Biological Assessment for
Building Demolition at Cape Vizcaino

44000 North Highway 1, Westport
Mendocino County, California 95488
(APN-013-410-29)

Prepared for:
Save the Redwoods League
111 Sutter Street
San Francisco, California 94104

Prepared by:

2501 North State Street
Ukiah, California 95482

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List of Abbreviations, Definitions, and Acronyms

CDFW	California Department of Fish and Wildlife
CDP	Coastal Development Permit
CESA	California Endangered Species Act
County	County of Mendocino
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
DPS	Distinct Population Segment
ESHA	Environmentally Sensitive Habitat Area
ESU	Evolutionary Significant Unit
FESA	Federal Endangered Species Act
League	Save the Redwoods League
MAMU	Marbled murrelet
NCRM	NCRM, Inc.
NMFS	National Marine Fisheries Service
Property	Cape Vizcaino 402-acre property
SSC	Species of Special Concern
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

1.0 Summary

Biological surveys were conducted to determine if any direct or indirect impacts would be associated with the proposed demolition of aging infrastructure on APN-013-410-29. The parcel is located at 44000 N. Highway 1, Westport, Mendocino County, California (herein referred to as 'the project area'). The project area is part of the larger Cape Vizcaino property (Property) and is owned by Save the Redwoods League (Figure 1). NCRM, Inc. (NCRM) botanist, Laura Moreno-Baker, surveyed for special-status plants and communities within the project vicinity in January and May of 2024; NCRM biologist, Ben Cook, surveyed for special-status wildlife species and associated habitat in January of 2024.

Surveys were conducted in accordance with a Coastal Development Permit (CDP) application, which is required before undertaking any development activity in the Coastal Zone (Chapter 3, Coastal Act). The removal of a rectangular rigid-frame prefabricated steel barracks building would be considered a parcel development under the Coastal Act (Section 30106). The review of potential impacts to sensitive or special-status species and their associated habitat is required in support of the CDP application.

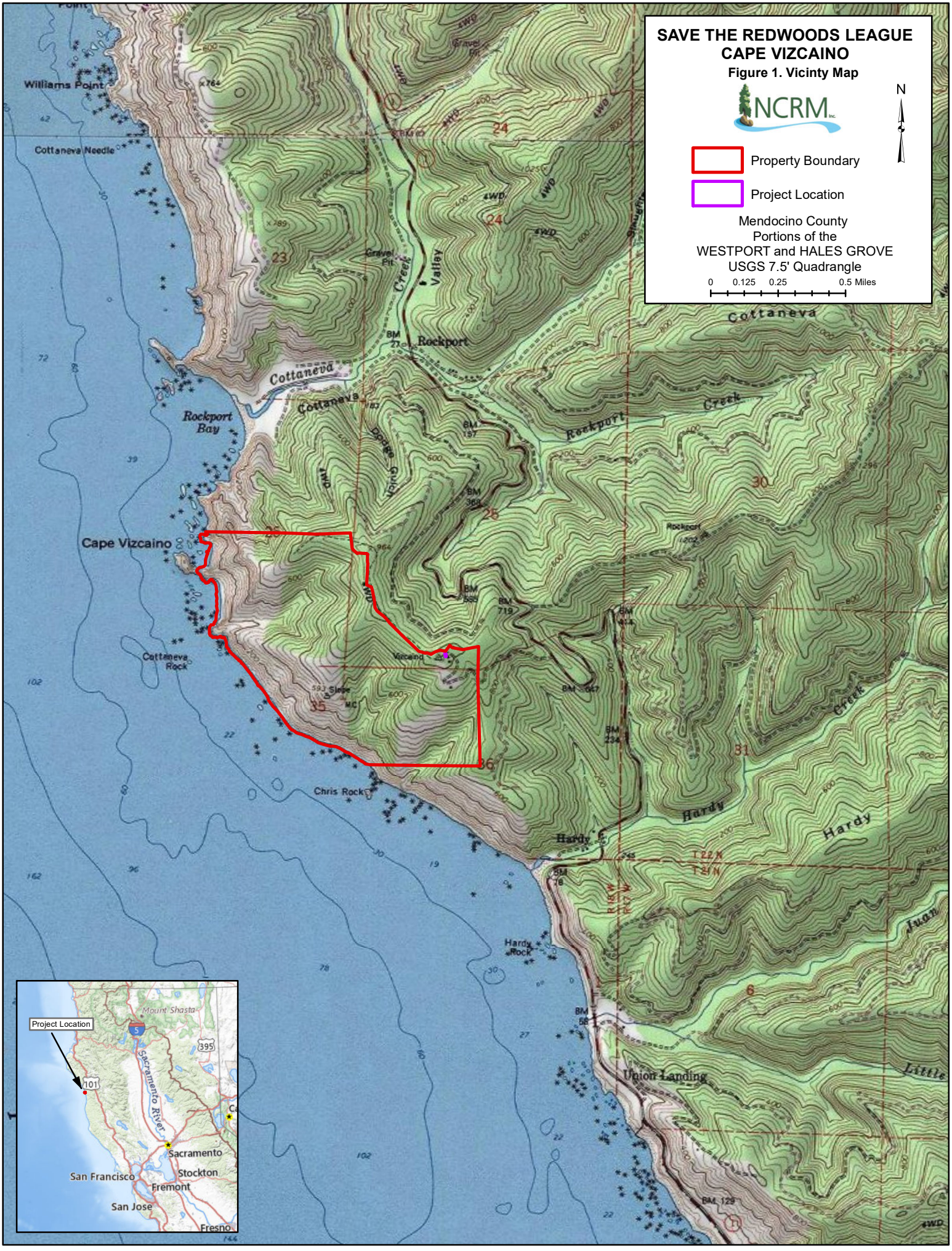
Removal of existing vegetation and the use of heavy machinery has the potential to create a temporary disturbance that could impact three special-status plant species on the scoping list having "moderate" potential to occur and five special-status species having "high" potential to occur. No sensitive or special-status wildlife species were observed during surveys; however, nine wildlife species on the scoping list have "moderate" potential to occur, while one species has "high" potential to occur (see Appendix A and Appendix B for species and communities with potential for occurrence). This project is affiliated with the Redwood Forest and Woodland Alliance, recognized as a Sensitive Natural Community. As such, it qualifies as an Environmentally Sensitive Habitat Area (ESHA). Coastal Act Section 30107.5 describes 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." Consequently, this project will impact an ESHA. However, by adhering to the provided recommendations and mitigation measures, the project is not expected to have a significant adverse effect on wildlife or botanical species. The purpose of the demolition project is to reverse anthropogenic activity and restore the area to its natural condition. Impacts associated with this project are expected to be temporary.

2.0 Project Location

Cape Vizcaino is made up of approximately 402 acres located in Sections 25, 26, 35, and 36 in T22N, R18W, M.D.B.&M. located in Mendocino County, CA. The Property is further identified using Mendocino County assessor's parcel numbers: 013-410-14, 013-410-21, 013-410-22, 013-410-29, and 013-410-30. The Property lies north of Fort Bragg along the Pacific Ocean approximately 2.7 miles south of Rockport, CA, and is within the Westport 7.5' USGS Quadrangle. The project area is located on the southern face of Cottoneva Ridge, north of the mouth of Hardy Creek (see Figure 1).

3.0 Project Description

The proposed activities include the demolition and removal of the barrack building that is 22 feet wide, 55 feet long, and stands approximately 12 feet tall. In addition to the demolition of the barrack, electrical upgrades are proposed to restore power to the mess hall located south of the barrack (Figure 2). Currently, the mess hall electricity is supplied via subpanels attached to the barrack. To reinstall power


SAVE THE REDWOODS LEAGUE
CAPE VIZCAINO
Figure 1. Vicinty Map
NCRM Inc.
N
Property Boundary
Project Location
Mendocino County
Portions of the
WESTPORT and HALES GROVE
USGS 7.5' Quadrangle
0 0.125 0.25 0.5 Miles
Williams Point
Cottaneva Needle
Cape Vizcaino
Cottaneva Rock
Chris Rock
Hardy Rock
Rockport
Rockport Bay
Cottaneva
Hardy
Union Landing
Project Location
Mount Shasta
Sacramento River
Sacramento
Stockton
Fremont
San Francisco
San Jose
Fresno

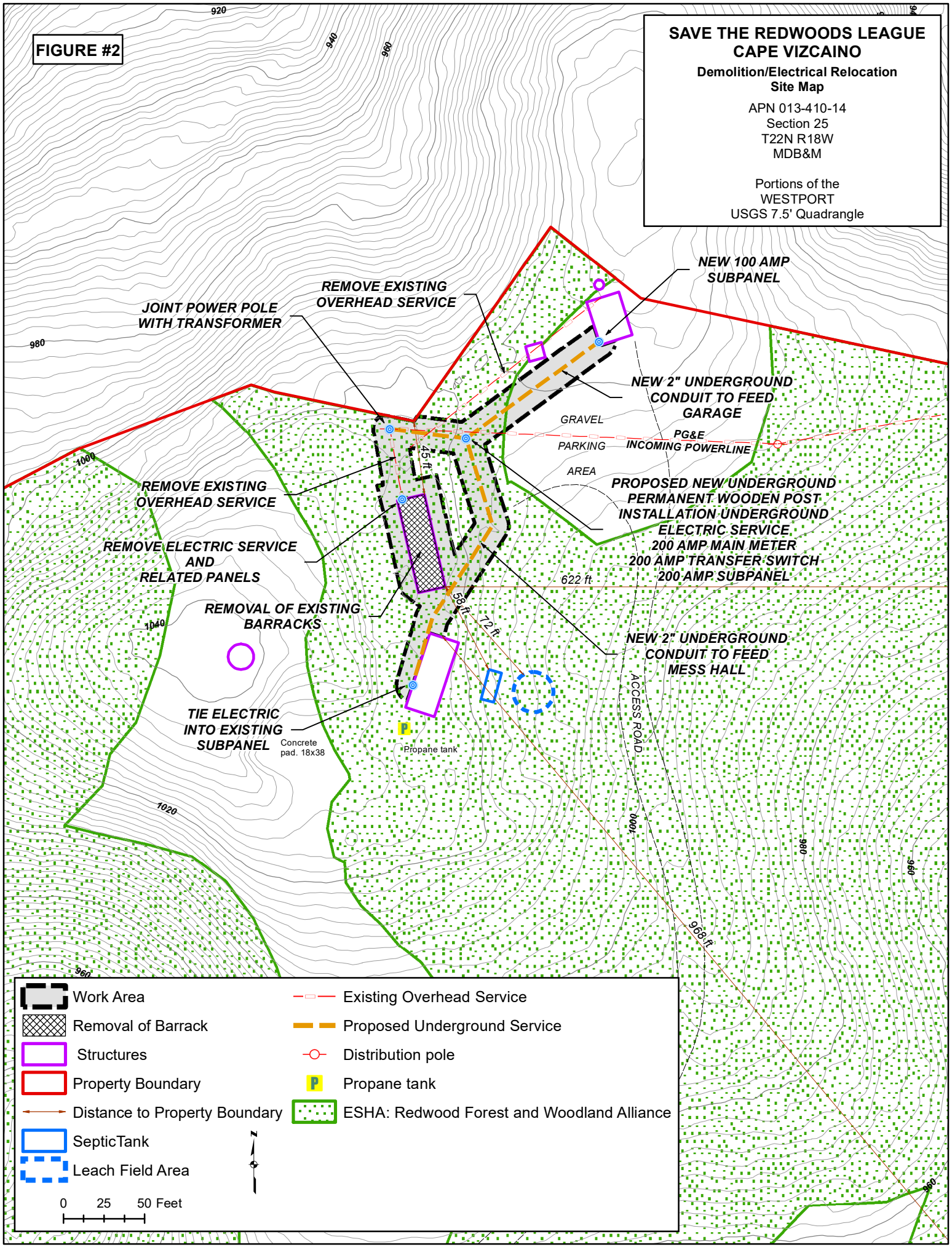


FIGURE #2
SAVE THE REDWOODS LEAGUE
CAPE VIZCAINO
Demolition/Electrical Relocation
Site Map
APN 013-410-14
Section 25
T22N R18W
MDB&M
Portions of the
WESTPORT
USGS 7.5' Quadrangle
NEW 100 AMP SUBPANEL
REMOVE EXISTING OVERHEAD SERVICE
JOINT POWER POLE WITH TRANSFORMER
NEW 2" UNDERGROUND CONDUIT TO FEED GARAGE
GRAVEL
PARKING
AREA
PG&E INCOMING POWERLINE
45 ft
REMOVE EXISTING OVERHEAD SERVICE
PROPOSED NEW UNDERGROUND PERMANENT WOODEN POST INSTALLATION UNDERGROUND ELECTRIC SERVICE 200 AMP MAIN METER 200 AMP TRANSFER SWITCH 200 AMP SUBPANEL
REMOVE ELECTRIC SERVICE AND RELATED PANELS
622 ft
58 ft
72 ft
REMOVAL OF EXISTING BARRACKS
NEW 2" UNDERGROUND CONDUIT TO FEED MESS HALL
ACCESS ROAD
TIE ELECTRIC INTO EXISTING SUBPANEL
Concrete pad. 18x38
Propane tank
968 ft
980
960
1000
1020
1040
Work Area
Removal of Barrack
Structures
Property Boundary
Distance to Property Boundary
SepticTank
Leach Field Area
Existing Overhead Service
Proposed Underground Service
Distribution pole
Propane tank
ESHA: Redwood Forest and Woodland Alliance
N
0 25 50 Feet

to the mess hall, the applicant plans to relocate the subpanels and bury approximately 315 linear feet of two-inch conduit (Figure 2).

The total project area encompasses approximately 8,951 square feet. The project will be broken down into the following phases. 1) removal of salvageable materials from the barrack, 2) electrical work, 3) demolition of the barrack, and 4) restoration of disturbed areas in the form of seeding and revegetating. Heavy machinery, including excavators and dump trucks, will be used to break down the structure and remove debris. All resulting debris and materials will be hauled off-site to a certified landfill.

4.0 Biological Setting

4.1 Watershed

The Property sits atop the southern slope of the divide between Cottoneva Creek to the north and Hardy Creek to the south, at an elevation of approximately 328 feet above sea level Cottoneva Creek watershed is home to populations of Northern California steelhead (*Oncorhynchus mykiss irideus*) and coho (*Oncorhynchus kisutch*). The National Marine Fisheries Service (NMFS) has designated Critical Habitat for steelhead.) within the South Fork of Cottoneva Creek. Hardy Creek, a tributary to the Pacific Ocean, shares similarities with Cottoneva Creek, but there is no designated Critical Habitat for either listed salmonid.

In 1997, a survey conducted by the California Department of Fish and Wildlife (CDFW) at the confluence of Hardy Creek, Middle Fork Hardy, and North Fork Creek, results yielded significant salmonid findings. The site revealed the presence of 36 steelhead (CDFW 1997). Subsequent electrofishing in 2009 at Middle Fork Hardy uncovered 24 young-of-the-year steelhead and four juvenile steelhead (CDFW 2009). Steelhead are not anticipated to be present on or near the property. The streams within the property have hanging mouths that drain directly into the ocean, preventing anadromous fish from utilizing them. Consequently, there is no suitable habitat for steelhead in this area.

4.1.1 Wetlands

Forested and scrub-shrub freshwater wetland habitat classified as PSS1C (Palustrine (P), scrub-shrub (SS), Broad-leaved Deciduous (1), seasonally flooded (C)) was identified approximately 950 feet south of the project area, buffering an unnamed tributary to the Pacific Ocean. The proposed operations will not have any impact on these wetlands due to their location being approximately 950 feet from the project area edge.

4.2 Vegetation Communities

The property is situated in a mountainous, maritime-influenced region that supports rich coniferous and hardwood forests. The natural community within the project area is classified as the *Sequoia sempervirens* (redwood) Forest & Woodland Alliance (S3, G3). This Sensitive Natural Community and its Associations are considered ESHAs. The project area exists within North Coast coniferous forest habitat, made up of redwood (*Sequoia sempervirens*), Douglas fir (*Pseudotsuga menziesii*), and grand fir (*Abies grandis*). The immediate perimeter surrounding the infrastructure is mostly herbaceous and made up of pennyroyal (*Mentha pulegium*), plantago (*Plantago lanceolata*), milk maids (*Cardamine californica*), modesty (*Whipplea modesta*), iris (*Iris douglasiana*), and sorrel (*Oxalis oregana*).

Other common mid-canopy woody plants and tall herbaceous perennials present on the project area include ferns (*Polystichum munitum* and *Pteridium aquilinum*), blackberry (*Rubus* ursinus), salal

(*Gaultheria shallon*), and American stinging-nettle (*Urtica dioica* subsp. *gracilis*). The shady understory supports a diverse array of herbaceous species and could be conducive to populations of Humboldt County milk-vetch (*Astragalus agnicides*), a CRPR (California Rare Plant Rank) 1B.1 listed species; redwood lily (*Lilium rubescens*), a CRPR 4.2 listed species; heart-leaved twayblade (*Listera cordata*), a CRPR 4.2 species; and white-flowered rein orchid (*Piperia candida*), a CRPR 1B.2 species. See Appendix A below for definitions of rare plant ranks.

4.3 Climate

The Property experiences climatic conditions typical of a Mediterranean climate, with cool wet winters and warm dry summers. Daytime low temperatures are in the 40's throughout the year. Daytime high temperatures range from the mid 50's during winter to high 60's in the summer months. Most of the precipitation across the region is generated between the months of October and April by a westerly flow of moist air off the Pacific Ocean. Most precipitation comes in the form of rain during the winter months, averaging approximately 40 inches annually. Cape Vizcaino's proximity to the ocean gives it typical exposure to the coastal fog moisture influence that is characteristic of many redwood forests.

4.4 Soils

The soil unit associated with this project is identified as Vandamme loam (unit number 221). This soil type is well-drained, with surface runoff rates ranging from slow to very rapid under bare soil conditions. It features slow permeability and is utilized primarily for commercial timber production, as well as for wildlife habitats and watershed management. The natural vegetation in this area includes redwood, Douglas-fir, grand fir, tanoak, huckleberry, sword fern, and oxalis.

5.0 Survey Methodology

5.1 Scoping

In February 2024, the following literature and database searches were reviewed or completed to assess the potential for sensitive natural communities and special-status species:

- USDA Soil Survey Report for Mendocino County, California (Data Version 18, 2024)
- California Natural Diversity Database (CDFW 2024)
- California Native Plant Society Electronic Inventory (CNPS 2024)
- National Wetlands Inventory (USFWS, 2024)
- Information of Planning and Consultation (USFWS, 2024)
- Coastal Commission definitions and categories on Environmentally Sensitive Habitat Areas

Scoping lists and database searches (i.e., CNDDB, CNPS) were based on a five-mile radius of the project area, including the Westport, Hales Grove, Lincoln Ridge, and Leggett 7.5' USGS quadrangles. Pelagic wildlife species were excluded from the scoping list due to the lack of suitable habitat near the project area. A desktop review evaluated the potential presence of suitable habitats for special-status species, as well as past observations of certain species. Suitable habitat conditions are based on the physical and biological conditions of the site. The potential for each special-status species to occur in proposed demolition areas was ranked based on the following criteria:

- **None**. No habitat components meeting the specific requirements are present (such as coastal marsh or coastal dunes) in the vicinity of the Project.
- **Unlikely**. Few to none of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.

- **Moderate**. Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
- **High**. All the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
- **Present**. Species was observed on the site or have been recorded (database observation) on the site in the recent past.

5.2 Surveys

Botanical surveys were conducted within the project area and the surrounding vicinity on January 24 and May 28, 2024, by botanist, Laura Moreno-Baker. The survey methodology involved traversing habitats conducive to special-status species within and adjacent to the project area.

Wildlife biologist, Ben Cook, conducted biological surveys around the project area on January 24th, 2024, to assess existing biological conditions and the potential presence of special-status species and their habitats. Surveys consisted of an inventory of species observed, track and sign identification, as well as evaluations of all habitats within the proposed demolition area. These observations along with this year's field observations from nearby locations are documented in Appendix C. The site visit utilized the scoping lists in Appendices A and B, and the survey was conducted within the proximity of the project area.

NCRM has a longstanding history of conducting wildlife surveys on the property, including a comprehensive study on the use of basal hollows by bats at Cape Vizcaino between April 2016 and August 2017 (NCRM 2020). This research involved species identification through genetic testing of guano. Of the twelve hollows surveyed on the property, ten had guano present, predominantly from the California myotis (*Myotis californicus*), while two basal hollows were dominated by the Townsend's big-eared bat (*Corynorhinus townsendii*) guano presence. Other bat species identified at Cape Vizcaino from the guano testing included the fringed/western long-eared bat (*Myotis evotis*), long-legged myotis (*Myotis volans*), big brown bat (*Eptesicus fuscus*), hoary bat (*Lasiurus cinereus*), and silver-haired bat (*Lasionycteris noctivagans*). Notably, Cape Vizcaino exhibited low bat abundance in both summer and winter compared to other surveyed locations.

In addition to bat studies, NCRM has been conducting northern spotted owl (*Strix occidentalis caurina*) surveys for approximately ten years, with a call point located at the proposed demolition site. Despite regular surveys since 2014, no northern spotted owls have been documented within the property. Northern spotted owls have been detected within 0.7-mile buffer of the known Activity Center MEN 0576 toward the north and MEN 0434 in the south end of the property (Figure 4).

NCRM also conducted marbled murrelet (*Brachyramphus marmoratus*) protocol-level surveys (Evans Mack et. al. 2003) in 2014 and 2015. There were no positive results and in 2016 CDFW issued a 10-year probable absence given the poor habitat conditions on the property.

6.0 Results

6.1 Sensitive Natural Communities

None of the communities listed in the CDFW scoping list were observed within the project area; however, *Sequoia sempervirens* (redwood) Forest & Woodland Alliance (S3, G3) is considered a Sensitive Natural Community (SNC). This SNC and its Associations are considered ESHAs.

<u>*Sequoia sempervirens* (redwood) Forest & Woodland Alliance</u>

- *Sequoia sempervirens* is dominant or co-dominant in the tree canopy with *Abies grandis, Acer macrophyllum, Alnus rubra, Arbutus menziesii, Chrysolepis chrysophylla, Notholithocarpus densiflorus, Picea sitchensis, Pseudotsuga menziesii, Tsuga heterophylla* and *Umbellularia californica*.
- *Sequoia sempervirens* > 50% relative cover in the tree canopy, or > 30% relative cover with other conifers such as *Pseudotsuga menziesii* or with a lower tier of hardwood trees such as *Notholithocarpus densiflorus* (Keeler-Wolf et al. 2003a, Evens and Kentner 2006).

<u>Associations</u>

- *Sequoia sempervirens* / *Polystichum munitum*
- *Sequoia sempervirens* / *Oxalis oregana*
- *Sequoia sempervirens - Pseudotsuga menziesii* / *Gaultheria shallon*

6.2 Special-Status Plants

Out of the 42 special-status plant species included in the scoping list, eight species were determined to have a "moderate" to "high" potential to exist within the project area. Below is a description of the rationale used for the species with a "moderate" to "high" likelihood, limited to those with state or federally listed status or listed by the California Native Plant Society (CNPS) in categories 1A, 1B, 2A, 2B, or 3. This limited analysis excludes the following four species as they do not meet the definition of rare or endangered under CEQA Guidelines (see Section 7.1): broad-lobed leptosiphon (*Leptosiphon latisectus*, CRPR 4.3, G4, S4), heart-leaved twayblade (*Listera cordata*, CRPR 4.2, G3, S3), Methuselah's beard lichen (*Usnea longissima*, CRPR 4.2, G4, S4). One CRPR 4.2 species, categorized as having "high" potential to occur, redwood lily (*Lilium rubescens*), was included below because it was found within the project footprint. No special-status species listed in Appendix A, or otherwise, were observed during surveys.

6.2.1 "Moderate" Potential

Small groundcone (*Kopsiopsis hookeri*, CRPR 2B.3) was thought to have a "moderate" likelihood of occurring in the project vicinity given the plant's wide range and the presence of suitable habitat. It is a perennial rhizomatous herb that is known to flower from April to August. According to the CNPS Rare Plant Inventory, this species is known to parasitize salal (*Gaultheria* shallon) and huckleberry (*Vaccinium* spp.), both of which are present in the project area. No observations were made during surveys nor have any past observations been reported in or near the project area.

Robust false lupine (*Thermopsis robusta*, CRPR 1B.2) was categorized as having "moderate" potential to occur given the presence of suitable habitat and the proximity of a recent observation in 2019, approximately five miles north-northeast of the project area. Robust false lupine is a perennial rhizomatous herb that flowers from May to July. There were no observations of this species during 2024 survey efforts.

6.2.2 "High" Potential

Humboldt County milk-vetch (*Astragalus agnicidus*) was thought to have "high" potential to occur given the presence of suitable habitat and the proximity of CNDDB occurrences approximately 2 miles east of the project area. This perennial herb is known to thrive in disturbed openings and roadsides within coniferous forest. The blooming window occurs between April and September. There were no observations of this species during 2024 survey efforts.

White-flowered rein orchid (*Piperia candida*) was thought to have "high" potential to occur given the presence of suitable habitat. The blooming window for this species occurs between May and September. There were no observations of this species during 2024 survey efforts.Redwood lily (*Lilium rubescens*, CRPR 4.2) was found within the project footprint. Redwood lily is a perennial bulbiferous herb that flowers from April to August. Redwood lily generally occurs in dry soils within chaparral conifer forest habitats and is ranked as a CRPR 4.2, G3, S3 special-status plant species by CNPS and CNDDB. CRPR 4.2 plants are of limited distribution and are moderately threatened in California; their status should be monitored regularly. The global and state rank, G3/S3, denotes plants that are vulnerable and at moderate risk of extinction or elimination.

Approximately 85 lilies were observed within and around the planters lining the outside of the barrack proposed for demolition (Figure 3, Lily Locations Map). These lilies were not yet blooming, however vegetative characteristics were evaluated. Upon consulting with the stewards of this property, Tori Perreault and Lhasa Summers, botanical technicians who routinely visit the work area, the lilies were confirmed as redwood lilies (see Photo 1). Additionally, these lilies were observed in other areas of the Cape Vizcaino property that are not within the project area. Mrs. Moreno-Baker counted approximately 90 additional redwood lilies along the main road running through the property. It is likely that the population throughout the Cape Vizcaino property is larger than what was observed.

Photo 1. Redwood lily photographed near the barrack on July 8th, 2021, by Tori Perreault.

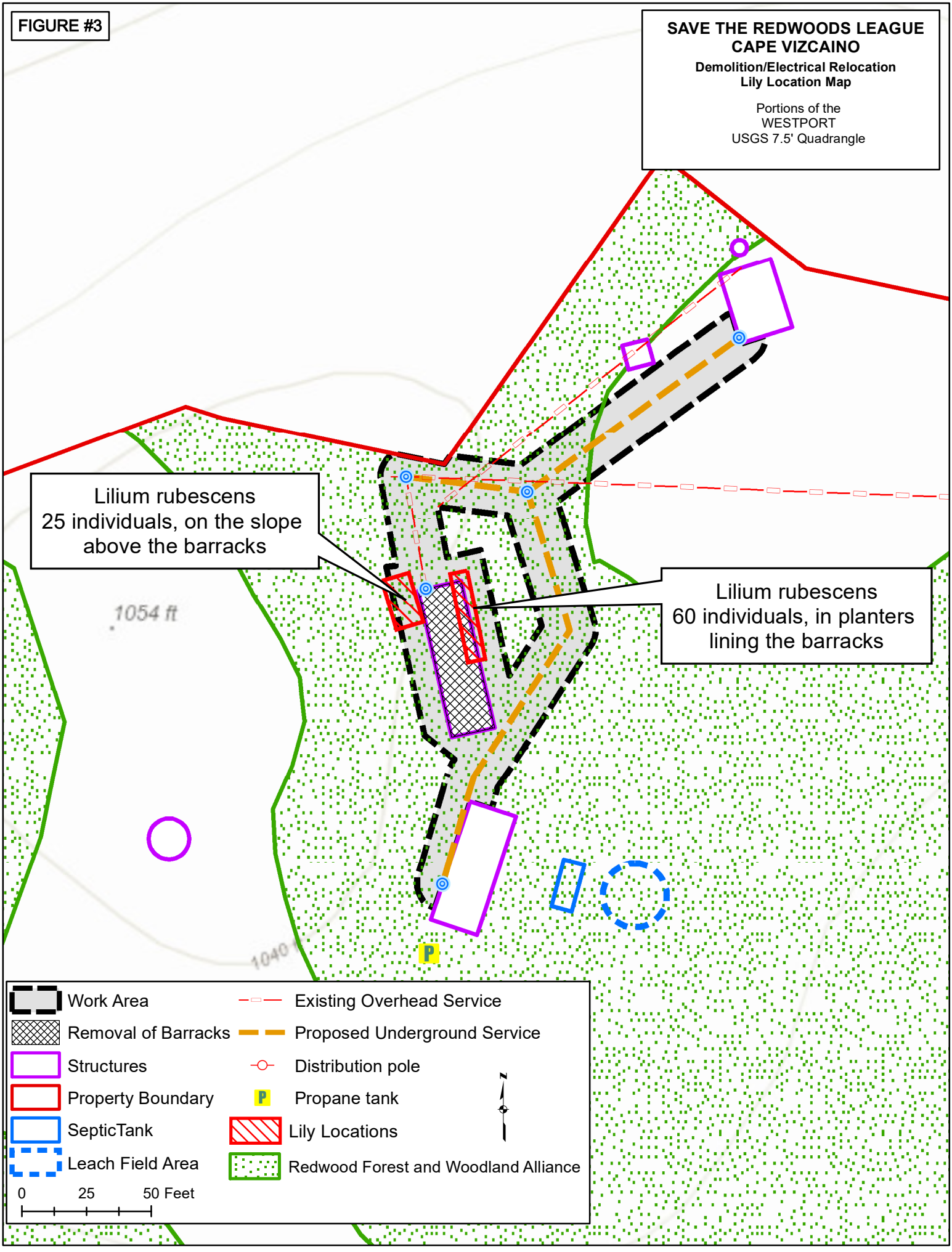


FIGURE #3
SAVE THE REDWOODS LEAGUE
CAPE VIZCAINO
Demolition/Electrical Relocation
Lily Location Map
Portions of the
WESTPORT
USGS 7.5' Quadrangle
Lilium rubescens
25 individuals, on the slope
above the barracks
Lilium rubescens
60 individuals, in planters
lining the barracks
1054 ft
1040 ft
P
Work Area
Removal of Barracks
Structures
Property Boundary
SepticTank
Leach Field Area
Existing Overhead Service
Proposed Underground Service
Distribution pole
Propane tank
Lily Locations
Redwood Forest and Woodland Alliance
0
25
50 Feet

6.3 Special-Status Vertebrates and Invertebrates

A total of 23 sensitive vertebrate and invertebrate species were identified during the scoping for sensitive species. Seven of these species are federally listed (FESA), and two additional species are state listed as "candidate endangered" species (CESA). The remaining species on the scoping list are all considered species of special concern (SSC) by state or federal agencies. Although 23 species have either been identified in the scoping area in the past or have the potential to occur within it (CNDDB 2024), no species on the list were observed during the wildlife survey. Of the 23 species identified by the CNDDB (2024), six have no potential for occurring, four are unlikely to occur, nine have a moderate potential of occurring, one has high potential for occurrence, and three are considered present on the property. Because there is potential for 13 SSC to occur in the surrounding area, we have detailed those species below and mitigation measures for potential impacts are included in Section 8.0.

6.3.1 Birds

During the wildlife survey, no bird species were identified that would be directly impacted by the demolition. Although no bird species from the scoping list were observed during our survey, we believe that one species has a "high" potential of occurring adjacent to the project area while two species were noted to be "present" near or around the project area.

One species with "high" potential to occur is, the federally listed as threatened and state listed as endangered, marbled murrelet (MAMU). No marbled murrelet detections were made during 2022 and 2023 protocol-level surveys that NCRM conducted on nearby properties, Cape Vizcaino does have some late seral trees and proximity to the ocean that could support nesting MAMUs. Four areas off property and north of Cape Vizcaino have been designated as MAMU habitat stands by CDFW through past NTMP consultations (Figure 4). The closest designated MAMU area is approximately 1.2 miles north of the proposed demolition site. MAMU surveys were conducted on the property in 2014 and 2015 resulting in no detections. MAMUs require old-growth forests with multiple canopy layers and moderate to high canopy closure. These specific characteristics are not present within the demolition footprint.

One species that was given a "present" occupation status that is both federal and state listed as threatened, is the northern spotted owl (*NSO*). Cape Vizcaino has two known northern spotted owl Activity Centers within a 0.7-mile radius around the Property (Figure 4). NCRM has conducted protocol-level (USFWS 2012) NSO surveys on the Property since 2014. In the 2024 survey, two barred owls were observed north of the property near Call Point 3, and no NSOs were detected within the property.

NSOs depend on both foraging and nesting habitats to survive and reproduce successfully. Foraging habitat contains over 40% canopy cover of trees that are 11 inches or greater in diameter and have a basal area that is greater than or equal to 75 square feet per acre of trees (11 inches or greater in diameter). Nesting and roosting habitat has over 60% canopy cover of trees that are greater than or equal to 11 inches in diameter and yet also have a basal area greater than or equal to 100 square feet per acre of trees (11 inches or greater in diameter). NSOs are particularly vulnerable to disturbance during their breeding season,

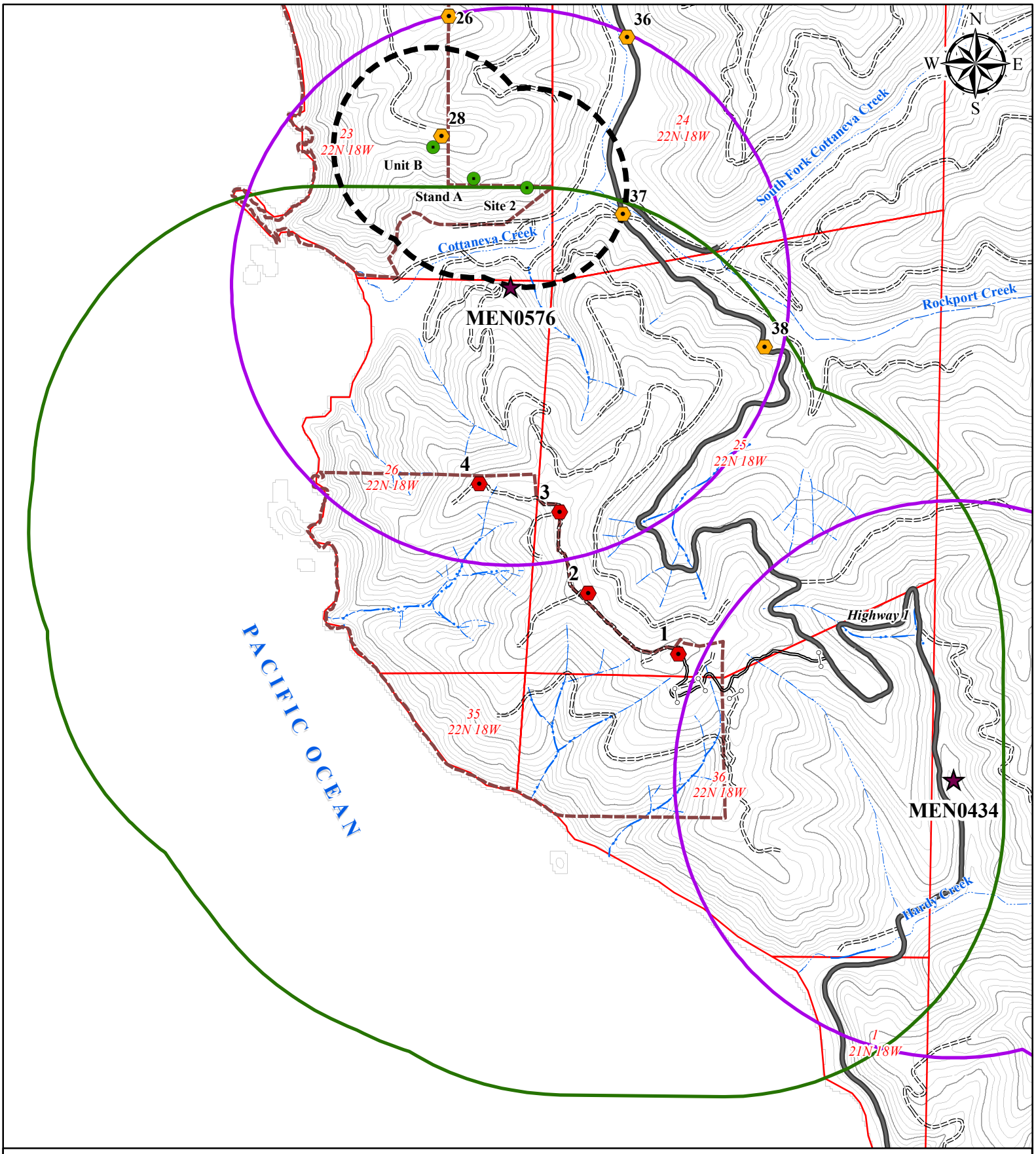


Figure 4. Map of CDFW designated MAMU habitat and the known spotted owl Activity Centers

SRL- Cape Vizciano

Portions of Sections 25, 26, 35 & 36, T22N, R18W, Westport 7.5' USGS

NCRM Inc.

0 0.15 0.3 0.6 Miles

1:20,000/ 1 inch = 1,667 feet

- NSO Activity Center
- Potential MAMU Habitat Stands (Historic)
- NSO Call Points (Cape Viz)
- NSO Call Points (LCR)
- Potential MAMU Habitat Buffer (0.25 Mile)
- NSO AC Buffer (0.7mi)
- Cape Vizcaino Buffer (0.7mi)
- SRL Property Boundary

between February 1 and July 31[1]. NSOs have been documented to occupy nearby forested habitat, but the Project's proposed operations will not alter habitat and potential disturbance would be limited to noise during a short window of time. Following the guidance of USFWS's "*Northern Spotted Owl Survey Protocol, 2012 revision*" (2012; Section 9.0), this project would be categorized as a disturbance-only. Adequate surveys have already been conducted to determine the minimal chance of a noise-based take.

Another raptor species known to be "present", though not nesting on the property, is the osprey (*Pandion haliaetus*), which is designated as a state species of special concern. An established osprey nest is located approximately two miles north of the project area. To avoid impacting this species, proposed mitigation measures ensure that operations will occur outside of the nesting season. Additionally, the project does not propose any disturbance to woody vegetation or trees.

6.3.2 Mammals

Cape Vizcaino is home to numerous terrestrial mammals including mountain lion (*Puma concolor*), black-tailed deer (*Odocoileus hemionus*), racoon (*Procyon lotor*), coyote (*Canus latrans*), gray fox (*Urocyon cinereoargenteus*), dusky-footed woodrat (*Neotoma fuscipes*), western gray squirrel (*Sciurus griseus*), brush rabbit (*Sylvilagus bachmani*), black-tailed jack rabbit (*Lepus californicus*), bobcat *(Lynx rufus*), Roosevelt elk (*Cervus elaphus roosevelti*), and California black bear (*Ursus americanus californiensis*).

The scoping effort resulted in four sensitive mammal species that have potential to occur in the vicinity. Of the four, three have been determined to have a moderate chance of occurring within or adjacent to proposed development areas: Pacific fisher (*Pekania pennanti*), Sonoma tree vole (*Arborimus pomo*), and North American porcupine (*Erethizon dorsatum*).

Due to the Pacific fisher's historical range encompassing the area as well as their preference for coniferous old growth forests, it is determined to have a moderate chance of occurring in the Property. The Pacific fisher is currently listed as a U.S. Forest Service sensitive species and a CDFW SSC due to habitat loss, fragmentation, and other environmental pressures. This elusive member of the weasel family primarily inhabits dense, mature forests with a complex understory and abundant canopy cover. Preferred habitats include mixed coniferous and hardwood forests, often characterized by significant amounts of standing and fallen dead wood, which provide essential denning sites and protection from predators. The nearest known location is approximately 13 miles southeast of the property (CNDDB 2024b).

The Sonoma tree vole is currently listed as an IUCN near threatened species and a CDFW SSC, reflecting its vulnerable status due to habitat loss and fragmentation. This small, arboreal rodent is primarily found in the coastal forests of northern California, where it exhibits a strong preference for old-growth and mature Douglas-fir forests. These forests provide the essential structure and food resources that the voles need, as they spend most of their lives in the canopy, feeding on the needles of Douglas-fir, grand fir (*Abies grandis*), and Sitka spruce (*Picea sitchensis*). TDue to the presence of mature Douglas-fir in the area, there is a moderate chance of Sonoma tree voles occurring. According to CNDDB (2024b), one nest was observed in 1997, one mile east of Highway 1 north of Wages Creek, at the mouth of Jimmy Gulch which is five miles south of the property. The proposed operations will not remove any trees; therefore, the

[1] This is the breeding season for the coast redwood ecotype found in the Coastal District of California.

disturbance would be limited to noise.

According to CNDDB (2024), the last North American porcupine documented to have occurred in the area was in 1959. The existing range within California has been the center of much debate and conflicting data (Appel, et al., 2017). The North American porcupine is not currently listed as a threatened or endangered species; it is considered of least concern by IUCN. This distinctive mammal is highly adaptable and can be found in a variety of habitats across its range, which includes much of the United States, Canada, and northern Mexico. Preferred habitats include mixed forests, coniferous and deciduous woodlands, and shrublands. Porcupines are also known to inhabit areas with ample tree cover, as they rely on trees for food, shelter, and protection from predators. They feed on a variety of vegetation, including leaves, twigs, bark, and evergreen needles, and they sometimes venture into more open habitats in search of food. Porcupines prefer coniferous forests and mixed woodland habitat; therefore, they would have a moderate chance of occurring within the project area.

The Townsend's big-eared bat (*Corynorhinus townsendii*) is currently listed as a CDFW SSC and an IUCN species of least concern, largely due to habitat loss and disturbance of its roosting sites. This species has a "present" status for its chance of occurring around the project area in the abandoned buildings. This bat is highly dependent on specific habitats, primarily favoring caves, old mine shafts, and abandoned buildings for roosting and hibernation. They are also found in a range of forested environments, including deciduous and coniferous forests, as well as arid desert scrub and riparian zones. They prefer habitats that offer ample roosting opportunities and are near open spaces where they can forage for insects. The Townsend's big-eared bat was also determined to have a high chance of occurring in the vicinity. In 2017 and 2018, Townsend's big-eared bats were documented in basal hollows of large trees located on the property. This species typically roosts during the summer when they form maternity colonies that can grow to over 100 individuals (Kunz and Martin 1982). During our survey no bats were observed currently occupying the work site. No scat or sign was discovered which would have been evidence of their previous occupation.

6.3.3 Reptiles and Amphibians

No reptiles or amphibians were documented during the survey. The scoping list from CNDDB includes five amphibian species in the vicinity, but due to the lack of amphibian preferred habitat near the project area, there is an "unlikely" potential for the following SSC to occur: foothill yellow-legged frog (*Rana boylii*) North Coast Distinct Population Segment (DPS) and the Pacific tailed frog (*Ascaphus truei*). Of the remaining species, three have "moderate" potential to occur which include: northern red-legged frog (*Rana aurora*), red-bellied newt (*Taricha rivularis*), and the southern torrent salamander (*Rhyacotriton variegatus*). The closest watercourse to the project area is approximately 950 feet away from the proposed work area and will not be impacted by operations.

The northern red-legged frog is currently listed as a CDFW SSC in various parts of its range, reflecting concerns over habitat loss, degradation, and fragmentation. This amphibian is typically found inhabiting moist, forested areas, particularly those with abundant vegetation and still or slow-moving water bodies such as ponds, marshes, and streams. They prefer habitats with dense riparian cover, which provides essential shelter and breeding sites. The presence of clean, freshwater ecosystems is crucial for their survival, as they rely on these environments for laying eggs and the development of tadpoles. The nearest reported location is over 1.5-miles from the project area. Although the project is not expected to impact bodies of water, this

species is known to range more than 650 feet beyond aquatic environments, resulting in a "moderate" possibility of occurrence and some potential for impact

The red-bellied newt is currently listed as a CDFW SSC due to habitat loss, water pollution, and the impacts of climate change. This striking amphibian is endemic to the coastal regions of northern California, where it prefers moist, forested environments, particularly those in proximity to clean, fast-flowing streams. These streams are crucial for their breeding and larval development, while the surrounding forest provides shelter and feeding grounds. The red-bellied newt relies on a combination of aquatic and terrestrial habitats, migrating between them seasonally. Although the project is not expected to impact bodies of water, this species is known to range beyond aquatic environments, resulting in a "moderate" possibility of occurrence, and therefore some potential to impact individuals. The nearest known occurrence is approximately 2.2 miles from the property.

The southern torrent salamander is currently listed as a CDFW SSC to its limited range and the ongoing threats of habitat loss and degradation. This small, semi-aquatic salamander is endemic to the coastal forests of northern California and southern Oregon. It prefers cold, clear, fast-flowing streams and seepages in old-growth and mature second-growth coniferous forests. These pristine aquatic habitats, often characterized by a dense canopy cover and minimal sedimentation, are crucial for their survival as they provide essential breeding and foraging grounds. Although the project is not expected to impact bodies of water, this species is known to range beyond aquatic environments, resulting in a "moderate" possibility of occurrence. CNDDB (2024b) has identified southern torrent salamanders approximately 220 feet north of the project site.

6.3.4 Fish

The Property is located within the Northern California/Southern Oregon Coast Evolutionary Significant Unit (ESU) for coho salmon and the Northern California ESU for steelhead. These ESUs are listed as endangered and threatened under both the ESA and the CESA. Cottoneva Creek, which runs about a mile north of the barrack, across Highway 1, is considered Critical Habitat for both species by the National Marine Fisheries Service (NMFS 2009) and USFWS (1997). There are intermittent streams located on the Property, which are not suitable fish habitat and are not located near the project area; therefore, it was determined that no sensitive fish species would occur within the demolition footprint.

6.3.5 Invertebrates

The two mollusk species identified on our scoping list are the California floater (*Anodonta californiensis*) and western pearlshell (*Margaritifera falcata*), both are not expected to occur within the work site due to a lack of available habitat. Potential habitat for mollusk species on the scoping list included only in large streams, which are not present near the project area.

Of the four insect species on the scoping list, there is a moderate chance that three could occupy the demolition footprint. Crotch bumble bee (*Bombus crotchii*), obscure bumble bee (*Bombus caliginosus*), and the western bubble bee (*Bombus occidentalis*) all prefer grasslands and open prairies. Because there is a small meadow adjacent to the worksite which would meet some of the habitat needs for these species, along with an overlap of the species historic range, there is a moderate chance of occurring near the worksite.

7.0 Discussion

7.1 Potential Impacts

The only SSC plant observed in the project area was the redwood lily. CRPR 4 plant taxa are of limited distribution throughout California and their vulnerability or susceptibility to threat typically appears low. This species also has a Global and State Rank of G3/S3. S3 rank plants are considered vulnerable and at moderate risk of extirpation due to a fairly restricted range, relatively few populations or occurrences, recent and widespread declines, threats, or other factors. Because direct impacts would likely be imposed on these individuals during project activities mitigations are recommended below.

Based on the proposed limited scope of work, we do not foresee any significant impacts to sensitive wildlife species from the Project. Very little work will occur outside of the existing footprints, such that the only biological resources that could be impacted, are terrestrial wildlife species that may move into the demolition area during the limited work period, which would include roosting bats, migrating amphibians, or nesting birds within or immediately adjacent to the proposed development areas.

The project site has been identified as being within a Sensitive Natural Community, classifying it as an ESHA, see Figure 2. In addition to the Coastal Commission definition of ESHA as stated earlier in this document, Mendocino County Code Section 20.496.010 ESHAs include: anadromous fish streams, sand dunes, rookeries and marine mammal haul-out areas, wetlands, riparian areas, areas of pygmy vegetation which contain species of rare or endangered plants and habitats of rare and endangered plants and animals. Consequently, this project will result in the temporary disturbance of an ESHA. Given that the project is well within an ESHA the development would comply with the standards outlined in Section 20.496.020(A)(4) and go as follows:

Compatibility with Adjacent Habitat Areas (Standard a & d): The demolition will allow vegetation to reclaim the area, expanding the potential for natural habitat. The electrical upgrades will comply with the continuance of adjacent habitat as it will remain below the surface and will interface less with adjacent habitat.

Site Feasibility and Buffer Area (Standard b & e): The location of the demolition is fixed. The location for the electrical burial has been proposed by a licensed contractor, and the location has been identified as the most feasible option. PG&E will assess the proposed location to ensure it meets safety standards. No riparian vegetation loss is proposed.

Site Design and Impact Prevention (Standard c): The project will not degrade adjacent habitat areas, as access to the site has been established for multiple decades. No road building, major excavation, or tree removal is proposed. Access to the site will be on compacted soil with some rock surfacing. The demolition site is on a relatively flat building pad, minimizing runoff. The site does not have drainages that are hydrologically connected to natural streams.

Minimization of Development Impacts (Standard f): The project is expected to create approximately 1,210 square feet of pervious surface by removing the barrack structure. Existing footprints and roadways will be flagged, and construction vehicles will operate only within these designated areas to limit vegetation disturbance. Noise reduction measures will be implemented, and misting or watering will be used to control dust during removal. Demolition and electrical

upgrades will be performed during daylight hours, minimizing the need for artificial lighting. Best practices for erosion and sediment control will be implemented before the rainy season, along with revegetation efforts. A certified hazardous material abatement company will be retained to limit air pollution. Wetland intrusion is not anticipated, and the project will not remove trees or significantly alter natural landforms.

Riparian Vegetation Replacement (Standard g): The nearest stream is located approximately 950 feet from the project area. No loss of riparian vegetation will occur.

Hydrological Capacity and Structures (Standard h): No culverts, bridges, or other in-stream structures that could obstruct water flow are proposed as part of the project.

Protection of Hydraulic Capacity and Biological Diversity (Standard i): The project will not alter natural drainage patterns.

Drainage Conveyance Priority (Standard j): Natural stream environmental zones are not present within the project area.

Mitigation for Significant Adverse Impacts (Standard k): The project is not expected to have permanent or significant adverse impacts within the ESHA. The removal of the structure will eliminate artificial and unintended wildlife habitat, ultimately allowing for revegetation and the further expansion of the redwood forest. Mitigation measures for anticipated temporary impacts are detailed in Section 8.0.

8.0 Recommendations and Mitigations

Potential impacts to plant and wildlife species are primarily limited to short-term effects within the existing worksite footprint around the structure slated for removal. Except for the redwood lilies, it is unlikely that any other sensitive or Species of Special Concern (SSC) will be impacted by the project.

To mitigate impacts to redwood lilies within the project footprint, we recommend the following avoidance recommendations:

- Redwood lilies should be transplanted from the project site prior to demolition activities.
    - Redwood lilies will be transplanted during their dormant season, typically in late summer to early fall after the flowering period but before the first frost.
    - When digging up bulbs as much of the root system will remain intact as possible and they will be handled with care to avoid bruising.
    - The new location will closely mmargettatch the lilies' natural habitat with well-drained soil, partial shade, and a site that receives filtered sunlight. Areas with heavy clay or overly moist conditions will be avoided.
    - Place the bulbs in the prepared holes at the same depth they were growing before.
    - Space the bulbs adequately to allow for growth, usually about 12-18 inches apart.

To mitigate excessive impacts to all surrounding vegetation, we recommend the following avoidance and minimization recommendations:

- All construction vehicles utilize only existing footprints or roadways. Existing footprint and the roadway will be flagged to mark their limits, and all construction vehicles operate only within these designated areas.
- Maximize the preservation of existing vegetation by marking project area boundaries and any protected areas.
- Instruct employees and subcontractors to honor project boundaries and prohibit access of heavy equipment, vehicular traffic or storage of construction materials withing the protected areas.
- A qualified biologist shall be present during all activities including vegetation removal, electric line installation, and demolition operations to monitor to confirm species are not present and/or to relocate them out of the work area including amphibian SSC.

In addition to vegetation protection, the following measures are recommended:

- If operations occur during the nesting bird season (February 15th -August 15th), a nesting bird survey should take place at the work site before construction activities.
- Demolition activities will occur outside of the NSO breeding season (after July 31 and before February 15).
- Bat mitigation plan:
    - Demolition will be conducted outside of pupping season (June-August).
    - Demolition will occur during daylight hours to limit construction noise and artificial light.
    - Demolition will be incremental with disassembling small portions of the roof structure first. This will create a disturbance and an undesirable roost site, allowing any roosting bats to vacate the premises prior to the complete demolition of the structure.
    - Prior to demolition of the structure, a bat survey shall be conducted by a qualified biologist. The bat survey will involve surveying the structure for evidence of bat use (guano accumulation, ammonia odor, grease-stained cavities). If an active roost site is found, the biologist will conduct acoustic surveys using an acoustic detector to determine whether a site is occupied. All positive results will be submitted to the Mendocino County Department of Planning & Building Services and CDFW to determine if the proposed bat mitigation plan will adequately avoid impacts to bats. If evidence of bat use is not found, then the work will proceed.
    - If an active pupping colony is observed, a 100-foot exclusion zone shall be established around the roost site. Demolition and/or ground disturbance shall not occur within the exclusion zone until all young are no longer dependent upon the roost. If no dependent pups are present, bats will be gently flushed out from the structures prior to demolition, incentivizing relocation.
    - Previously installed bat boxes have been removed at the request of CDFW, and three cedar bat boxes have been installed. One three-chamber box measuring 3.5 x 15.5 x 22 inches and two two-chamber 15.1 x 9.4 x 3.2-inch boxes, have been installed throughout the property. The boxes are mounted on 15-20 foot posts and equipped with squirrel guards. See Figure 5 for the bat box installation locations.
- Amphibian mitigation measures:
    - Pre-construction surveys for amphibians should take place immediately before disturbance.
    - A qualified biologist, who is onsite to monitor species during construction activities,

shall relocate individuals found within the project footprint to suitable, nearby habitats.

- Sediment and erosion control measures will be implemented to prevent runoff and sedimentation into nearby water bodies where these species may reside or breed.

Figure #5

SAVE THE REDWOODS LEAGUE
CAPE VIZCAINO
Demolition/Electrical Relocation
Bat Boxes
Portions of the
WESTPORT
USGS 7.5' Quadrangle

N
W E
S

0 25 50 100 Feet

900
920
940
960
980
1000

P

- Bat Boxes
- Property Boundary
- Structures

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Appendix A. Special-Status Plant Species and Communities with Potential for Occurrence

Scientific Name **Common Name**	**Fed List**	**State List**	**Global Rank**	**State Rank**	**CA Rare Plant Rank**	**Associated Habitat**	**Blooming Period**	**Likelihood of Occurrence**
Abronia umbellata subsp. *breviflora* pink sand-verbena	None	None	G4G5 T2	S2	1B.1	Coastal dunes. 0-10 meters in elevation.	Jun-Oct	None
Agrostis blasdalei Blasdale's bent grass	None	None	G2G3	S2	1B.2	Coastal bluff scrub, Coastal dunes, Coastal prairie. 0-150 meters in elevation.	May-Jul	None
Arctostaphylos stanfordiana subsp. *raichei* Raiche's manzanita	None	None	G3T2	S2	1B.1	Chaparral, Lower montane coniferous forest (openings). Rocky, Serpentinite (often). 450-1035 meters in elevation.	Feb-Apr	None
Astragalus agnicidus Humboldt County milk-vetch	None	Endangered	G2	S2	1B.1	Broadleafed upland forest, North Coast coniferous forest. Disturbed areas, openings, roadsides (sometimes). 120-800 meters in elevation.	Apr-Sep	High
Astragalus rattanii subsp. *rattanii* Rattan's milk-vetch	None	None	G4T4	S4	4.3	Chaparral, Cismontane woodland, Lower montane coniferous forest. Gravelly, Streambanks. 30-825 meters in elevation.	Apr-Jul	None
Calamagrostis bolanderi Bolander's reed grass	None	None	G4	S4	4.2	Bogs and fens, broadleafed upland forest, Closed-cone coniferous forest, Coastal scrub, Marshes and swamps (freshwater), Meadows and seeps (mesic), North Coast coniferous forest. Mesic. 0-455 meters in elevation.	May-Aug	Unlikely
Calamagrostis foliosa leafy reed grass	None	Rare	G3	S3	4.2	Coastal bluff scrub, North Coast coniferous forest. Rocky. 0-1220 meters in elevation.	May-Sep	Unlikely
Cardamine angulata seaside bittercress	None	None	G4G5	S3	2B.2	Lower montane coniferous forest, North Coast coniferous forest. wet areas. Streambanks. 15-915 meters in elevation.	(Jan) Mar-Jul	Unlikely

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Castilleja litoralis Oregon coast paintbrush	None	None	G3	S3	2B.2	Coastal bluff scrub, Coastal dunes, Coastal scrub. Sandy. 15-100 meters in elevation.	Jun	None
Castilleja mendocinensis Mendocino Coast paintbrush	None	None	G2	S2	1B.2	Closed-cone coniferous forest, Coastal bluff scrub, Coastal dunes, Coastal prairie, Coastal scrub. 0-160 meters in elevation.	Apr-Aug	None
Ceanothus foliosus subsp. *vineatus* Vine Hill ceanothus	None	None	G3T1	S1	1B.1	Chaparral. 45-305 meters in elevation.	Mar-May	None
Ceanothus gloriosus subsp. *exaltatus* glory brush	None	None	G4T4	S4	4.3	Chaparral. 30-610 meters in elevation.	Mar-Jun (Aug)	None
Clarkia amoena subsp. *whitneyi* Whitney's farewell-to-spring	None	None	G5T1	S1	1B.1	Coastal bluff scrub, Coastal scrub. 10-100 meters in elevation.	Jun-Aug	None
Coptis laciniata Oregon goldthread	None	None	G4?	S3?	4.2	Meadows and seeps, North Coast coniferous forest (streambanks). Mesic. 0-1000 meters in elevation.	(Feb) Mar-May (Sep-Nov)	Unlikely
Epilobium septentrionale Humboldt County fuchsia	None	None	G4	S4	4.3	Broadleafed upland forest, North Coast coniferous forest. Rocky (sometimes), Sandy (sometimes). 45-1800 meters in elevation.	Jul-Sep	Unlikely
Erigeron biolettii streamside daisy	None	None	G3?	S3?	3	Broadleafed upland forest, Cismontane woodland, North Coast coniferous forest. Mesic, Rocky. 30-1100 meters in elevation.	Jun-Oct	Unlikely
Eriogonum kelloggii Kellogg's buckwheat	None	Endangered	G2	S2	1B.2	Lower montane coniferous forest (rocky, serpentinite). 579-1250 meters in elevation.	(May) Jun-Aug	None

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Erysimum concinnum bluff wallflower	None	None	G3	S2	1B.2	Coastal bluff scrub, Coastal dunes, Coastal prairie. 0-185 meters in elevation.	Feb-Jul	None
Erythronium revolutum coast fawn lily	None	None	G4G5	S3	2B.2	Bogs and fens, Broadleafed upland forest, North Coast coniferous forest. Mesic, Streambanks. 0-1600 meters in elevation.	Mar-Jul (Aug)	None
Gilia capitata subsp. *pacifica* Pacific gilia	None	None	G5T3	S2	1B.2	Chaparral (openings), Coastal bluff scrub, Coastal prairie, Valley and foothill grassland. 5-1665 meters in elevation.	Apr-Aug	None
Hemizonia congesta subsp. *tracyi* Tracy's tarplant	None	None	G5T4	S4	4.3	Coastal prairie, Lower montane coniferous forest, North Coast coniferous forest. Openings, Serpentinite (sometimes). 120-1200 meters in elevation.	(Mar-Apr) May-Oct	None
Hesperocyparis pygmaea pygmy cypress	None	None	G1	S1	1B.2	Closed-cone coniferous forest (usually podzol-like soil). 30-600 meters in elevation.	NA	None
Horkelia marinensis Point Reyes horkelia	None	None	G2	S2	1B.2	Coastal dunes, Coastal prairie, Coastal scrub. Sandy. 5-755 meters in elevation.	May-Sep	None
Hosackia gracilis harlequin lotus	None	None	G3G4	S3	4.2	Broadleafed upland forest, Cismontane woodland, Closed-cone coniferous forest, Coastal bluff scrub, Coastal prairie, Coastal scrub, Marshes and swamps, Meadows and seeps, North Coast coniferous forest, Valley and foothill grassland. wetlands. Roadsides. 0-700 meters in elevation.	Mar-Jul	Unlikely
Kopsiopsis hookeri small groundcone	None	None	G4?	S1S2	2B.3	North Coast coniferous forest. 90-885 meters in elevation.	Apr-Aug	Moderate

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Lathyrus glandulosus sticky pea	None	None	G3	S3	4.3	Cismontane woodland. 300-800 meters in elevation.	Apr-Jun	Unlikely
Leptosiphon latisectus broad-lobed leptosiphon	None	None	G4	S4	4.3	Broadleafed upland forest, Cismontane woodland. 170-1500 meters in elevation.	Apr-Jun	Moderate
Lilium rubescens redwood lily	None	None	G3	S3	4.2	Broadleafed upland forest, Chaparral, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest. Roadsides (sometimes), Serpentinite (sometimes). 30-1910 meters in elevation.	(Mar) Apr-Aug (Sep)	High
Listera cordata heart-leaved twayblade	None	None	G5	S4	4.2	Bogs and fens, Lower montane coniferous forest, North Coast coniferous forest. 5-1370 meters in elevation.	Feb-Jul	High
Micranthes marshallii Marshall's saxifrage	None	None	G5	S3	4.3	Riparian forest. Rocky, Streambanks. 90-2130 meters in elevation.	Mar-Aug	None
Mitellastra caulescens leafy-stemmed mitrewort	None	None	G5	S4	4.2	Broadleafed upland forest, Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest. Mesic, Roadsides (sometimes). 5-1700 meters in elevation.	(Mar) Apr-Oct	None
North Central Coast Fall-Run Steelhead Stream	None	None	GNR	SNR	NA	Inland Waters.	NA	None
Piperia candida white-flowered rein orchid	None	None	G3?	S3	1B.2	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest. Serpentinite (sometimes). 30-1310 meters in elevation.	(Mar-Apr) May-Sep	High
Pityopus californicus California pinefoot	None	None	G4G5	S4	4.2	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest. Mesic. 15-2225 meters in elevation.	(Mar-Apr) May-Aug	Unlikely

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Pleuropogon refractus nodding semaphore grass	None	None	G4	S4	4.2	Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest, Riparian forest. Mesic. 0-1600 meters in elevation.	(Feb-Mar) Apr-Aug	Unlikely
Sedum eastwoodiae Red Mountain stonecrop	None	None	G5T2	S2	1B.2	Lower montane coniferous forest (serpentinite). 600-1200 meters in elevation.	May-Jul	None
Sidalcea malachroides maple-leaved checkerbloom	None	None	G3	S3	4.2	Broadleafed upland forest, Coastal prairie, Coastal scrub, North Coast coniferous forest, Riparian woodland. Disturbed areas (often). 0-730 meters in elevation.	(Mar) Apr-Aug	Unlikely
Silene bolanderi Bolander's catchfly	None	None	G2	S2	1B.2	Chaparral (edges), Cismontane woodland, Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest. Usually grassy openings, sometimes dry rocky slopes, canyons, or roadsides. Openings (usually), Roadsides (sometimes), Rocky (sometimes), Serpentinite (sometimes). 420-1150 meters in elevation.	May-Jun	None
Silene greenei subsp. *angustifolia* Red Mountain catchfly	None	Endangered	G5T1	S1	1B.2	Chaparral, Lower montane coniferous forest. Peridotite. Rocky, Serpentinite (usually). 425-2085 meters in elevation.	May-Jun	None
Thermopsis robusta robust false lupine	None	None	G2	S2	1B.2	Broadleafed upland forest, North Coast coniferous forest. 150-1500 meters in elevation.	May-Jul	Moderate
Usnea longissima Methuselah's beard lichen	None	None	G4	S4	4.2	Broadleafed upland forest, North Coast coniferous forest. On tree branches; usually on old growth hardwoods and conifers. 50-1460 meters in elevation.	NA	High

Appendix A. Special-Status Plant Species and Communities with Potential for Occurrence

Viburnum ellipticum oval-leaved viburnum	None	None	G4G5	S3?	2B.3	Chaparral, Cismontane woodland, Lower montane coniferous forest. 215-1400 meters in elevation.	May-Jun	None

Plants addressed in the rare plant assessment are cataloged on the following lists:

a) Species listed or proposed for listing as threatened or endangered under the FESA
b) Species that are candidates for possible future listing as threatened or endangered under the FESA
c) Species listed or proposed for listing by the State of California as threatened or endangered under the CESA
d) CNPS list 1A species (plants presumed extinct in California)
e) CNPS list 1B (plants rare, threatened, or endangered in California)
f) CNPS list 2 species (plants rare, threatened, or endangered in California but more common elsewhere)
g) CNPS list 3 and list 4 species (plants with limited distribution, more information needed, on review list); plants that are not on a specific list but have recognized regional or local interests and qualify for protection.

The CNPS New Threat Code extensions and their meanings:

The classification system created by the CNPS helps distinguish between rarity, endangerment, and distribution:

.1 – Seriously endangered in California
.2 – Fairly endangered in California
.3 – Not very endangered in California

Global Ranking

The Global rank (G-rank) reflects the overall condition of a plant species or community throughout its global range.

Species or Community Level

G1 – Less than 6 viable element occurrences (Eos) OR less than 1,000 individuals OR less than 2,000 acres
G2 – 6-20 Eos OR 1,000-3,000 individuals OR 2,000-10,000 acres
G3 – 21-80 Eos OR 3,000-10,000 individuals OR 10,000-50,000 acres
G4 – Apparently secure; this rank is lower than G3, but factors exist to cause some concern (i.e., there is some threat or somewhat rare habitat)
G5 – Population or stand demonstrably secure to ineradicable due to being commonly found in the world.

Subspecies Level

Subspecies receive a T-rank attached to the G-rank. With the subspecies, the G-rank reflects the condition of the entire species, whereas the T-rank reflects the global situation of the subspecies or variety.

State Ranking

The state rank (S-rank) is assigned much the same way as the global rank, except state ranks in California often also contain a threat designation attached to the S-rank:

S1 – Less than 6 Eos OR less than 1,000 individuals OR less than 2,000 acres
S1.1 – very threatened
S1.2 – threatened
S1.3 – No current threats known
S2 – 6-20 Eos OR 1,000-3,000 individuals OR 2,000-10,000 acres
S2.1 – very threatened
S2.2 – threatened
S2.3 – No current threats known
S3 – 21-80 Eos or 3,000-10,000 individuals OR 10,000-50,000 acres
S3.1 – very threatened
S3.2 – threatened
S3.3 – No current threats known
S4 – Apparently secure within California; this rank is lower than S3 but factors exist to cause some concern (i.e., there is some threat or somewhat rare habitat)
S5 = Demonstrably secure to ineradicable in California. NO THREAT RANK.

Appendix B. Special-Status Wildlife with Potential for Occurrence.

COMMON NAME	*SCIENTIFIC NAME*	STATUS	BREEDING SEASON	HABITATS	GENERAL HABITAT	MICROHABITAT	RANGE	POTENTIAL TO OCCUR
Amphibians								
Foothill yellow-legged frog – north coast DPS	*Rana boylii* pop. 1	G3TNRQ, S4 – BLM | CSSC | USFS	Mating & egg-laying in streams & rivers (not ponds or lakes), April-early July, after streams slow from winter runoff.	Aquatic | Klamath/North coast flowing waters | Riparian forest | Riparian scrub | Riparian woodland	Partly shaded shallow streams and riffles with a rocky substrate in a variety of habitats.	Needs at least some cobble-sized substrate for egg-laying and at least 15 weeks to attain metamorphosis.	North Coast Ranges of the SF Bay Estuary, Klamath Mtns., and Cascade Range. Includes watershed subbasins Lower Pit, Battle Cr., Thomes Cr., and Big Chico Cr. In Lassen, Shasta, Tehama, and Butte counties.	Unlikely, due to the closest documented sighting was 150-miles from the Property.
Northern red-legged frog	*Rana aurora*	G4, S3 – CSSC | ILC | USFS	December-March. Eggs hatch after about four weeks.	Klamath/North coast flowing waters | Riparian forest | Riparian woodland	Humid forests, woodlands, grasslands, and streamside in northwestern California, usually near dense riparian cover.	Generally near permanent water, but can be found far from water, in damp woods and meadows, during non-breeding season.	Mendocino Co. north along the west coast through WA.	Moderate, due to the lack of riparian areas near the worksite. The closest documented sighting was 1.7-miles from the Property.
Pacific tailed frog	*Ascaphus truei*	G4, S3S4 – CSSC | ILC	Most breeding occurs in early fall (reported May-Oct.); breed in stream they inhabit. Eggs laid in spring/summer after spring runoff.	Aquatic | Klamath/ North coast flowing waters | Lower montane coniferous forest | North coast coniferous forest | Redwood | Riparian forest	Occurs in montane hardwood-conifer, redwood, Douglas-fir, and ponderosa pine habitats.	Restricted to perennial montane streams. Tadpoles require water below 15°C.	Known only from Del Norte, Siskiyou, Humboldt, Trinity, Shasta, Tehama, & Mendocino counties.	Unlikely, due to the lack of fast-moving streams near the worksite. The closest documented sighting was 1-mile from the Property.
Red-bellied newt	*Taricha rivularis*	G2, S2 – CSSC | ILC	Breeding takes place from late February to May, peaking in March.	Broadleaved upland forest | North coast coniferous forest |	Coastal drainages. Will migrate over 1 km to breed,	Terrestrial habitats, juveniles generally underground, adults active at surface in moist environments.	Humboldt Co. south to Sonoma Co., inland to Lake Co. Isolated pop. Of	Moderate, due to the lack of streams near the worksite, but an abundance of moist terrestrial habitats. The closest

COMMON NAME	*SCIENTIFIC NAME*	STATUS	BREEDING SEASON	HABITATS	GENERAL HABITAT	MICROHABITAT	RANGE	POTENTIAL TO OCCUR
				Redwood | Riparian forest | Riparian woodland	typically in streams with moderate flow and clean, rocky substrate.		uncertain origin in Santa Clara Co.	documented sighting was 2.2-miles from the Property.
Southern torrent salamander	*Rhyacotriton variegatus*	G3G4, S2S3 – CSSC | ILC | USFS	Egg laying occurs in late spring and early summer.	Lower montane coniferous forest | Old growth | Redwood | Riparian forest	Coastal redwood, Douglas-fir, mixed conifer, montane riparian, and montane hardwood-conifer habitats. Old growth forest.	Cold, well-shaded, permanent streams and seepages, or within splash zone or on moss-covered rocks within trickling water.	Point Arena north to OR border.	Moderate, due to the lack of streams near the worksite, but an abundance of moist terrestrial habitats. The closest documented sighting was 300 feet from the project worksite.
Birds								
Northern goshawk	*Accipiter gentilis*	G5, S3 – BLM | CDF | CSSC | ILC | USFS	Nests typically in densest part of a stand; in trees greater than 12-in. diameter and nest generally built below the canopy in fork of large branch.	North coast coniferous forest | Subalpine coniferous forest | Upper montane coniferous forest	Within, and in vicinity of, coniferous forest. Uses old nests and maintains alternate sites.	Usually nests on north slopes, near water. Red fir, lodgepole pine, Jeffrey pine, and aspens are typical nest trees.	Year-round resident on northern 1/3 of CA.	Unlikely, due to the Property being considered part of the species non-breeding range. The closest documented sighting was over 150-miles from the Property.
Osprey	*Pandion haliaetus*	G5, S4 – CDF | CWL | ILC	Most are migratory, breeding starts in March and migrate south for the winter.	Riparian forest | Ocean shore, bays, freshwater lakes, and larger streams.	Associated strictly with large, fish-bearing waters, including rivers, lakes, bays, estuaries, and surf zones, primarily in ponderosa	Large nests built in treetops within 15 miles of a good fish-producing body of water.	Statewide.	Present, due to an active nest located about 2.8 miles away from the Property.

COMMON NAME	*SCIENTIFIC NAME*	STATUS	BREEDING SEASON	HABITATS	GENERAL HABITAT	MICROHABITAT	RANGE	POTENTIAL TO OCCUR
					pine through mixed conifer habitats. Preys mostly on fish.			
Northern spotted owl	*Strix occidentalis caurina*	FT | CT | CSSC | BLM | CDF | USFS	February-August.	Mature multi-layered mixed conifer, redwood and Douglas-fir forests with a permanent water source and suitable nesting sites.	Nests in cavities or broken tops of large trees or snags. A pair may use the same breeding site for 5 to 10 years, although not breed every year.	Prefer narrow, steep canyons with north-facing slopes.	Northern CA to WA.	Present, due to the documented Activity Center locations nearest to the Property (MEN0576 and MEN0434) are roughly 0.5-miles away.
Marbled murrelet	*Brachyramphus marmoratus*	G3, S2 - CDF | IUCN | NRWL | FT | CE	Eggs laid from mid-May to mid-June. Incubation from mid-June to mid-Aug. and lasts 30 days. Young fledge early July-early Sept.	Lower montane coniferous forest | Old growth | Redwood	Feeds near-shore; nests inland along coast from Eureka to OR border and from Half Moon Bay to Santa Cruz.	Nests in old-growth redwood-dominated forests, up to six miles inland, often in Douglas-fir.	Northern CA coast.	High, due to the designated MAMU habitat located about 0.45-miles away from the Property.
Western snowy plover	*Charadrius nivosus nivosus*	G3T3, S3 – CSSC | NRWL | FT	March 1 – September 30.	Great Basin standing waters | Sand shore | Wetland	Sandy beaches, salt pond levees and shores of large alkali lakes.	Needs sandy, gravelly, or friable soils for nesting.	Extends from Damon Point, WA to Baja California, MX.	None, due to the absence of habitat. The closest documented sighting was about 15-miles from the Property.
Fish								

COMMON NAME	*SCIENTIFIC NAME*	STATUS	BREEDING SEASON	HABITATS	GENERAL HABITAT	MICROHABITAT	RANGE	POTENTIAL TO OCCUR
Coho salmon – central California coast ESU	*Oncorhynchus kisutch* pop. 4	G5T2Q, S2 – AED | FE | CE	Adults enter fresh water from Nov.- Jan. to spawn. In the short coastal streams of CA, migration usually begins between mid-Nov.- mid-Jan.	Aquatic | Coastal watershed Streams	Relatively slow-moving water with fine gravel. In the ocean they tend to live closer to shores than in the open ocean.	Require beds of loose, silt-free, coarse gravel for spawning. Also need cover, cool water and sufficient dissolved oxygen.	Federally listed populations occur between Punta Gorda and San Lorenzo River. State listed populations occur south of Punta Gorda.	None, due to the absence of habitat. The closest documented sighting was about 7-miles from the Property.
Steelhead-northern California DPS summer-run	*Oncorhynchus mykiss irideus,* pop.48	G5TNRQ, S2, FT, SE, ATH	Return to freshwaters between May and October.	Aquatic | North Coast flowing waters	Migrating adults require a 7-inch depth minimum for migration. Water velocities of 10-13 ft/s begin to hinder the swimming ability of adult steelhead. Optimum temperature requirements fall in the range of 39 to 52°F.	Cool, swift, shallow water and clean loose gravel for spawning, and suitably large pools in which to spend the summer.	Mattole River, Eel River, Trinity River, Mad River, Redwood Creek, Klamath River, Smith River, Salmon River, and Scott River.	None, due to the absence of habitat. The closest documented sighting was about 5-miles from the Property.
Steelhead-northern California DPS winter-run	*Oncorhynchus mykiss irideus,* pop.49	G5TNRQ, S3, FT, ATH	Return to freshwaters between November and April.	Aquatic | Klamath/North coast flowing waters | Sacramento/San Joaquin flowing waters	Migrating adults require a 7-inch depth minimum for migration. Water velocities of 10-13 ft/s begin to hinder the	Cool, swift, shallow water and clean loose gravel for spawning, and suitably large pools in which to spend the summer.	NC winter steelhead DPS includes all naturally spawning populations in California coastal river basins below upstream barriers to migration from Redwood Creek (Humboldt Co.) to	None, due to the absence of habitat. The closest documented sighting was about 0.4-miles from the Property.

COMMON NAME	*SCIENTIFIC NAME*	STATUS	BREEDING SEASON	HABITATS	GENERAL HABITAT	MICROHABITAT	RANGE	POTENTIAL TO OCCUR
					swimming ability of adult steelhead. Optimum temperature requirements fall in the range of 39 to 52°F.		just south of the Gualala River (Mendocino Co.)	
Insects								
Crotch bumble bee	*Bombus crotchii*	G2, S1S2 – IUCN	Queen bees are active from March until May.	Grasslands | Shrublands	Pacific Coast, Western Desert, and adjacent foothills throughout most of California's southwestern region.	Food plant genera include *Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia,* and *Eriogonum*.	Coastal CA east to the Sierra-Cascade crest and south into MX.	Moderate, due to some small grassland areas near the project worksite. The closest documented sighting was about 8-miles from the Property.
Obscure bumble bee	*Bombus caliginosus*	G2G3, S1S2 – IVU	Active February-November.	Open grassy coastal prairies and coast range meadows.	Coastal areas.	Food plant genera include *Baccharis, Cirsium, Lupinus, Lotus, Grindelia,* and *Phacelia.*	Santa Barbara Co. north to WA, with scattered records from the east side of the Central Valley.	Moderate, due to some coastal range meadows existing on the Property. The closest documented sighting was detection on the Property in 1959. There has not been a detection within 50 miles of the Property since 1990.
Western bumble bee	*Bombus occidentalis*	G2G3, S1 – IVU | USFS	Active from February to November.	Found in a range of habitats.	Mixed woodlands, farmlands, urban areas, montane meadows and into the western edge of the prairie grasslands.	Once common and widespread, species has declined precipitously, perhaps from disease.	Central CA to southern B.C.	Moderate, due to suitable habitat located on the Property. The closest documented sighting was about 8-miles from the Property. There has not been a detection within 50 miles of the Property since 1984.

COMMON NAME	*SCIENTIFIC NAME*	STATUS	BREEDING SEASON	HABITATS	GENERAL HABITAT	MICROHABITAT	RANGE	POTENTIAL TO OCCUR
Monarch butterfly – California overwintering population	*Danaus plexippus plexippus* pop. 1	G4T1T2, S2 – IUCN | USFS | FC	Temperature increases at the over-wintering sites in the spring, signaling individuals to breed and lay eggs on milkweed throughout the migration. The following generations breed and lay eggs throughout the summer.	Closed-cone coniferous forest	Winter roost sites extend along the coast from northern Mendocino Co. to Baja California, MX.	Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.	Monarchs are native to North and South America but have since spread to many other locations where milkweed and suitable temperatures exist, including Australia, New Zealand and portions of the Iberian Peninsula.	Unlikely, due to the closest documented sighting was about 65-miles from the Property.
Mammals								
Pacific fisher	*Pekania pennanti*	G5, S2S3 – BLM | CSSC | ILC | USFS	Reproduction peaks in late March, and breeding may occur as late as May.	North coast coniferous forest | Old growth | Riparian forest	Intermediate to large-tree stages of coniferous forests and deciduous-riparian areas with high percent canopy closure.	Uses cavities, snags, logs and rocky areas for cover and denning. Needs large areas of mature, dense forest.	Northern Coastal Range, Klamath Mtns, southern Cascades, and Sierra Nevada mtn. ranges.	Moderate due to suitable habitat located on the Property. The closest documented sighting was about 8-miles from the Property.
North American porcupine	*Erethizon dorsatum*	G5, S3 – ILC	Breeding occurs in fall and early winter with young born in the spring/early summer	Broadleaved upland forest | Cismontane woodland | Closed-cone coniferous forest | Lower montane coniferous	Forested habitats.	Wide variety of coniferous and mixed woodland habitat.	Canada to northern MX.	Moderate, due to suitable habitat located on the Property. The closest documented sighting was about 10-miles from the Property, in 1959. The closest modern detection was about 26-miles from the Property in 2014.

COMMON NAME	*SCIENTIFIC NAME*	STATUS	BREEDING SEASON	HABITATS	GENERAL HABITAT	MICROHABITAT	RANGE	POTENTIAL TO OCCUR
				forest | North coast coniferous forest | Upper montane coniferous forest				
Sonoma tree vole	*Arborimus pomo*	G3, S3 – CSSC | INT	Breeds year-round, but mostly from February - September.	North coast coniferous forest | Old growth | Redwood	North coast fog belt fin Douglas-fir, redwood, and montane hardwood-conifer forests.	Feeds almost exclusively on Douglas-fir needles. Will occasionally take needles of grand fir, hemlock, or spruce.	Distributed along coast from Sonoma Co. to OR border, restricted to fog belt.	Moderate, due to suitable habitat located on the Property. he closest documented sighting was about 0.4-miles from the Property, in 1994.
Townsend's big-eared bat	*Corynorhinus townsendii*	G4, S2 – BLM | CSSC | ILC | USFS	Mating occurs Nov.- Feb. Young born May-June, peak birthing in late May. Young are capable of flight in 2-3 weeks and weaned after six weeks.	Broadleaved upland forest | Chaparral | Lower montane coniferous forest | Meadow & seep | | Riparian forest | Riparian woodland | Upper montane coniferous forest | Valley & foothill grassland	Wide variety of habitats. Most common in mesic sites.	Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.	Statewide; once common now uncommon.	Present, due positive detections in two basal hallows during the 2017-2018 bat surveys on the Property.
Mollusks								
California floater	*Anodonta californiensis*	G3Q, S2? – USFS	Larvae released by female in the spring/early summer. Breeding varies depending on water temperature and habitat.	Aquatic	Freshwater lakes and slow-moving streams and rivers. Most often found in the sand and mud of lakes and reservoirs or in stable areas of low-	Generally, in shallow water.	Historically from BC to Baja. Extirpated in many areas including the Central Valley. Known populations. Occur in the Fall and Pit Rivers in Shasta Co.	None, due to the absence of habitat. The closest documented sighting was about 9-miles from the Property.

COMMON NAME	*SCIENTIFIC NAME*	STATUS	BREEDING SEASON	HABITATS	GENERAL HABITAT	MICROHABITAT	RANGE	POTENTIAL TO OCCUR
					gradient stream reaches. Taxonomy under review by specialists.			
Western pearlshell	*Margaritifera falcata*	G4G5, S1S2 – INT	Reproduction is dependent on salmonids for parasitic larvae to attach to.	Aquatic	Found in perennial, cold-water small streams and large rivers that support salmonid populations. Stable sand, gravel, or cobble stream bottoms. Can live more than 100 years.	In large streams with a higher gradient, they are found in sheltered areas behind boulders or log jams. Prefers lower velocity waters.	Southern California to British Columbia.	None, due to the absence of habitat. The closest documented sighting was about 9-miles from the Property.

*Oceanic/pelagic species were omitted due to the location of the worksite in proximity to the ocean

Potential to Occur:	
None	No habitat components meeting the species requirements are present within the greater project area.
Unlikely	Few to none of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
Moderate	Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
High	All the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.

Acronym	Status:
AED	American Fisheries Society (AFS) – **Endangered**
AVU	American Fisheries Society (AFS) – **Vulnerable**
ATH	American Fisheries Society (AFS) – **Threatened**
BLM	Bureau of Land Management (BLM) – **Sensitive**
CDF	CA Dept. of Forestry – **Sensitive**
CC	California – **Candidate**
CD	California – **Delisted**
CE	California – **Endangered**
CFP	California – **Fully Protected**
CP	California – **Protected**
CT	California – **Threatened**
CSSC	CDFW – **Species of Special Concern**
CWL	CDFW – **Watch List**
FC	Federal – **Candidate**
FD	Federal – **Delisted**
FE	Federal – **Endangered**
FT	Federal – **Threatened**
IUCN	International Union for the Conservation of Nature (IUCN) – **Sensitive or Near Endangered**
ICE	IUCN – **Critically Endangered**
IDD	IUCN – **Data Deficient**
ILC	IUCN – **Least Concern**
INT	IUCN – **Near Threatened**
IVU	IUCN – **Vulnerable**
MSSC	Marine Mammal Commission (MMC) – **Species of Special Concern**
NRWL	North American Bird Conservation Initiative (NABCI) – **Red Watch List**
NYWL	NABCI – **Yellow Watch List**
UBCC	U.S. Fish & Wildlife Service (USFWS) – **Birds of Conservation Concern**
USFS	U.S. Forest Service (USFS) – **Sensitive**
Present	Species were observed on or near the site or have been recorded (database observation) on the site in the recent past.

G1	Global Conservation Status Rank: **Critically Imperiled** – At very high risk of extinction due to extreme rarity (five or fewer populations).
G2	Global Conservation Status Rank: **Imperiled** – at risk of extinction or elimination (6-20 extant populations).
G3	Global Conservation Status Rank: **Vulnerable** – at moderate risk of extinction or elimination (21-100 extant populations).
G4	Global Conservation Status Rank: **Apparently secure** – at fairly low risk of extinction or elimination (100-1,000 extant populations).
G5	Global Conservation Status Rank: **Secure** – Common; widespread and abundant (1,000+ extant populations).
S1	Subnational Conservation Status Rank: **Critically Imperiled** – at very high risk of extirpation in the state/province due to extreme rarity.
S2	Subnational Conservation Status Rank: **Imperiled** – at high risk of extirpation in the state/province.
S3	Subnational Conservation Status Rank: **Vulnerable** – moderate risk of extirpation in the state/province.
S4	Subnational Conservation Status Rank: **Apparently secure** – at fairly low risk of extirpation in the state/province.
S5	Subnational Conservation Status Rank: **Secure** – at very low risk of extirpation in the state/province.
T#	Infraspecific (Subspecies) Taxon Conservation Status Rank

Appendix C. Wildlife Species Observed

Common nighthawk (*Chordeiles minor*)
Western screech owl (*Megascops kennicottii*)
Coyote (*Canis latrans*)
Great horned owl (*Bubo virginianus*)
Northern saw-whet owl (*Aegolius acadicus*)
Sharp-shinned hawk (*Accipiter striatus*)
Common raven (*Corvus corax*)
Steller's jay (*Cyanocitta stelleri*)
American robin (*Turdus migratorius*)
Swainson's thrush (*Catharus ustulatus*)
Hermit thrush (*Catharus guttatus*)
Pacific-slope flycatcher (*Empidonax difficilis*)
Brown creeper (*Certhia americana*)
Golden-crowned kinglet (*Regulus satrapa*)
Dark-eyed junco (*Junco hyemalis*)
Band-tailed pigeon (*Patagioenas fasciata*)
Osprey (*Pandion haliaetus*)
American black bear (*Ursus americanus*)
California common scorpion (*Paruroctonus silvestrii*)
California king snake (*Lampropeltis getula californiae*)
Red-tailed hawk (*Buteo jamaicensis*)
American bushtit (*Psaltriparus minimus*)
Northern flicker (*Colaptes auratus*)
Chestnut-backed chickadee (*Poecile rufescens*)
Hairy woodpecker (*Leuconotopicus villosus*)
Cellar spider (*Pholcus phalangioides*)

Appendix D. Plant Species Observed

Family	Scientific Name	Common Name
Dryopteridaceae -Wood Fern Family		
	Polystichum munitum	western sword fern
GYMNOSPERMS		
Cupressaceae - Cypress Family		
	Sequoia sempervirens	coast redwood
Pinaceae - Pine Family		
	Abies grandis	grand fir
	Pseudotsuga menziesii	Douglas fir
EUDICOTS		
Apiaceae - Carrot Family		
	Osmorhiza berteroi	sweet cicley
	Sanicula crassicaulis	gamble weed
Asteraceae - Aster Family		
	Anisocarpus madioides	woodland tarweed
	Bellis perennis	English daisy
	Hypochaeris glabra	smooth cat's ear
Brassicaceae - Mustard Family		
	Cardamine spp.	milkmaids
Caprifoliaceae - Honeysuckle Family		
	Lonicera hispidula	honeysuckle
Ericaceae - Heath Family		
	Gaultheria shallon	salal
	Vaccinium ovatum	California huckleberry
Fabaceae - Pea Family		
	Vicia sp.	vetch
Fagaceae - Beech Family		
	Notholithocarpus densiflorus	tan oak
Lamiaceae - Mint Family		
	Mentha pulegium	penny royal
	Stachys sp.	hedge nettle
Myricaceae - Wax Myrtle Family		
	Morella californica	California wax myrtle
Oxalidaceae - Sorrel Family		
	Oxalis oregana	redwood sorrel
Philadelphaceae - Mock Orange Family		
	Whipplea modesta	yerba de selva, modesty
Plantaginaceae - Plantain Family		
	Plantago lanceolata	English plantain
Rosaceae - Rose Family		
	Fragaria vesca	wood strawberry
	Rubus ursinus	California blackberry
Rubiaceae - Madder Family		
	Galium sp.	bedstraw
Violaceae - Violet Family		

	Viola sempervirens	evergreen violet
MONOCOTS		
Iridaceae - Iris Family		
	Iris sp.	Douglas iris