harry Barbier Memorial Park, China Camp State Park in sites approved by State Parks staff, or another appropriate location and debris would be hauled to the location for disposal. The air curtain burner would only be run when a backstock of at least 2 days' worth of debris would be available to burn. The burner would operate between the hours of 8:00 am and 3:00 pm. Air curtain burning would be conducted in compliance with Bay Area Air Quality Management District (BAAQMD) Regulation 5 for open burning and burn day restrictions.

### Workers

Approximately 2 to 3 work crews could conduct treatments simultaneously within a day. A single contractor crew would consist of 3 to 6 workers. The CAL FIRE Delta Crew or Marin County Fire Tamalpais Crew may conduct treatments and would consist of 10 to 12 workers per crew.

### Site Access

Work areas would be accessed on foot using existing fire roads and trails adjacent to the work areas. Private residences may be used as access points with the landowner's permission. Vehicles and equipment would be staged at the contractor's yard daily or on City-owned property. The air curtain burner, if used, may be staged at the Nike Missile site at Harry Barbier Memorial Park, China Camp State Park in sites approved by State Parks staff, or another appropriate location, if used.

### Schedule and Duration

Treatments would occur during weekdays between 8:00 am and 4:00 pm. The treatments would be separated into two phases. Phase I would begin in the fall 2021 and would consist of treatment on up to 27 acres of fuel reduction areas. Phase I would take approximately 10 to 19 weeks to complete. Phase II would conduct treatment on the remaining 15 acres of land.

[1] An air curtain burner places a high velocity curtain of air over a defined burn chamber, which can be a temporary pit in the ground or a well-conceived above ground structure with refractory walls. In either case, the rising particulates or smoke particles (also referred to as "Black Carbon") from burning the wood waste hit the curtain of air, are bounced back down and reburn in the area just below, which is usually the hottest area in the burn box and referred to as secondary burn chamber. They now are small or light enough to penetrate the air curtain and rise as gaseous emissions consisting mostly of water vapor and (biogenic) carbon dioxide. The result is not only a much cleaner, nearly smokeless burn, but also a much faster burn, as some of the air curtain's volume is decisively directed in the burn chamber over-oxygenating the fire, thereby accelerating it.

Phase II is estimated to take 6 to 12 weeks to complete. Phase I and Phase II would take a combine 68 to 136 workdays to complete. Treatments on State Parks land would not commence until a Right-of-Entry Permit is procured and further discussions are conducted.

A monitoring plan would be implemented to assess the effectiveness of the treatments and the invasion of non-native invasive plant species. Maintenance treatments following the project implementation would occur every 3 to 5 years for woodland vegetation communities and 1 to 2 years for grassland vegetation communities. Treatment of invasive Scotch and French broom would be conducted as needed.

**Project Design and Implementation Features**

The MWPA has developed specific design and implementation features adapted from several source documents referenced in parenthesis after each name that will be incorporated as applicable into the project design and implementation for each of its projects. Refer to the end of this document for citations to the documents the features were adapted from. The following specific design and implementation measures are part of the project:

**CUL-1 Training[2]**

For all activities with the potential for ground disturbance (excluding prescribed herbivory, vegetation and tree trimming, and hand pulling smaller vegetation) all contractors and crew will receive training prepared by and/or conducted by a qualified archaeologist (who meets the U.S. Secretary of Interior's professional standards set forth in 48 CFR Parts 44738-44739 and Appendix A to 36 CFR 61) prior to beginning work. The training will address the potential for exposing subsurface resources, recognizing basic signs of a potential resource, understanding required procedures if a potential resource is identified including reporting the resource to a qualified archaeologist, and understanding all procedures required under Health and Safety Code § 7050.5 and PRC §§ 5097.94, 5097.98, and 5097.99 for the discovery of human remains.

**CUL-2 Unanticipated Discovery[2]**

In the event that a previously unidentified cultural resource is discovered during implementation of an activity all work within a minimum of 150 feet of the discovery will be halted. The resource will be located, identified, and recorded in the MWPA cultural resources GIS database. Data regarding archaeological resources will be kept confidential per law, but may be shared with Native American tribes identified by the NAHC to be traditionally and culturally affiliated with the geographic area of the project site, if archaeological in nature and if the tribe has requested that such information be shared with them.

The boundaries around the buffered resource will be temporarily marked, such as with fencing or flagging. A qualified archaeologist will inspect the discovery and determine whether further investigation is required. If the discovery can be avoided and no further impacts will occur, the resource will be documented on California State Department of Parks and Recreation cultural resource record forms and no further effort will be required. If the project proponent wishes to continue work in the area, only work performed using hand tools or powered hand tools is allowed, work cannot include ground disturbance below the topsoil

[2] Adapted from the Marin Municipal Water District, Final Program Environmental Impact Report for the Biodiversity, Fire, and Fuels Integrated Plan (BFFIP EIR), October 2019

layer, and the work area can only be accessed on foot as determined acceptable by the qualified cultural resource specialist/archaeologist.

Alternatively, the qualified archaeologist will evaluate the resource and determine whether it is:

- Eligible for the CRHR (and a historical resource for purposes of CEQA),
- A unique archaeological resource as defined by CEQA, and/or
- A potential tribal cultural resource (all archaeological resources could be a tribal cultural resource).

If the qualified archaeologist determines that the resource could be a tribal cultural resource, he or she will, within 48 hours of the discovery, notify each Native American tribe identified by the NAHC to be traditionally and culturally affiliated with the geographic area of the project site of the discovery. A tribal monitor will inspect the resource to determine whether it constitutes a tribal cultural resource. If the resource is determined to be neither a unique archaeological, an historical resource, or a potential tribal cultural resource, work may commence in the area.

If the resource meets the criteria for either a historical resource, unique archaeological resource, and/or tribal cultural resource, work will remain halted in the buffered area around the resource. No work will occur within the buffered area except those methods previously discussed as determined acceptable by the qualified archaeologist and/or tribal monitor. After work is completed, all cultural resource delineators (e.g., flags or fencing) will be removed in order to avoid potential vandalism, unauthorized excavation(s), etc.

**CUL-3 Cultural Resource Investigation[2,3]**

Prior to implementation of vegetation management activities that have potential for intensive ground disturbance below the ground surface or use of heavy equipment off established roads and trails, a qualified archaeologist will conduct a records search and/or site-specific survey of the project areas where such disturbances could occur. Resources found during the records search and/or survey will be flagged for avoidance with an appropriate buffer identified by the qualified archaeologist, or the qualified archaeologist may identify modifications to the prescriptions using only hand tools or powered hand tools and access by foot with no ground disturbance, provided it would avoid all changes to the resources. Any resource found during the site survey will be documented on California State Department of Parks and Recreation cultural resource record forms and 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.

[3] Adapted from measures in the Midpeninsula Regional Open Space District, Wildland Fire Resiliency Program Final Environmental Impact Report (WFRP EIR), May 2021.

**ET-1 Environmental Training for Biological Resources[4,5]**

All crew members and contractors will receive training from a qualified registered professional forester (RPF) or biologist prior to beginning a treatment project where sensitive biological resources could occur in the work areas. The training will describe the appropriate work practices necessary to effectively implement the appropriate project design and implementation features and to comply with the applicable environmental laws and regulations. The training will include the identification, relevant life history information, and avoidance of potentially present special-status species with potential to occur; identification and avoidance of sensitive natural communities and habitats with the potential to occur in the treatment area; best management practices; and reporting requirements. As appropriate, the training will include protocols for work, such as specific trimming methods, where applicable. 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 or biologist. The qualified RPF or biologist will immediately contact the California Department of Fish and Wildlife (CDFW) or United States Fish and Wildlife Service (USFWS), as appropriate, if any wildlife protected by the CE Species Act (CESA) or Federal Endangered Species Act (ESA) is encountered and cannot leave the site on its own (without being handled).

**ES-1 Environmental Surveys for Rare Plants**

Within areas where rare and special-status plants have a high potential to occur, based on desktop data of habitat types, known site-specific information, and the professional judgement of qualified biologists, surveys will be conducted prior to any activity proposed to occur during the flowering season for the specific plant species that has the potential to damage the flowering body and seeds of these plant species. Activities that have the potential to damage the flowering body include but may not be limited to mowing, weed whacking, off-road vehicle and heavy equipment use, discing, and prescribed burning.

**IP-1 Clean Equipment[6,5]**

All crew members, surveyors, and other personnel on site related to project activities will clean clothing, footwear, and equipment used during treatments of soil, seeds, vegetative matter, other debris or seed-bearing material, or water (e.g., rivers, streams, creeks, lakes) before entering the treatment area or when leaving an area with infestations of invasive plants, noxious weeds, known plant pathogens, or invasive wildlife.

**IP-2 Prevent the Spread of Invasive Species and Plant Pathogens[6,5]**

Segregate and treat soils and vegetation contaminated with invasive plant seeds and propagules. Treat, as appropriate, to prevent the spread of invasive plants. Treatment may include disposal on site within already infested areas, chipping or pile burning and mulching to eliminate viable seeds, or disposal at an approved cogeneration plant or green waste facility.

Minimize soil disturbance to the greatest extent possible to reduce the potential for introducing or spreading invasive plants or plant pathogens, to protect topsoil resources, and to reduce available habitat for the establishment of new invasive plants.

**IP-3 Treat Invasive Plants Prior to Seeding[6,5]**

Schedule activities to maximize the effectiveness of control efforts and minimize introduction and spread of invasive plants as feasible, with consideration for project objectives and location (e.g., install and maintain fuel breaks, disc lines, and other work before non-native plants set seeds).

**IP-4 Retain Native Plants**[6,5]

When removing vegetation, focus first on removing invasive and highly flammable species, and dead or diseased vegetation. Retain beneficial, low-fire risk native plant species whenever possible.

**GEO-1 Erosion and Soils Loss Stabilization Measures**[3]

Soils will be stabilized if a vegetation management activity may leave less than 70 percent groundcover or native mulch/organic material.

For areas between 50 percent and 70 percent ground cover left:

- Sow native grasses and other suitable native vegetation on denuded areas where natural colonization or other replanting will not occur rapidly; use slash or chips to prevent erosion on such areas.
- Use surface mounds, depressions, logs, rocks, trees and stumps, slash and brush, the litter layer, and native herbaceous vegetation downslope of denuded areas to reduce sedimentation and erosion, as necessary to prevent erosion or slope destabilization.
- Install approved, biodegradable erosion-control measures and non-filament-based geotextiles (e.g., coir, jute) when:
  - Conducting substantial ground-disturbing work (e.g., use of heavy equipment, pulling large vegetation) within 100 feet and upslope of currently flowing or wet wetlands, streams, lakes, and riparian areas;
  - Causing soil disturbance on moderate to steep (10 percent slope and greater) slopes; and
  - Removing invasive plants from stream banks to prevent sediment movement into watercourses and to protect bank stability.
- Sediment-control devices, if installed, will be certified weed-free, as appropriate. Sediment control devices will be inspected daily during active work to ensure that they are repaired and working as needed to prevent sediment transport into the waterbodies.

For areas with less than 50 percent ground cover:

- Any of the above measures
- Stabilize with mulch or equivalent immediately after project activities, to the maximum extent practicable.
- If project activities could result in substantial sediment discharge from soil disturbance, as determined by the qualified personnel (e.g., RPF), organic

[4] East Bay Municipal Utility District (EBMUD), Practices and Procedures Monitoring and Reporting Plan Section 01 35 44 Environmental Requirements, August 2018.

[5] Board of Forestry and Fire Protection, California Vegetation Treatment Program Final Environmental Impact Report (CalVTP EIR), November 2019.

[6] Ecologically Sound Practices Partnership. Ecologically Sound Practices for Vegetation Management (ESP), May 2021.

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.

Once work is completed, the areas will be inspected at least annually if accessible, until groundcover exceeds 70 percent or slopes have stabilized, as determined by a qualified professional. At that time, erosion-control and slope-stability devices may be removed.

**HAZ-1 Leak Prevention and Spill Cleanup[5,2]**

The project proponent will, at a minimum, implement measures that address the following procedures related to the use of hazardous materials during work:

- Proper disposal or management of contaminated soils and materials (i.e., clean up materials)
- Daily inspection of vehicles and equipment for leaks and spill containment procedures
- Emergency response and reporting procedures to address hazardous material releases
- Emergency spill supplies and equipment will be available to respond in a timely manner if an incident should occur
- Response materials such as oil-absorbent material, tarps, and storage drums will be available in the plan area at all times during management activities and will be used as needed to contain and control any minor releases
- The absorbent material will be removed promptly and disposed of properly
- Use of secondary containment and spill rags when fueling
- Discourage “topping-off” fuel tanks
- Workers using fuels or other hazardous materials must be knowledgeable of the specific procedures necessary for hazardous materials cleanup and emergency response
- All diesel and gasoline powered equipment will be maintained per manufacturer's specification, and in compliance with all state and federal emission requirements

**HAZ-2 Wildfire Risk Reduction[4,5,2]**

The following measures will be implemented during activities that involve the use of equipment that can generate sparks or heat:

- Maintain fire suppression equipment (e.g., shovel, extinguisher) in work vehicles and ensure workers are trained in use
- Closely monitor for ignited vegetation from equipment and tool use
- Train workers to properly handle and store flammable materials to minimize potential ignition sources
- Prohibit smoking in vegetated areas
- Avoid use of spark- and/or heat-generating equipment during high fire danger days (e.g., Red Flag Days and Fire Weather Watch)
- Outfit off-road diesel vehicles and equipment with spark arrestors
- Avoid metal string or blade weed trimmers
- Maintain one fire extinguisher for each chainsaw

**NOI-1 Minimization of Noise Disruption to Nearby Neighbors and Sensitive Receptors[7,5]**

All projects will comply with applicable local noise ordinances. All powered 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.

Measures to minimize noise disruption to nearby neighbors and sensitive receptors will be implemented as needed. These measures may include but are not limited to:

- Using noise control technologies on equipment (e.g., mufflers, ducts, and acoustically attenuating shields)
- Locating stationary noise sources (e.g., pumps and generators) away from sensitive receptors.
- Close engine shrouds during equipment operations
- Shut down equipment when not in use. Equipment will not be idled unnecessarily.
- Operate heavy equipment during daytime hours if such noise would be audible to receptors (e.g., residential land uses, schools, hospitals, places of worship).
- Locate project activities, equipment, and equipment staging areas away from nearby noise-sensitive land uses (e.g., residential land uses, schools, hospitals, places of worship), to the extent feasible

**NSO-1 Northern Spotted Owl Nesting Season Avoidance[2]**

Within areas where northern spotted owl have the potential to occur, work, including mowing with heavy equipment, the mechanical removal of vegetation, or prescribed burning, including pile and broadcast burning, will occur outside of the northern spotted owl nesting season to the extent possible (February 1 to July 31).

If work must occur during the northern spotted owl nesting season, either NSO-2 or NSO-3 will apply.

**NSO-2 Work During Northern Spotted Owl Nesting Season – Surveys[2]**

Within an area where northern spotted owl has the potential to occur, when work will occur during the northern spotted owl nesting season (February 1 through July 31), and work is not considered low-impact by a qualified biologist the following measure will apply. Low impact type activities include, but are not limited to, goat grazing, hand pulling of weeds, hand trimming of trees and vegetation with non-mechanized equipment, chipping from existing roadways in residential areas, use of mechanized equipment adjacent to roads or in residential areas that is a typical noise for the environment.

Determine if a known breeding pair is found within 0.25 mile of the proposed activity (i.e., from existing surveys that season) and perform a nest check to confirm presence. If no survey data for the season has been completed for the areas, two surveys will be conducted by a qualified biologist (whose qualifications have been approved by the MWPA or lead public agency) for nesting northern spotted owls during the months of April and May preceding the commencement of these activities. At a minimum, the survey area will include all suitable nesting habitats within 0.25 mile of any planned activity sites, and then one of the two options listed below will be implemented. If access cannot be secured for surveys, then work should be delayed until after the nesting season, unless it can be shown that noise generation from the activities and the activities proposed would be below noise and visual disturbance levels

for northern spotted owls (refer to USFWS Revised Transmittal of Guidance: Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owls and Marbled Murrelets in Northwestern California) at the nest site, if known.

1. If it is conclusively determined that there are nesting northern spotted owls, planned activities that generate noise (e.g., mowing, heavy equipment usage, crews with hand tools that generate noise) in areas without regular human disturbances from human residency (e.g., leaf blowers, home construction and remodeling, roadways), that are within 0.25-mile of an identified active nest will not begin prior to September 1 unless the young have fledged, at which time work may begin no earlier than July 10. Prescribed burns may only occur within suitable northern spotted owl habitat (as determined by a qualified biologist) during the nesting season if protocol surveys have determined that northern spotted owl nesting is not occurring in the area of planned activity.
2. If work must occur within 0.25 mile, a permit may be required from the US Fish and Wildlife Service before work can commence.

**NSO-3 Northern Spotted Owl Habitat Alteration**[2]

For projects involving removal of large trees (10-inches DBH or greater) in potential northern spotted owl roosting, or nesting habitat (as identified during the desktop review) in areas without regular human disturbances from human residency, habitat alteration within core use areas (nesting and roosting habitat) will be planned in consultation with a qualified northern spotted owl biologist.

**NSO-4 Retain Dusky-footed Woodrat Nests**[2,6]

Dusky-footed woodrats are important prey for northern spotted owls. Wherever feasible, project activities will leave dusky-footed wood rat nests intact. If possible, maintain a 3-foot buffer of vegetation around dusky-footed woodrat middens.

**NB-1 Nesting Bird Season Avoidance**[6,8,2,5]

Whenever possible, schedule work outside of the bird nesting season, which is generally from February 1 through July 31st [9]. Not all species nest between the regulatory season, and active nests that are encountered year-round are protected.

**NB-2 Nesting Bird Surveys**[6,8,2,5]

If work that has the potential to impact nesting birds commences between February 1 and July 31 (during the nesting season), a qualified biologist (whose qualifications have been approved by the MWPA or lead public agency) will conduct a pre-activity survey for nesting birds.

[7] San Francisco Public Utilities Commission (SFPUC), Standard Construction Measures, July 2015.

[8] Marin County Parks (MCP), Bird Nesting Survey Training Manual, 2017.

[9] Note that the general nesting season between February 1 and July 31 is a guideline, and that birds may begin nesting beforehand, and complete nesting after these dates. Regardless, active nests are protected year-round. Avian nesting season may begin as early as January 1.

Nesting bird surveys are recommended during the nesting season for work involving mowing with heavy equipment, other vegetation (including tree) removal or limbing and trimming activities, and prescribed (broadcast and pile) burning. Low-impact activities including goat grazing, hand-pulling weeds, and herbicide application do not generally require nesting bird surveys. Determination of need for surveys for low-impact activities should be evaluated on a case-by-case basis in consultation with a qualified biologist or RPF.

Nesting bird surveys will occur within no more than 7 days prior to work to ensure that no nests will be disturbed during vegetation management work. If work pauses for more than 7 days, a follow-up survey will be conducted prior to the restarting of work. Appropriate survey areas will be determined by the qualified biologist depending on the project footprint, type of activity proposed, and suitable habitat for nesting birds. Surveys will be conducted during periods of high bird activity (i.e., 1-3 hours after sunrise and 1-3 hours before sunset). If the qualified biologist determines that visibility is significantly obstructed due to on-site conditions (such as access issues, rain, fog, smoke, or sound disturbance [including high wind]), surveys will be deferred until conditions are suitable for nest detection.

**NB-3 Nesting Birds: Active Nest Avoidance[6,8,2,5]**

If active nests (i.e., presence of eggs and/or chicks) are observed in areas that could be directly or indirectly disturbed (including noise disturbance), a temporary, species-appropriate no-disturbance buffer zone will be created around the nest sufficient to reasonably expect that breeding would not be disrupted. No work will occur inside the buffer zone.

The size of the buffer zone will be determined by the biologist, by taking into account factors including but not limited to the following:

- Noise and human disturbance levels at the site at the time of the survey and the noise and disturbance expected during the work;
- Distance and amount of vegetation or other screening between the site and the nest; and
- Sensitivity of individual nesting species and behaviors of the nesting birds, taking into account factors such as topography, visibility to source of disturbance, noise/vibration, nesting phase, and other case-by-case specifics.

Buffer sizes may be altered during the course of work at the recommendation of the biologist. Raptor nests are subject to additional protections, including during the “branching” phase, when fledglings begin to fly but do not fully leave the nest. Buffers will be maintained until young fledge or the nest becomes inactive, as determined by the qualified biologist.

If work must occur within the buffer, proceed to NB-4.

**NB-4 Nesting Birds - Active Nest Monitoring[6,8,2,5]**

If an avoidance buffer is not achievable, a qualified biologist may monitor the nest(s) during work activities within the recommended nest buffer to document that no take of the nest (nest failure) has occurred related to work activities. If it is determined that work activity is resulting in nest disturbance, work should cease immediately.

**RB-1 Prework Survey[4,5]**

If vegetation management activities would (1) occur in trees with potential for roosting bat species, (2) would include removal or trimming of trees where a bat could be roosting, or (3) would involve removal or trimming of a tree with mechanized equipment adjacent to trees or structures that could have roosting bats and (4) the work would commence between March 1 and July 31, during the bat maternity period, a pre-activity survey will be conducted for

roosting bats within 2 weeks prior to work to ensure that no roosting bats will be disturbed during work. This survey can be conducted concurrent with other surveys for other sensitive species. Trees and shrubs within the work footprint that have been determined to be unoccupied by roosting bats, or that are located outside the avoidance buffer for active roosting sites may be removed. Roosting initiated during work is presumed to be unaffected, and no buffer would be necessary.

**RB-2 Avoidance of Maternity Roosts and Day Roosts[4]**

If active maternity roosts or day roosts are found within the project site, or in areas subject to disturbance from work activities, avoidance buffers will be implemented. The buffer size will be determined in consultation with the qualified biologist or RPF.

**RB-3 Bat Roosting Tree Removal – Seasonal Restrictions[4]**

Removal of trees identified as providing suitable roosting habitat should be conducted during seasonal periods of bat activity, including:

- Between March 1 and April 15, or after evening temperatures rise above 45 degrees Fahrenheit and/or no more than ½ inch of rainfall within 24 hours occurs; or
- Between September 1 and about October 15, or before evening temperatures fall below 45 degrees Fahrenheit and/or more than ½ inch of rainfall within 24 hours occurs.

If it is determined that a colonial maternity roost is potentially present, the roost will be avoided and will not be removed during the breeding season (April 15 to August 31) unless removal is necessary to address an imminent safety hazard.

Operation of mechanical equipment producing high noise levels (e.g., chainsaws, heavy equipment) in proximity to buildings/structures supporting or potentially supporting a colonial bat roost will be restricted to periods of seasonal bat activity (as defined above), when possible.

**RB-4 Bat Roosting Tree Removal – Emergency Removals[4]**

Potential non-colonial roosts that cannot be avoided will be removed on warm days in late morning to afternoon when any bats present are likely to be warm and able to fly. Appropriate methods will be used to minimize the potential of harm to bats during tree removal. Such methods may include using a two-step tree removal process. This method is conducted over two consecutive days, and works by creating noise and vibration by cutting non-habitat branches and limbs from habitat trees using chainsaws only (no excavators or other heavy machinery) on Day 1. The noise and vibration disturbance, together with the visible alteration of the tree, is very effective in causing bats that emerge nightly to feed, to not return to the roost that night. The remainder of the tree is removed on Day 2.

**RR-1 Riparian Resources – Project Design[6,5]**

In riparian areas, 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 representative of healthy stands of the riparian vegetation types that are characteristic of the region. Allowable activities include 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. Mature, healthy trees will not be removed from a riparian corridor. Any activities conducted within a riparian corridor will be conducted so as to

avoid alteration to a bed, channel, or bank of a waterway and all debris, including sawdust, chips, or other vegetative material, will be prevented from entering the bed, channel, or bank of a waterway, unless a permit from the California Department of Fish and Game under Section 1600 is obtained.

Avoid grazing across waterways and within a 50-foot buffer if there is a need for protection of riparian vegetation from grazing. Limited grazing may be allowed if it would be beneficial to plant communities without causing harm (e.g., removal of invasive species) and would not result in erosion.

**TR-1 Emergency Access to Project Areas[2,3]**

The following measures will be implemented to maintain emergency access:

- At least one week prior to temporary lane or full closure of a public road for vegetation management-related work, the appropriate emergency response agency/agencies will be contacted with jurisdiction to ensure that each agency is notified of the closure and any temporary detours in advance and obtain all required encroachment permits
- In the event of any emergency, roads blocked or obstructed for maintenance activities will be cleared to allow the vehicles to pass.
- During temporary lane or road closures on public roads, flaggers equipped with two-way radios will be utilized where needed to control traffic. During an emergency, flaggers will radio to the crew to cease operations and reopen the public road to emergency vehicles.
- All authorized vehicles at the treatment site will be parked to not block roads when no operator is present to move the vehicle.

**TR-2 Traffic Control Measures[4]**

Traffic control measures will be implemented to maintain traffic and pedestrian circulation on streets affected by project activities. The following measures may include:

- All traffic control devices will conform to the latest edition of the MUTCD, and as amended by the latest edition of the MUTCD California supplement.
- Any work that disturbs normal traffic signal operations and ensure proper temporary traffic control (lane shifts, lane closures, detours etc.) will be coordinated with the agency having jurisdiction, at least 72 hours prior to commencing worker.
- Flaggers and/or warning signage of work ahead.
- A minimum of twelve (12) foot travel lanes on public roads must be maintained unless otherwise approved.
- Maintaining access to driveways and private roads at all times unless other arrangements have been made.
- Traffic control devices will be removed from view or covered when not in use.
- Sidewalks for pedestrians will remain open if safe for pedestrians. Alternate routes and signing will be provided if pedestrian routes are to be closed.
- Scheduling truck trips during non-peak hours to the extent feasible.

## Discussion of Exceptions (Section 15300.2)

**(a) Location:**

Sensitive habitats, including watercourses and wetland areas would be avoided. Riparian woodlands may be encountered but any vegetation trimming or thinning would be conducted by hand and alteration to and deposition of debris avoided within the bed, channel, or bank of a waterway (RR-1). Due to the scope and design of the project, the project would not adversely affect riparian habitats as the work would not affect shade or species diversity and could be beneficial if invasive species removal is needed, therefore, exception (a) does not apply.

**(b) Cumulative Impact:**

Fuel reduction treatments, similar to that proposed for this project, have occurred along the project area in previous years to create shaded fuel breaks and limit invasive broom. Previous fuel reduction treatments have occurred on China Camp State Park lands and City-owned land near Black Canyon. Other defensible space and fuel reduction zone creation between communities and open space is occurring in the San Rafael Zone and greater Marin County, but would not be conducted within the same zones as this project and would not result in cumulative impacts as defined in CEQA Guidelines Section 15300.2. Ongoing maintenance of the fuel reduction zones would be limited to the types of activities previously described, which would be performed periodically to create defensible space between structures and open space. The visual character of project work areas would be modified each time vegetation treatments are implemented as vegetation regrows, due to reduction in vegetation cover and type (e.g., broom removal), but the natural character would remain. The design and implementation of this project ensures that significant effects on environmental resources are avoided over successive years of maintenance. As such, the project would not contribute to any potential significant cumulative effect and therefore, exception (b) does not apply.

**(c) Significant Effects due to "Unusual Circumstances":**

The proposed vegetation thinning activities along the WUI, and future maintenance is considered routine and is prevalent and typical throughout the County and Bay Area region. Sensitive waterways and special-status species would be avoided. The project would modify the vegetation, but the natural character would remain, and the aesthetic change would not be substantial. Therefore, there are no unusual circumstances associated with the project or the environment in which it would be implemented, and exception (c) does not apply.

**(d) Scenic Highways:**

No designated California State Scenic Highways occur in the vicinity of the prescribed herbivory sites; therefore, exception (d) does not apply (Caltrans, 2021).

**(e) Hazardous Waste Sites:**

Per the current government database of hazardous waste sites at the time of this filing, one closed hazardous waste site is located adjacent to the fuel reduction zones (SWRCB, 2021). No ground disturbing activities that could unearth potentially contaminated soils would occur; therefore, exception (e) does not apply.

**(f) Historical Resources:**

The project does not propose any intense ground-disturbing activities (e.g., ground disturbance using equipment that results in the removal or turning of soil a few inches deep or more) and, would occur within 100 to 150 feet from structures and roadways. Some hand pulling of invasive plants could occur. As part of the project, workers would participate in a cultural training prior to project implementation (CUL-1) a records search would be conducted prior to work (CUL-3) in order to identify areas of avoidance, and should a previously

unidentified cultural resource be discovered, work would halt in the area and the resource fully avoided (CUL-4). Project activities would not alter any built environment features and would not cause a substantial adverse change in the significance of a known or previously undiscovered historical resource. Therefore, exception (f) does not apply.

## Environmental Assessment

| Aesthetics | | |
|---|---|---|
| **Question** | **Yes** | **No** |
| Relevant to the project? | ☒ | ☐ |
| Potential for significant impact? | ☐ | ☒ |

The visual character within the proposed fuel reduction zones is characterized by primarily residential and forested recreational areas. Vegetation consists of densely forested mountain areas as well as grassy and chaparral-covered lowlands and hills. Viewers in the vicinity of the work areas would primarily be recreationalists from existing trails and fire roads that overlook or are adjacent to the fuel reduction areas. Motorists on some public roads may be able to see small segments of the fuel reduction areas.

Equipment and trucks performing the work would be temporarily visible along these fuel reduction zones. The vegetation thinning activities would be in one area for a short period of time (a few hours to a day) and the work would be performed in a limited area within the fuel reduction zones at any given time.

Minor changes to the vegetation patterns and form would occur from manual and mechanical removal of small or hazard trees and shrubs in forested areas, as well as weed removal within up to 150 feet of structures. No healthy, mature, scenic trees would be removed as part of this project. The vegetative material would be chipped and either broadcast on site or hauled away from the work area or trucked to be burned using an air curtain burner. Viewers in the immediate vicinity may notice changes in the density and type of the vegetation within the work areas. These methods of vegetation thinning currently occur in the San Rafael Zone as well as throughout broader Marin County to create defensible space between structures and open space. This type of work and vegetation management is typical of the area and a characteristic part of the existing environment. The project would not degrade recreationalists or motorist views from nearby roads or trails because the visual change would be minimal, is typical in the area, and would only extend 150 feet from structures. The natural vegetation and characteristics of the areas would remain. Significant adverse effects to aesthetics would not occur. Visual degradation as seen from State or locally designated scenic roads or vistas, including the Marin County ridge and upland greenbelt areas, would not occur.

| Agriculture and Forestry Resources | | |
|---|---|---|
| **Question** | **Yes** | **No** |
| Relevant to the project? | ☒ | ☐ |
| Potential for significant impact? | ☐ | ☒ |

The proposed vegetation thinning activities would not convert designated farmland to non-agricultural uses. Project activities would primarily involve thinning and removal of shrubs and underbrush. Healthy, mature trees would not be removed and as such would not result in the

loss of forest land, nor would it convert forestry land to non-forestry use. Adverse effects on agriculture and forestry resources would not occur.

| Air Quality | | |
|---|---|---|
| **Question** | **Yes** | **No** |
| Relevant to the project? | ☒ | ☐ |
| Potential for significant impact? | ☐ | ☒ |

Vehicles and equipment for fuel reduction activities would emit diesel particulate matter and criteria air pollutants. In a typical day, it is assumed that worker trucks, chainsaw, chipper, and mechanical hand tools would operate for a few hours per crew and up to one off-haul trucks would travel to a green waste disposal center a day.

An air curtain burner may be used for vegetation disposal. Air curtain burning would be conducted in compliance with BAAQMD Regulation 5 for open burning. At most, the air curtain burner would operate every 2 days and burn up to 50 cubic yards (approximately 1.2 tons (USDA, 2014)) of vegetative material on a burn day. Air curtain burners operate by trapping particles of smoke under an air curtain which are then reburned resulting in very high combustion efficiency (up to 99 to 100 percent reported) (Zahn, 2005; Fuhrmann, 2010, rev. 2020).Smoke, particulate matter, and carbon emissions are low and due to the high combustion efficiency, risk to workers conducting the burn and any other personnel in the area is relatively low. Activities would be conducted for up to 136 workdays over 2 years, which would not result in a generation of air emissions if excess of BAAQMD significance thresholds (CAPCOA, 2021; Clerico & Villegas, 2017). No tilling or grading activities that could generate fugitive dust emission would occur. Significant air quality impacts would not occur.

| Biological Resources | | |
|---|---|---|
| **Question** | **Yes** | **No** |
| Relevant to the project? | ☒ | ☐ |
| Potential for significant impact? | ☐ | ☒ |

Biological database searches for the vicinity of the fuel reduction zones were conducted (CDFW, 2021; CNPS, 2021). Of the species identified during the database search, species were determined to have potential to occur within the work areas if the species is known to occur in the vicinity of the sites and if the sites or immediate vicinity contains suitable habitat to support these species.

**Special-Status Plants and Sensitive Vegetation Communities**

Riparian, wetland, or other sensitive habitats may occur along or near the fuel reduction zones. Some plant species have a moderate or high potential to occur in the fuel reduction zones (refer to Figure 2 for locations of known occurrences in relation to the project). Vegetation trimming and removal would be conducted by hand to remove fuel loading and allow safe ingress and egress (RR-1). Workers would receive training from a qualified professional prior to beginning the vegetation treatments in areas where sensitive biological resources could occur. Training would include identification of special-status plant species and sensitive communities for avoidance or, as appropriate, training for species-specific protocols for work, such as trimming methods (ET-1). The training for this project would involve identification of Napa false indigo, Point Reyes salty bird's-beak, Tiburon buckwheat,

Marin western flax, white-rayed pentachaeta, and Marin knotweed for avoidance if encountered along the fuel reduction zones. Where rare plants have a high potential to occur based on a review and professional judgement, and activities that could damage the flowering plant species would occur during the blooming season, surveys would be conducted prior to work (ES-1). The vegetation trimming and removal would generally focus on removing invasive and fire-hazardous species, leaving native species in place (IP-4) and the types of activities generally would not disrupt the seed banks of these species. Workers would clean equipment and handle vegetation to avoid spreading invasive species and plant pathogens (IP-1, IP-2, IP-3). All sensitive plant species have a low to no potential to be impacted by vegetation removal activities as shown in Table 1. Significant impacts on native vegetation communities and special-status plants species would not occur.

**Special-Status Wildlife**

Some wildlife species have a moderate potential to occur within the fuel reduction zones (refer to Figure 3 for locations of known occurrences in relation to the project). Project activities would generally be conducted August 1 to January 31 avoiding nesting birds and roosting bats. If activities must occur from February 1 to July 31 appropriate nesting bird and/or bat surveys would be conducted (NSO-1, NSO-2, NB-1, NB-2, NB-3, NB-4, RB-1, RB-2, RB-3, RB-4). Training would include identification for avoidance of sensitive communities, such as wetlands and serpentine habitats. Training would also identify host plants for the monarch for avoidance (ET-1). Due to the scale and scope of the fuel reduction treatments, the western bumble bee and monarch would not be adversely affected as these species are mobile and could move away from any danger posed by equipment or humans.

The California red-legged frog has a moderate to low potential to occur within the fuel reduction zones. The drainages located within the work areas are considered not very suitable habitat for the California red-legged frog. Streams that are found within or adjacent to the fuel reduction zones would be avoided. Training would also identify habitat for the California red-legged frog for avoidance (ET-1).

Critical habitat for the northern spotted owl is approximately 4 miles from the fuel reduction zones (USFS, 2021) (refer to Figure 4 for locations of known occurrences in relation to the project). Vegetation treatment and removal would target invasive, non-native, and fire-hazardous vegetation and accumulative dead biomass along the fuel reduction zones. Small trees, 4 inches DBH and smaller, would be removed as part of clearance for horizontal spacing. This vegetation would grow back and be retreated as needed. Vegetation treatment would occur within 100 to 150 feet from roadways and occupied structures. Due to the sensitivity to human presence, northern spotted owls are less likely to nest within the fuel reduction zones as these areas are directly adjacent residential communities. As stated previously, vegetation treatment activities would occur outside of the northern spotted owl nesting season to the extent possible (NSO-1). If work was to occur during the nesting season, surveys would be conducted to determine if a breeding pair were located within 0.25 mile of the work area, and treatments would not occur before July 31 if an active nest was present, unless the young have fledged (NSO-2). If any large trees 10 inches DBH or greater are identified as hazard trees, a qualified northern spotted owl biologist would be consulted (NSO-3). Dusky-footed wood rat nests would be left intact wherever feasible (NSO-4). Given the work would be focused on removal of hazardous fuels near structures, the work would not be considered major habitat alteration for northern spotted owls. Significant impacts on special-status wildlife species would not occur.

**Wetlands**

Streams intersect or occur adjacent to the project work areas as shown in Figure 5 (USFWS, 2021). Existing infrastructure including culverts would not be altered as part of the project. Streams would be avoided by project activities. Wetlands may be encountered within the fuel reduction zones. No activities would occur in wetlands and training would ensure that workers avoid wetlands (ET-1). Significant impacts on wetlands would not occur.

**Table 1 Special-Status Species with Potential to Occur in the Project Vicinity**

| Scientific Name | Common Name | Sensitive Status | Habitat Types | Potential to occur in treatment areas | Potential to be impacted by treatment |
|---|---|---|---|---|---|
| **Sensitive Plants** | | | | | |
| *Amorpha californica var. napensis* | Napa false indigo | CRPR 1B.0 | Wetland, Riparian woodland | Low - Wetlands are not anticipated within the project area, and no known nearby occurrences | Low – can be identified and avoided with training |
| *Chloropyron maritimum ssp. palustre* | Point Reyes salty bird's-beak | CRPR 1B.1 | Coastal salt marsh | None - No coastal salt marsh habitat within project area | None |
| *Eriogonum luteolum var. caninum* | Tiburon buckwheat | CRPR 1B.2 | Chaparral, Coastal Prairie, Valley Grassland | High - Suitable habitats are present in project area, and species is known to occur within the project area | Low – can be identified and avoided with training; if work that could damage flowering body occurs during blooming season, surveys would occur |
| *Hesperolinon congestum* | Marin western flax | FT, CT, CRPR 1B.1 | Serpentine, grassland | Moderate - Potential habitat exists on-site, and species is known to occur nearby | Low – can be identified and avoided with training |
| *Pentachaeta bellidiflora* | white-rayed pentachaeta | Federally Endangered, California Endangered, CRPR 1B. | Grassy or rocky areas | Moderate - Potential habitat exists on-site; however, species is not known to occur nearby | Low – can be identified and avoided with training |
| *Polygonum marinense* | Marin knotweed | CRPR 3.1 | Coastal salt, brackish marshes, swamps | None - No coastal salt marsh habitat within project area | None |
| **Sensitive Wildlife** | | | | | |

| Scientific Name | Common Name | Sensitive Status | Habitat Types | Potential to occur in treatment areas | Potential to be impacted by treatment |
|---|---|---|---|---|---|
| *Antrozous pallidus* | pallid bat | SSC | Roosts in large diameter trees and abandoned buildings | Low - Potential roosting habitat within oak woodland | Low – work would occur outside the bat maternity roosting period or surveys conducted and roosting trees avoided |
| *Athene cunicularia* | burrowing owl | SSC | Nests in grassland burrows | Low - Suitable grassland habitat does not appear present on-site | Low – work would occur outside nesting season or surveys conducted and active burrows avoided |
| *Bombus occidentalis* | western bumble bee | CC | Grassland | Moderate - Potentially suitable grassland habitat within project area, and there are recorded nearby occurrences | Low – type of work not likely to affect bumble bee, which can disperse |
| *Danaus plexippus pop. 1* | monarch - California overwintering population | FC | Grassland, woodland; Eucalyptus groves | Moderate - Only one occurrence within 3 miles | Low – not likely to be encountered, host plants can be identified and avoided with training |
| *Emys marmorata* | western pond turtle | SSC | Freshwater ponds and streams | Low - Ponds and streams will be avoided | Low – can be identified and avoided with training |
| *Laterallus jamaicensis coturniculus* | California black rail | FT, FP | Wetlands and marshes | None - No suitable habitat | None |
| *Melospiza melodia samuelis* | San Pablo song sparrow | SSC | Marshes and wetland edges | None - No suitable habitat | None – suitable habitat would be avoided |
| *Rallus obsoletus* | California Ridgway's rail | FE, CE, FP | Wetlands and marshes | None - no suitable habitat | None |
| *Rana draytonii* | California red-legged frog | FT, SSC | Breeds in ponds/slow moving streams, may use grassland and oak | Moderate to low - Known occurrences are nearby, but drainages within | Low – can be identified and avoided with training |

| Scientific Name | Common Name | Sensitive Status | Habitat Types | Potential to occur in treatment areas | Potential to be impacted by treatment |
|---|---|---|---|---|---|
| | | | woodland for dispersal and foraging | project area are likely not very suitable | |
| *Reithrodontomys raviventris* | salt-marsh harvest mouse | FE, CE, FP | Marshes and wetland edges | None - no suitable habitat | Low – can be identified and avoided with training |
| *Spirinchus thaleichthys* | longfin smelt | FC, CT | Aquatic | None - no suitable habitat | None |
| *Strix occidentalis caurina* | Northern spotted owl | FT, CT | Forest with high canopy and open understory for foraging | Moderate. Activity centers are documented nearby, but none have historically been documented within 0.25 miles of the project area. | Low – work would occur outside nesting season or surveys conducted, removal would focus on small trees and hazardous fuels; healthy, mature trees would not be removed; removal of larger hazard trees would not occur without consultation with a qualified biologist |
| *Thaleichthys pacificus* | eulachon | FT | Aquatic | None | None |

Notes:

Species with occurrences within 3 miles of project areas were examined. Species which are considered "extirpated" or those with occurrence data greater than 75 years old were removed from the analysis as they are not anticipated to occur in the vicinity of the work area. Species with occurrence data which was greater than 50 years old was examined for inclusion on a case-by-case basis.

| | | | |
|---|---|---|---|
| FE | Federally Endangered | CR | California Rare |
| FT | Federally Threatened | CC | California State Candidate |
| FC | Federal Candidate | FP | Fully Protected |
| CE | California State Endangered | SSC | California State Species of Special Concern |
| CT | California State Threatened | CRPR | California Rare Plant Ranks |

*Source: (CDFW, 2021; CNPS, 2021; CDFG, 2003; Hickman, 1993; Stebbins, 2003)*

| Cultural Resources and Tribal Cultural Resources[10] | | |
|---|---|---|
| **Question** | **Yes** | **No** |
| Relevant to the project? | ☒ | ☐ |
| Potential for significant impact? | ☐ | ☒ |

Equipment and vehicles for the fuel reduction activities would operate from existing fire roads and trails adjacent to the work areas. No intense ground disturbing activities (e.g., off-road equipment use, discing). While some hand pulling of invasive species may occur, the potential to disturb cultural resources is generally low since this work results in little ground disturbance and no heavy equipment. Workers would participate in a cultural training prior to project implementation (CUL-1) and should a previously unidentified cultural resource be discovered, work would halt in the area and the resource fully avoided conducted (CUL-2). A cultural resources records and/or site-specific survey of project areas that could involve ground disturbance, such as areas of extensive broom pulling, would be conducted prior to the disturbance and any identified resource areas would be flagged for avoidance (CUL-3) or limited prescriptions that avoid affects such as only allowing hand tools in the area. Significant impacts on cultural resources and human remains would not occur.

| Energy | | |
|---|---|---|
| **Question** | **Yes** | **No** |
| Relevant to the project? | ☒ | ☐ |
| Potential for significant impact? | ☐ | ☒ |

The vehicles and equipment conducting the fuel reduction activities would consume energy, including gas, diesel, and motor oil. Vehicle engines and fuel used during implementation of the project would comply with State and local energy reduction and efficiency requirements. The use of fuel to implement the project would be minimal and the proposed fuel consumption would, additionally, be considered beneficial and not wasteful given the positive outcome of the work to create defensible space between occupied structures and open space areas. Implementation of fuel reduction activities would not cause a significant impact due to wasteful, inefficient, or unnecessary consumption of energy resources.

| Geology and Soils | | |
|---|---|---|
| **Question** | **Yes** | **No** |
| Relevant to the project? | ☒ | ☐ |
| Potential for significant impact? | ☐ | ☒ |

Vehicle travel to the work areas would occur on existing paved roads. Work areas would be accessed on foot, and operation of equipment would occur using existing fire roads and trails adjacent to the work areas. Most of the fire roads and trails are unpaved and may consist of gravel or dirt. While the use of established unpaved roads and trails could result in erosion,

[10] No tribal consultation requirement is associated with filing a notice of exemption per Assembly Bill 52 (PRC §21080.3.1.(b)).

impacts on any one area from travel would be limited due to minimal use, typically only a day or two.

Soil erosion and loss of topsoil could occur during manual and mechanical vegetation cutting and removal through the exposure of bare soils. After the vegetation thinning is completed, erosion and topsoil loss could occur through loss of root-soil matrix strength if root systems die. Root systems of larger vegetation would generally be left in place, minimizing the potential for erosion. Vegetation removal and cutting that maintain at least 70 percent of groundcover would not result in substantial erosion (Lang & McDonald, 2005). In areas where erosion could occur due to slope and soil exposure, erosion control devices would be installed (GEO-1). Significant impacts related to erosion and loss of topsoil would not occur.

| Greenhouse Gas Emissions | | |
|---|---|---|
| **Question** | **Yes** | **No** |
| Relevant to the project? | ☒ | ☐ |
| Potential for significant impact? | ☐ | ☒ |

Vegetation thinning activities would involve manual and mechanical vegetation removal within the fuel reduction zones. Use of vehicles and equipment during these activities and vehicle travel to work areas would generate some greenhouse gas (GHG) emissions. Air curtain burners may be used for debris disposal, which would emit GHGs. Air curtain burning minimizes carbon emissions compared to hand piled burning and would eliminate the carbon emissions associated with chipping and hauling. Project activities would not generate significant quantities of GHG emissions[11]. The project would involve vegetation thinning and would not typically remove any healthy, mature trees. Thinning can result in greater sequestration rates by reducing competition for the larger, more resilient trees (CAL FIRE, 2018). These processes are not quantified but would fluctuate during initial treatment and future maintenance. Due to the current higher fuel loads, it is anticipated that a net release of carbon from removal of vegetation could occur, at least in the near-term as the ecosystem fuel loads are restored closer to pre-fire suppression conditions and wildland fire risk is minimized while ingress and egress is improved. The fluctuation would be insignificant compared to overall carbon stock in Marin County. Significant greenhouse gas emission impacts would not occur.

| Hazards and Hazardous Materials | | |
|---|---|---|
| **Question** | **Yes** | **No** |
| Relevant to the project? | ☒ | ☐ |
| Potential for significant impact? | ☐ | ☒ |

Trucks, vehicles, and equipment are used for ongoing vegetation management along the WUI throughout Marin County. Vehicle and equipment use at work areas and vehicle travel to and from work areas could result in a minimal risk of accidental spills of fuels or lubricants from

[11] BAAQMD has established thresholds of significance for GHG emissions meant primarily for evaluating GHGs associated with land-use development or stationary-source projects, but the thresholds are not recommended for vegetation-management projects (Flores, 2020).

these vehicles. Workers handling hazardous materials are required to adhere to OSHA and Cal/OSHA health and safety requirements to protect workers. As part of the project, spill prevention and response measures would be implemented that would ensure that hazardous materials are properly stored on-site and that any accidental releases of hazardous materials would be properly controlled and quickly cleaned up (HAZ-1). Off-road grading or other intense ground disturbance would not occur, ensuring that any potential existing contamination would not be disturbed and would not pose a risk to the environment or public.

Due to the nature of air curtain burning, the likelihood of igniting a wildfire is low. The air curtain burner would be used in an area cleared of vegetation with low risk for fire spread and would only be performed with by qualified personnel and in compliance with BAAQMD Regulation 5 for open burning. Vegetation management crews would maintain fire suppression equipment (e.g., Pulaski axe, shovel, fire extinguisher) in work vehicles during activities that can generate sparks or heat (HAZ-2). Significant impacts related to hazards and hazardous materials would not occur.

| Hydrology and Water Quality | | |
|---|---|---|
| **Question** | **Yes** | **No** |
| Relevant to the project? | ☒ | ☐ |
| Potential for significant impact? | ☐ | ☒ |

Work areas would be accessed on foot using existing fire roads and trial adjacent to the work areas. Vehicles and equipment would not be staged in the residential communities adjacent to the work areas. Riparian woodlands may be encountered but any vegetation trimming, or thinning would be conducted by hand and alteration to and deposition of debris avoided within the bed, channel, or bank of a waterway (RR-1). Some hand pulling could occur within the fuel reduction zones. No intense ground disturbance such as grading or off-road equipment use would occur. Generally, soil-disturbing work resulting in groundcover of less than 70 percent and 100 feet or less upslope of a waterway or riparian corridor could have some potential to cause more substantial sedimentation of the waterway or habitat (Lang & McDonald, 2005). The majority of the proposed manual and mechanical vegetation removal activities would not result in circumstances that would result in significant ground cover removal and, thus, significant erosion and subsequent sedimentation. For the rare instances where erosion could occur, erosion control measures would be implemented (GEO-1). Significant water quality impacts would not occur.

| Land Use and Planning | | |
|---|---|---|
| **Question** | **Yes** | **No** |
| Relevant to the project? | ☐ | ☒ |
| Potential for significant impact? | ☐ | ☒ |

Implementation of vegetation thinning would not involve any new development or changes to land uses that could physically divide a community. The project is consistent with San Rafael Municipal Code Chapter 4.12: Wildland Urban Interface - Vegetation Management Standards, the objectives of the Marin Wildfire Prevention Authority, the Marin County Community Wildfire Protection Plan (2020), and the City of San Rafael Wildfire Prevention and Protection Plan (2020). All activities conducted would comply with local land use regulations and policies.

| Mineral Resources | | |
|---|---|---|
| **Question** | **Yes** | **No** |
| Relevant to the project? | ☐ | ☒ |
| Potential for significant impact? | ☐ | ☒ |

Fuel reduction activities would not result in the loss of availability of a known mineral resource because the work would occur within 100 to 150 feet of existing structures and would not permanently alter any features. Vegetation clearance is intended to increase defensible space between communities and open space and would not alter land uses, access, or subsurface areas that could impact mineral resources.

| Noise | | |
|---|---|---|
| **Question** | **Yes** | **No** |
| Relevant to the project? | ☒ | ☐ |
| Potential for significant impact? | ☐ | ☒ |

The proposed fuel reduction activities would occur on weekdays between 8:00am to 4:00pm. This timeframe would conform with the appropriate noise ordinance (e.g., City of San Rafael Noise Ordinance § 8.13.050, Marin County Noise Ordinance § 6.70.030(5))[12], which limits construction activities and other related work to Monday through Friday 7:00 am to 6:00 pm and Saturday from 9:00 am to 5:00 pm or 6:00 pm, depending upon the ordinance. Work would progress along the fuel reduction zones, limiting noise in any one location to a few hours. Most recreationalists or motorists are only in a single area for a short duration and would be able to move away from noisy areas with little impact on their experience. Residences would experience noise associated with activities, but it is anticipated that activities in any one location would only occur for a few hours. A single residence may be able to hear equipment operating for a day as activities progress along the fuel reduction zone. Measures to minimize noise disruption to nearby neighbors and sensitive receptors would be implemented, as needed (NOI-1). Exceedances of local noise standards would not occur (given the short duration of noise generation in any one location and existing noise levels) and significant noise impacts would not occur.

| Population and Housing | | |
|---|---|---|
| **Question** | **Yes** | **No** |
| Relevant to the project? | ☐ | ☒ |
| Potential for significant impact? | ☐ | ☒ |

[12] While these activities are not construction and do not require a construction permit, some of the equipment generates noise levels similar to construction equipment (e.g., noise level of a chainsaw is ≤82 dBA $L_{max}$ at 50 feet (USDOT, 2008) such that a comparison could be made and justification for ensuring work hours conform.

The workers implementing the fuel reduction activities are anticipated to be sourced from the existing contractor and conservation crews in the region. As such, this project would not induce population growth. No impact related to population and housing would occur.

| Public Services | | |
|---|---|---|
| **Question** | **Yes** | **No** |
| Relevant to the project? | ☐ | ☒ |
| Potential for significant impact? | ☐ | ☒ |

The project would not directly or indirectly induce population growth indirectly necessitating more public services. No new or altered governmental facilities would be needed to provide public services as a result of the project, and the project would not result in increased demand for public services. No impact related to public services would occur.

| Recreation | | |
|---|---|---|
| **Question** | **Yes** | **No** |
| Relevant to the project? | ☒ | ☐ |
| Potential for significant impact? | ☐ | ☒ |

Fuel reduction activities would be performed along the boundary of occupied structures and open space areas. The fuel reduction zones would be located within recreational areas owned and managed by the City of San Rafael and State Parks. Most of the treatment areas are within the Harry A. Barbier Memorial Park and China Camp State Park on the southern slopes of the San Pedro Mountain. Work areas and trails that are accessible to the public and residents occupying the structures adjacent to the work areas may be closed for short durations during fuel reduction activities for safety purposes. Most work areas are located off of trails where recreationalists would not be located. Although access to discrete areas that recreationalists may use could be unavailable or flagged off during vegetation management activities, the treatments would be for a short duration in one area, typically for only a few hours to a few days. Ample recreational opportunities are available within and surrounding the San Rafael Zone (e.g., San Pedro Mountain Open Space Preserve, Lucas Valley Open Space Preserve) that recreationalists could use if discrete areas are unavailable due to vegetation management activities. The project would not directly or indirectly induce population growth that could increase the use of recreational facilities. Significant recreational impacts would not occur.

| Transportation | | |
|---|---|---|
| **Question** | **Yes** | **No** |
| Relevant to the project? | ☒ | ☐ |
| Potential for significant impact? | ☐ | ☒ |

A maximum of 18 workers across three crews could be conducting vegetation management activities within the fuel reduction zones in the San Rafael Zone in a single day. An estimated 14 to 38 daily one-way vehicle trips would occur, which would not exceed the screening

threshold of 110 trips per day[13]. The VMT associated with implementation of the project would not conflict with State CEQA Guidelines section 15064.3, subdivision (b). No significant traffic impacts would occur.

| Utilities and Service Systems | | |
|---|---|---|
| **Question** | **Yes** | **No** |
| Relevant to the project? | ☒ | ☐ |
| Potential for significant impact? | ☐ | ☒ |

Biomass generated from fuel reduction activities would be processed using a chipper and/or an air curtain burner. Some materials may be broadcasted at the work areas. An estimated 20 to 25 cubic yards of chipped material would be generated a day. As the vegetation grows back and follow up maintenance is conducted in future years, additional vegetative materials would be chipped and hauled away. Materials would be hauled to West Marin Compost and the Marin Resources Recovery Center, which have a combined permitted capacity of 3,840 tons per day and would be able to accept the chipped material (CalRecycle, 2021). No impact related to utilities and services systems would occur.

| Wildfire | | |
|---|---|---|
| **Question** | **Yes** | **No** |
| Relevant to the project? | ☒ | ☐ |
| Potential for significant impact? | ☐ | ☒ |

The fuel reduction zones identified for vegetation clearance are within the Local Responsibility Area (LRA) and are all located within a moderate fire hazard severity zone (CAL FIRE, 2007/2008). The purpose of the project is to reduce fuel loads, which would reduce the spread and intensity of a wildfire, should one occur and to provide defensible space for fire suppression crews to safely defend communities. As stated above, vegetation management crews would maintain fire suppression equipment (e.g., Pulaski axe, shovel, fire extinguisher) in work vehicles during activities that can generate sparks or heat (HAZ-2). The project would not impair an adopted emergency response plan or evacuation plan. The project does not involve installation or maintenance of any infrastructure that could exacerbate fire risk. The project does not involve intense ground disturbing activities or off-road vehicle use that could result in downslope or downstream flooding or landslides should a wildfire occur.

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[13] The Office of Planning and Research identifies a screening threshold for a small land-use project as a project that generates or attracts fewer than 110 trips per day. Projects that generate fewer than this threshold may be assumed to cause a less-than-significant transportation impact (OPR, 2017). Although a vegetation treatment project is not a land use project, it is assumed that the screening threshold would still apply to the project.

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**Figure 1 Fuel Reduction Zones**

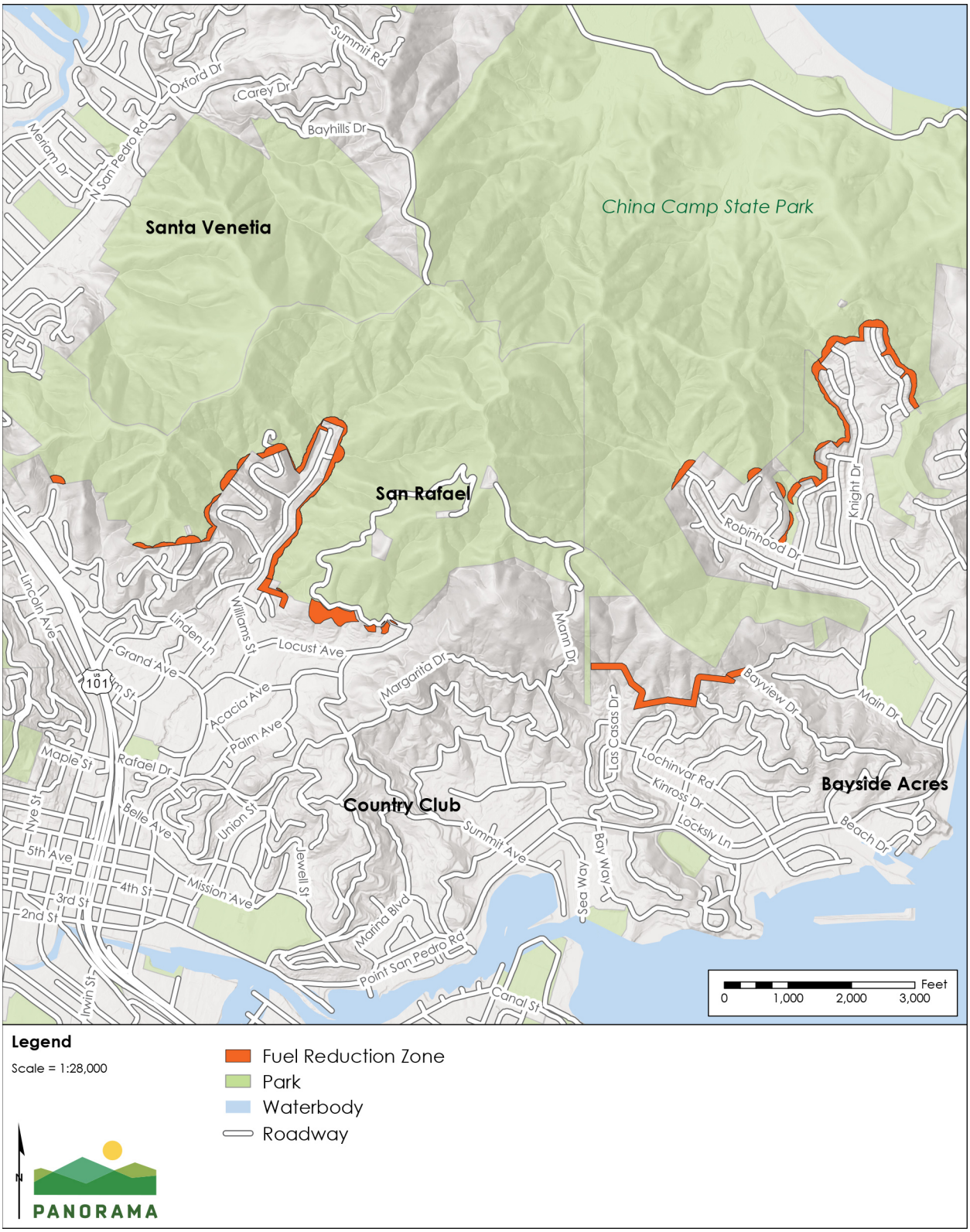

**Figure 2 Special-Status Plant Occurrences**

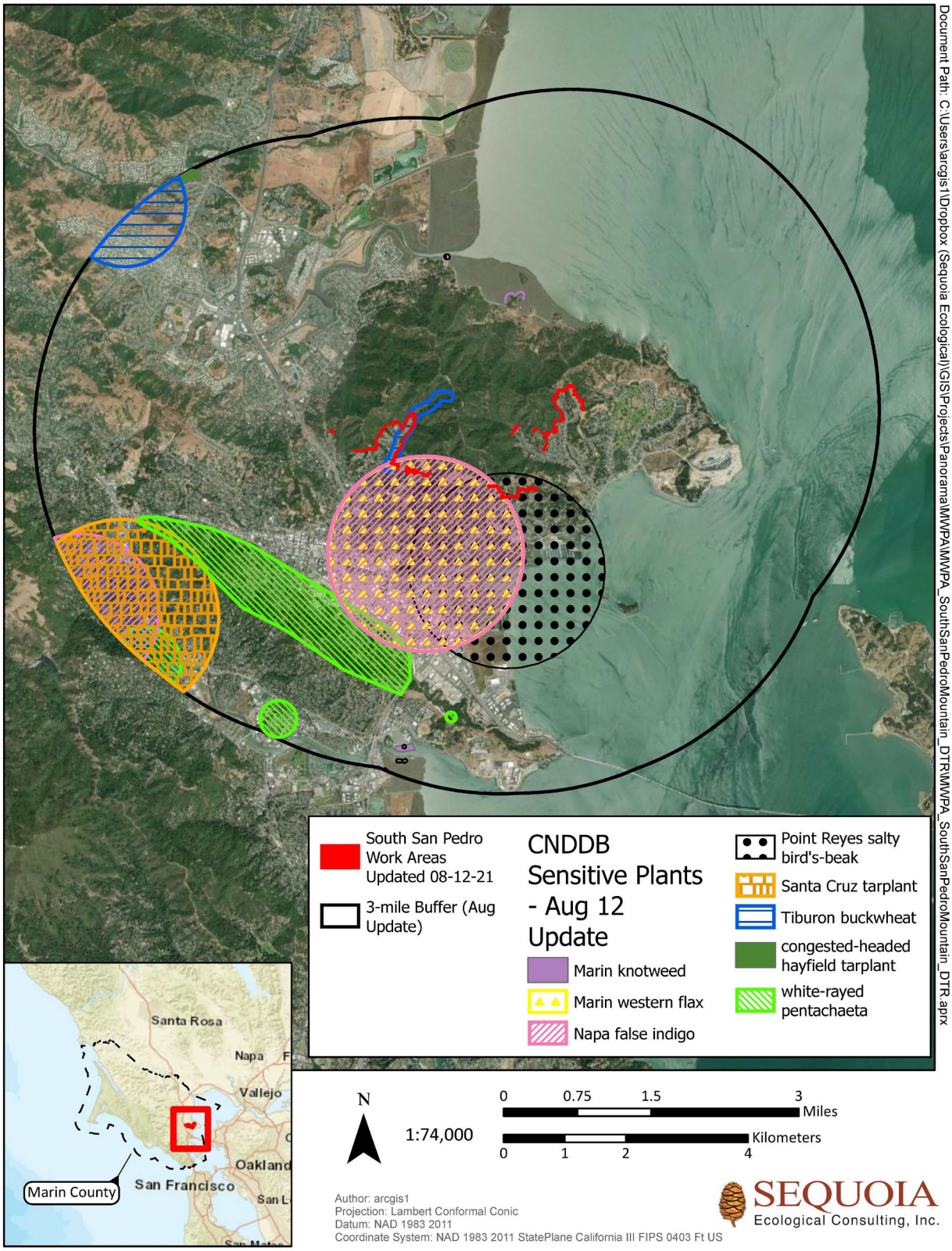

**Figure 3 Special-Status Wildlife Occurrences**

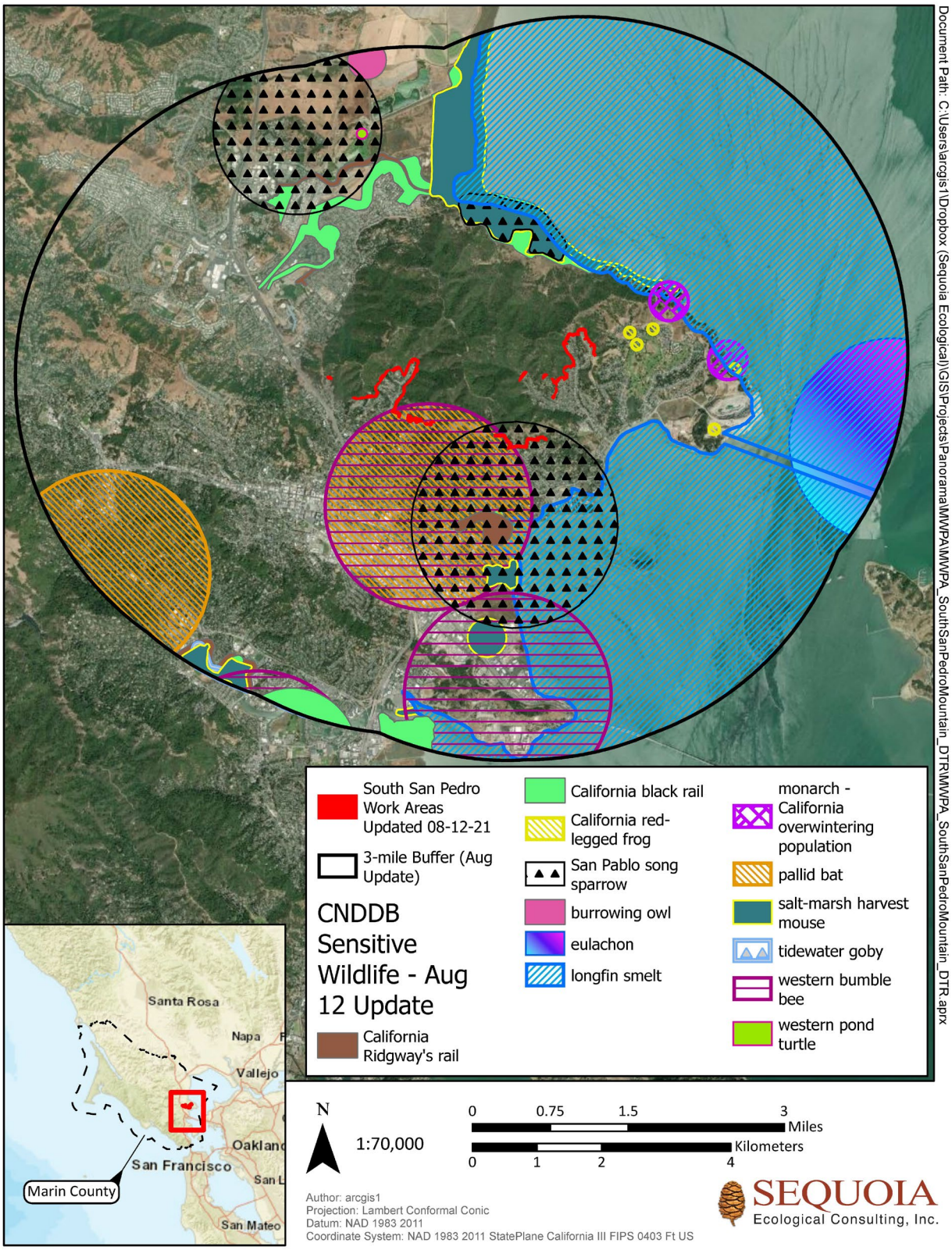

**Figure 4 Northern Spotted Owl Observations**

Figure omitted to protect northern spotted owl nest locations.

**Figure 5 Wetlands and Waterways**