Biological Scoping Survey Report

5680 Blue Lake Road, Upper Lake, CA
APN 003-007-03

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TABLE OF CONTENTS

Summary

This report presents the results of a biological scoping survey conducted for approximately three acres of a 28-acre parcel, located at 5680 Blue Lake Road, Upper Lake, California. The project site is located within a portion of Assessor Parcel 003-007-03; Township 16N, Range 10W, Section 6; Cow Mountain U.S.G.S. 7.5' quadrangle; approximately eight miles northwest of Clear Lake, in Lake County (Figures 1 and 2).

Surveys were conducted to determine if there would be any direct or indirect impacts caused by the proposed development. The project area was surveyed for the potential occurrence of special-status plants and plant communities, wetland and riparian areas, and special-status wildlife species and their habitats. The project area will serve as an event site and will include parking, housing, camping areas, and recreational activities.

1.0 Project Description

The biological scoping survey was conducted by both a botanist and biologist, to facilitate the issuance of a local discretionary permit, to which the California Environmental Quality Act (CEQA) applies. The project area was surveyed on April 7, 2023, and June 18, 2024. The purpose of these surveys was to describe the existing vegetation communities; survey the project area for special-status (rare) plants, plant communities, and wildlife habitats; and recommend appropriate mitigation measures, if needed.

According to the original project area description that was drafted in August of 2022 and shared at the time of hire, development activities were to include the construction of a parking lot; a 20'x10'rocked campsite footprint; a 15'x'15 restroom and a 20'x10' restroom; a 20'x20' cabin; a 25'x25'stage; a 20'x'40' storage shed; a 20'x20' office building; and the installation of a jungle gym, fountain, septic tank, a recreational vehicle (R.V.) dump station, two water tanks, and a circular cobblestone footprint (Figure 3b). Additionally, six-inch main plumbing/water lines are to be trenched from the septic tank to each restroom facility, the storage shed, the cobblestone footprint, and the R.V. dump station.

During our survey in April 2023 the biologists observed that land clearing activities and skid road construction had occurred prior to surveying (see Photos 6 and 7). In June of 2024, our botanist observed that development and construction activities had proceeded since the previous visit. The client installed the associated septic tank/leech field, constructed the storage shed, and installed the water fountain as well as the two water tanks (see Photos 1-3 and 5). Furthermore, additional roads and trails were constructed within the sloped portion of the project area (see Photo 4).

2.0 Project Site Description

2.1 General Site Description and Soils

The property is in Upper Lake, California, approximately 0.10 miles west of the Blue Lakes waterbody, on Blue Lakes Road. The proposed development occupies approximately three acres of the parcel, APN 142-033-09, which is just over 28 acres in size and currently consists of partially developed oak woodland/grassland environment. The three-acre project site has

Figure 1
HEWITT-NOVOA REGIONAL LOCATION

PROJECT
AREA

Witter
Springs

W-CA-20

W-Highway 20

Upper Lake

20

29

Lake
Mendocino

Old River Rd

Project Area

Hewitt-Novoa
Biological Scoping Survey

5680 Blue Lakes Road
APN 003-007-03
Section 6
T15N R10W
MDB&M

Portions of the
COW MOUNTAIN
USGS 7.5' Quadrangle

0 1 2 4 Miles

NCRM

Plotted Scale 1 : 126,720
1 inch = 2 miles

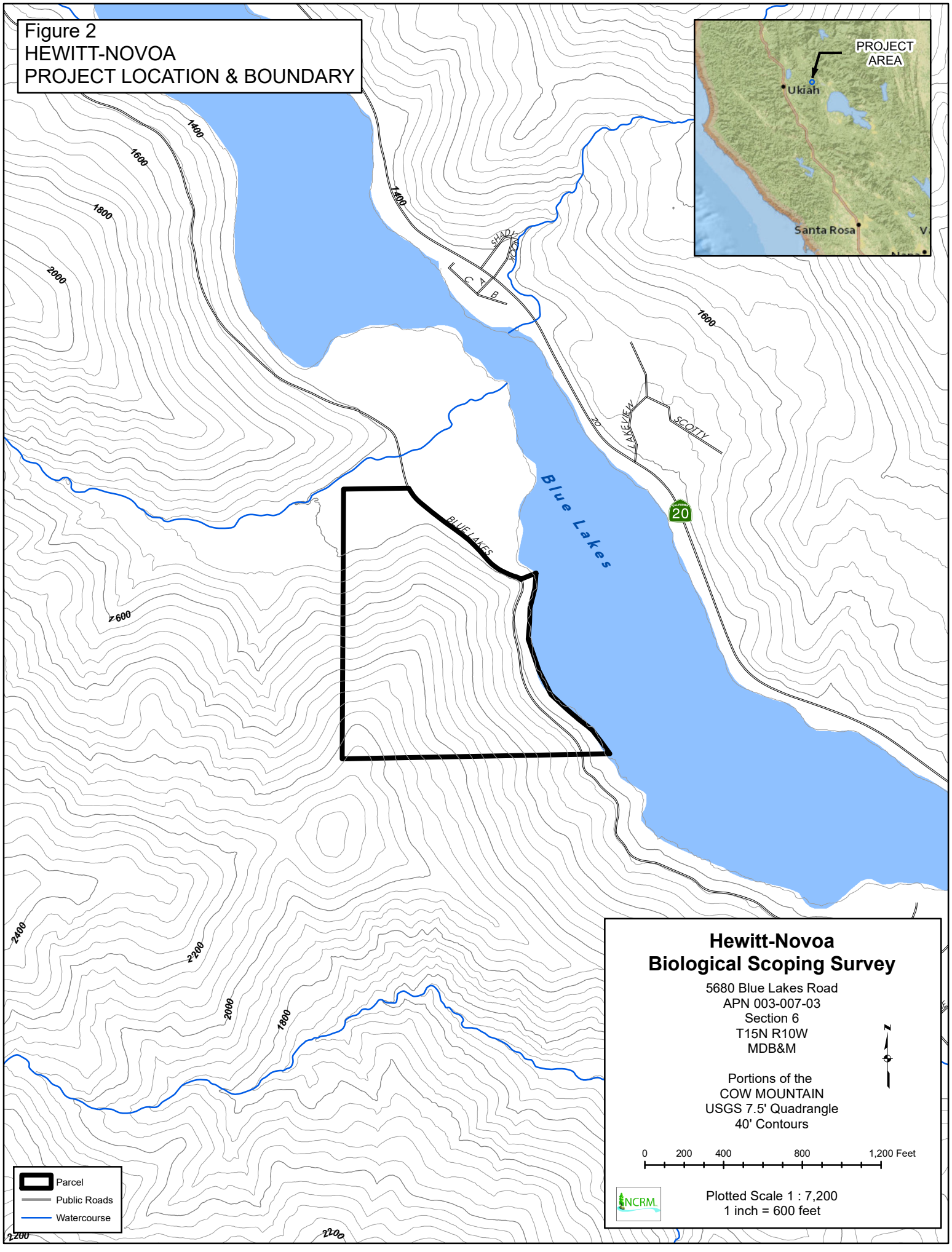
Figure 2
HEWITT-NOVOA
PROJECT LOCATION & BOUNDARY
PROJECT AREA
Ukiah
Santa Rosa
Blue Lakes
BLUE LAKES
SHADY
LAKEVIEW
SCOTTY
20
1400
1600
1800
2000
2200
2400
Hewitt-Novoa
Biological Scoping Survey
5680 Blue Lakes Road
APN 003-007-03
Section 6
T15N R10W
MDB&M
Portions of the
COW MOUNTAIN
USGS 7.5' Quadrangle
40' Contours
0 200 400 800 1,200 Feet
Plotted Scale 1 : 7,200
1 inch = 600 feet
Parcel
Public Roads
Watercourse

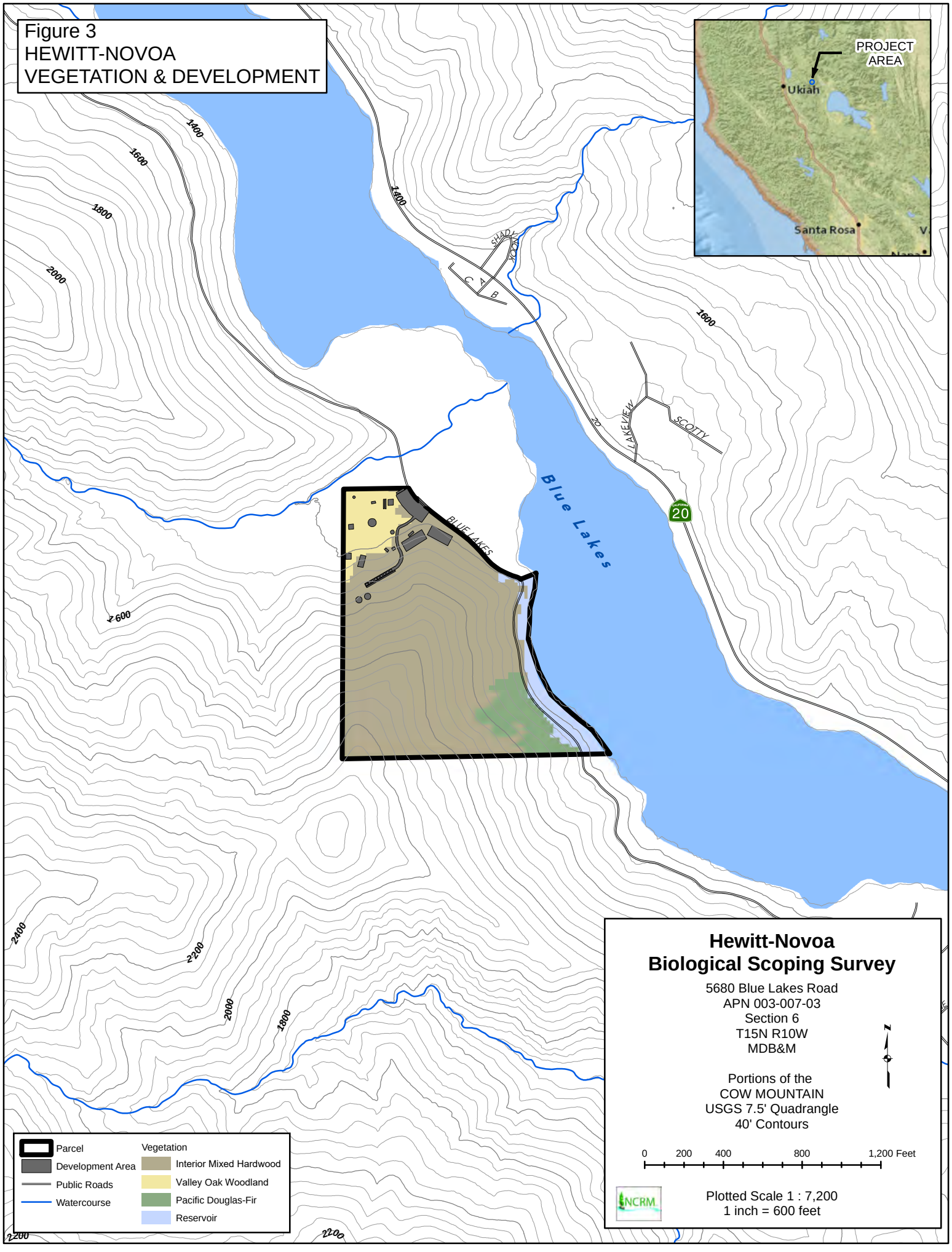
Figure 3
HEWITT-NOVOA
VEGETATION & DEVELOPMENT
PROJECT AREA
Ukiah
Santa Rosa
Blue Lakes
BLUE LAKES
SHADY
LAKEVIEW
SCOTTY
20
1400
1600
1800
2000
2200
2400
Parcel
Development Area
Public Roads
Watercourse
Vegetation
Interior Mixed Hardwood
Valley Oak Woodland
Pacific Douglas-Fir
Reservoir
Hewitt-Novoa
Biological Scoping Survey
5680 Blue Lakes Road
APN 003-007-03
Section 6
T15N R10W
MDB&M
Portions of the
COW MOUNTAIN
USGS 7.5' Quadrangle
40' Contours
0
200
400
800
1,200 Feet
NCRM
Plotted Scale 1 : 7,200
1 inch = 600 feet

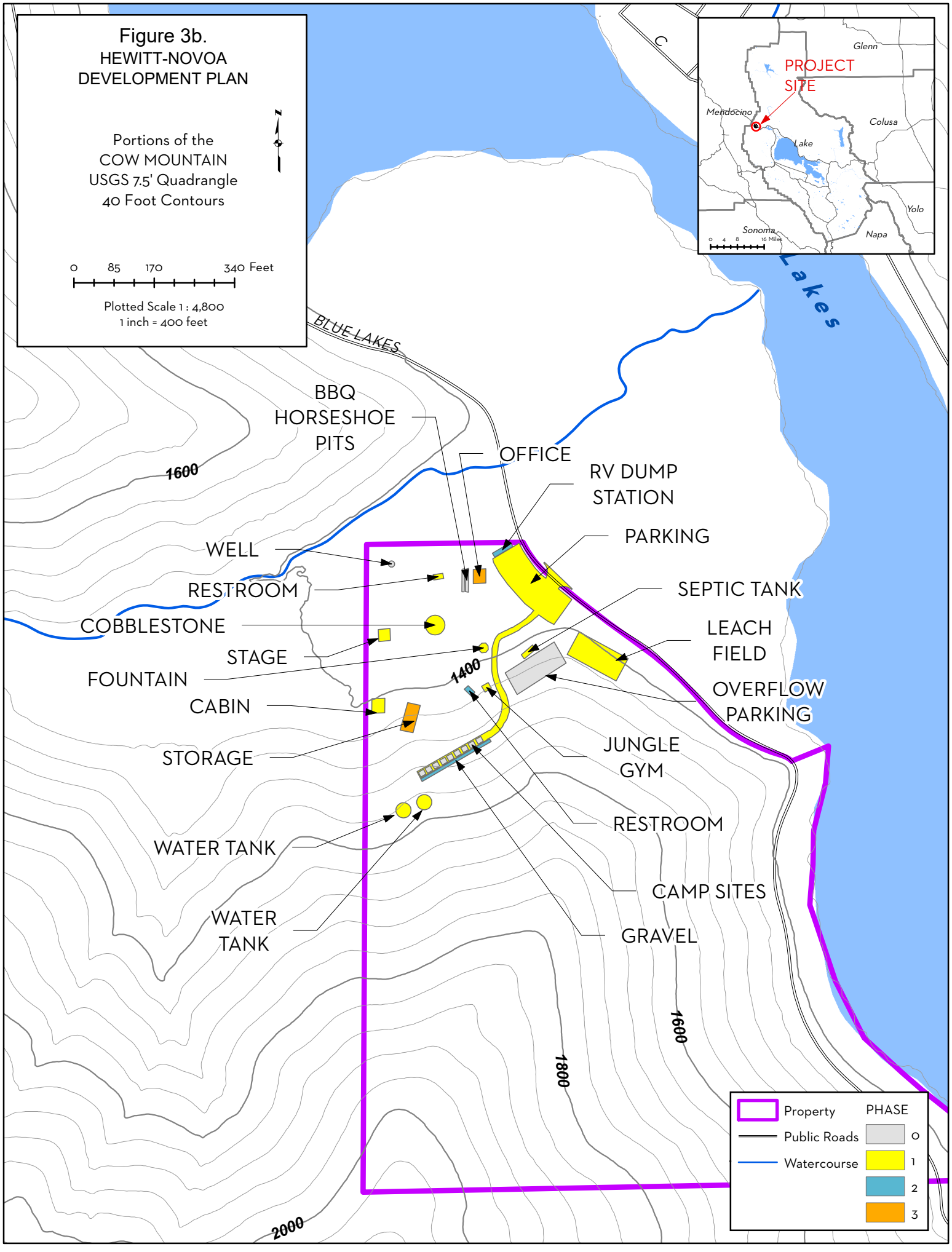
Figure 3b.
HEWITT-NOVOA
DEVELOPMENT PLAN
Portions of the
COW MOUNTAIN
USGS 7.5' Quadrangle
40 Foot Contours
N
0 85 170 340 Feet
Plotted Scale 1 : 4,800
1 inch = 400 feet
PROJECT SITE
Glenn
Mendocino
Colusa
Lake
Yolo
Sonoma
Napa
0 4 8 16 Miles
Blue Lakes
BLUE LAKES
BBQ
HORSESHOE
PITS
OFFICE
RV DUMP
STATION
PARKING
WELL
RESTROOM
SEPTIC TANK
COBBLESTONE
LEACH
FIELD
STAGE
FOUNTAIN
OVERFLOW
PARKING
CABIN
JUNGLE
GYM
STORAGE
RESTROOM
WATER TANK
CAMP SITES
WATER
TANK
GRAVEL
1600
1400
1800
1600
2000
Property
Public Roads
Watercourse
PHASE
0
1
2
3

been cleared of most overstory, midstory, and understory vegetation; and development activities (i.e., installation of a septic system, and construction of structures and road/trail systems) are well underway.

The development area is primarily flat with minimal sloping (0-5%); however, the development associated with the installation of water tanks and the construction of a rocked campsite footprint, as well as the roads leading up to it were on a 40-50% slope on the southern boundary of the project area (see Photo 8). The elevation is approximately 1,375 to 1,575 feet above sea level. Soils are mapped as Maymen-Hopland-Mayacama Association, 20-60 percent slopes (Natural Resource Conservation Service, 4/21/2023). No wetlands or watercourses exist within the three-acre project area; however, a seasonally wet ditch was observed at the bottom of the north-facing hillside.

Photo 1. Looking north, this photo shows the parking lot, as well as the septic system and associated leech field site on the southern end (boxed in red). Photo taken on June 17th by Laura Moreno-Baker.

Photo 2. Looking northwest, this photo shows the fountain and the constructed storage shed. Photo taken on June 17th by Laura Moreno-Baker.

Photo 3. Looking west, this photo shows the cabin in the process of being built. Photo taken on June 17th by Laura Moreno-Baker.

Photo 4. Looking southwest, this photo shows the skid roads constructed leading to the rocked campsites (straight ahead) and the water tanks (up and to the left). Photo taken on June 17th by Laura Moreno-Baker.

Photo 5. This photo shows the water tanks installed at the southernmost portion of the project area. Photo taken on June 17th by Laura Moreno-Baker.

2.2Vegetation

Vegetation in the lower, flatter project area is largely missing, due to land-clearing that was conducted before our first survey. This area consists of extremely sparse oak woodland with a large, circular patch of non-native grass in the center of proposed developments (see Photos 1, 2, and 6); the forb layer is largely nonexistent save for poison oak (*Toxicodendron diversilobum*). Vegetation on the north-facing slope, wherein the construction of a campsite and the installation of two large water storage tanks are to take place, was classified as the Madrone Forest Alliance, based on the Manual of California Vegetation (Sawyer et.al. 2009). See Section 4.4.2 for a description of the natural communities and Appendix C for the complete list of species observed during surveys.

Photo 6. Looking southwest from the proposed parking lot. This photo depicts the flat, sparsely vegetated nature of the larger project area contrasted with the oak woodland habitat of the north-facing slope in the distance. Photo taken on April 7, 2023, by Stephanie Martin.

Photo 7. Looking northeast toward the proposed parking area. Photo taken on April 7, 2023, by Stephanie Martin.

3.0 Methods

3.1 Scoping Survey

In April of 2023, a special-status plants, communities, and wildlife scoping list was constructed to help guide survey efforts. This list was updated in June of 2024 to account for any database changes. The scoping list was based on the California Native Plant Society Rare Plant Inventory (CNPS 2023) and California Natural Diversity Database (CNDDB *RareFind*; version 5.3.0). A four-quadrangle search was performed to ensure a radius of at least five miles was covered. The electronic search included Cow Mountain, Upper Lake, Purdy's Garden, and Lakeport 7.5' USGS quadrangles. The special-status scoping lists for this project can be found in Appendices A and B. The potential for each special-status species to occur in the project areas was ranked based on the following criteria:

- **None**. No habitat components meeting the species requirements are present.
- **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 were observed on the site or have been recorded (database observation) on the site in the recent past.

3.2 Survey Methodology

Site visits were conducted on April 7, 2023, and June 18, 2024, by NCRM botanist Laura Moreno-Baker and biologist Stephanie Martin. Botanical surveying methods were based on *Protocols for Surveying and Evaluating Impacts to Special-status Native Plant Populations and Sensitive Natural Communities* (CDFW 2018). Meandering transects were used to survey the project area. The site visits utilized the scoping lists in Appendices A and B, and the survey was conducted within the project area. This report is based on information and site conditions that were available at the time of these surveys.

In the case of special-status species where little information is known about occurrences and/or habitat requirements, the species evaluation was based on the best professional judgment of the biologist/botanist. For some threatened and endangered species, a site survey at the level conducted for this report may not be sufficient to determine the presence or absence of a species to the specifications of regulatory agencies.

4.0 Survey Results

4.1 Natural Communities

Out of the three Sensitive Natural Communities included in the scoping list (i.e., within four USGS 7.5-minute quadrangles queried) in Appendix A – Coastal and Valley Freshwater Marsh, Northern Interior Cypress Forest, and Serpentine Bunchgrass – none were determined to have the potential to exist within the project area. None were observed during survey efforts.

4.2 Special-Status Plants

No special-status and sensitive plants were found during the surveys. Out of the 33 special-status plant species included in the scoping list in Appendix A, four species were determined to have a "high" probability of existing within the project area and three were thought to have a "moderate" probability. Below is a description of the rationale used for the species with a "moderate" to "high" probability of occurring in the project area, 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 three species as they do not meet the definition of rare or endangered under CEQA Guidelines: bristly leptosiphon (*Leptosiphon aureus*, CRPR 4.2, S3, G3), broad-lobed leptosiphon (*Leptosiphon latisectus*, CRPR 4.3, G4, S4), and green monardella (*Monardella viridis*, CRPR 4.3, S3, G3).

CRPR 4 plant taxa are of limited distribution throughout California and their vulnerability or susceptibility to threat typically appears low. While avoidance is generally recommended for

CRPR 4 plants, strict mitigation is only required if the taxa meet the definition of rare or endangered under CEQA Guidelines. According to a 2020 Technical Memorandum adopted by the CNPS Rare Plant Program, *Considerations for Including CRPR 4 Plant Taxa in CEQA Biological Resource Impact Analysis*, only taxa that, "can be shown to meet the criteria for endangered, rare, or threatened status under CEQA Section 15380(d) or that can be shown to be regionally rare or unique as defined in CEQA Section 15125(c)", require full analysis.

Small-flowered calycadenia (*Calycadenia micrantha*, CAMI53) was found to have a "high" probability of occurring in the project area given the presence of proximal occurrence data and habitat in the project area. CAMI53 blooms from June to September and is known to thrive in dry, open, rocky, and/or sparsely vegetated hillsides and woodlands. It is ranked as a 1B.2, S2, G2 (CNPS, CNDDB). See Appendix A for definitions. Threats include road maintenance, development and non-native plants. The closest observation to the project area was reported approximately two miles east-southeast of the project area in 2019. CAMI53 is most likely to occur on the sloped areas of the project area, which are largely left undeveloped.

Grassland suncup (*Camissonia lacustris*, CALA39) was found to have "moderate" probability of occurring within the project area due to the presence of proximal occurrence data. It is ranked as a 1B.2, S2, G2. The closest observations were reported in grasslands surrounding Clear Lake. CALA39 is typically reported in rocky, open grassland habitat; this habitat is not present in the project area. Given that the project area lacks this species habitat type it is not expected that development activities from this project will impact this species adversely. No further surveys or mitigation measures are warranted.

Bristly sedge (*Carex comosa*, CACO8) was found to have "moderate" probability of existing in the project area given the presence of proximal occurrence data. It is ranked as a 2B.2, S2, G5. CACO8 was reported in the Blue Lakes area in 1927. There have since been no observations reported in the vicinity of the project area. The most recent proximal observation was reported at the Hopland Research Station in 1999, approximately 12 miles southwest. Furthermore, this species is known to occur in wet areas and along lake margins. This habitat is largely absent from the project area, save for the drainage ditch running along the bottom of the north-facing slope. This ditch is dry for most of the year therefore this species is not expected to be impacted by the proposed development. No further surveys or mitigation measures are warranted.

Koch's cord moss (*Entosthodon kochii*, ENKO) was thought to have "moderate" probability of existing, primarily due to a lack of information and data on the species - absence of evidence is not evidence of absence. It is ranked as a 1B.3, S1, G1. ENKO is known from four locations in California, two of which are historic. The most recent proximal observation was reported at the Hopland Research Station in 2002, approximately 12 miles southwest. ENKO was not observed during surveys, however, it is likely that it was present prior to land clearing activities. This species is not expected to be impacted by further development as the damage has been done. No further surveys or mitigation measures are warranted.

4.3 Wildlife

Out of the 16 total special-status wildlife species included in the scoping list in Appendix B, four were determined to have a "moderate" probability of occurring. These species have a

"moderate" probability of being found on the site: osprey (*Pandion haliaetus*), western bumblebee (*Bombus occidentalis*), American badger (*Taxidea taxus*), and the North American porcupine (*Erethizon dorsatum*). "Moderate" is defined as 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.

Amphibians and Reptiles

No amphibians were documented during the survey, and no permanent water sources exist within the property to support the western pond turtle (*Emys marmorata*), foothill yellow-legged frog (*Rana boylii*), or the red-bellied newt (*Taricha rivularis*). While the seasonal ditch may provide marginal habitat during the rainy season, it is dry most of the year. The stream off the north side of the property contains potential habitat for foothill yellow-legged frogs; however, it is not expected to be impacted by the proposed development. Impacts to amphibians and reptiles are not anticipated, no further surveys or mitigation measures are warranted.

Birds

Of the five birds listed in Appendix B, only the osprey has a "moderate" probability of being found on the site. Some of the habitat components meeting the species requirements are present but due to the lack of large nesting trees and human presence, this bird is unlikely to nest on the site. Additionally, no nests were documented in or near the project area during the biological survey; however, numerous migratory birds and birds of prey were observed (see Section 4.4.1). Because no nests were observed and no potential nesting sites will be impacted by the project, no further surveys or mitigation measures are warranted. Should further vegetation clearing activities take place a nesting bird survey should take place no sooner than seven days prior to the event.

Insects

No obscure or western bumble bees were observed during surveys. As the development will be in an area dominated by non-native grasses and forbs, substantial loss of foraging habitat is unlikely. No further surveys or mitigation measures are warranted.

Fish

No permanent water sources are present for any of the four fish species listed in Appendix B. No further surveys or mitigation measures are warranted.

Mammals

Very little habitat was observed on site for the five special-status mammal species listed in Appendix B. While there is some possibility that the porcupine or the badger may prefer the adjacent woodland, it is unlikely that the proposed development will affect either species. No further surveys or mitigation measures are warranted.

4.4 Documented Occurrences

4.4.1 Birds

Mourning dove (*Zenaida macroura*)
Hairy woodpecker (*Leuconotopicus villosus*)
Chipping sparrow (*Spizella passerina*)

Dark-eyed junco (*Junco hyemalis*)
Golden-crowned kinglet (*Regulus satrapa*)
Wrentit (*Chamaea fasciata*)
Western scrub jay (*Aphelocoma californica*)
Turkey vulture (*Cathartes aura*)
Yellow-rumped warbler (*Setophaga coronata*)
Northern flicker (*Colaptes auratus*)
Bushtit (*Psaltriparus minimus*)
California towhee (*Melozone crissalis*)
Oak titmouse (*Baeolophus inornatus*)
Anna's hummingbird (*Calypte anna*)
Western bluebird (*Sialia mexicana*)

4.4.2 Vegetation Communities

A large majority of the project area had previously undergone significant habitat alteration and did not depict a natural vegetation community. The majority of the project area most closely resembled the Valley Oak (*Quercus lobata)* Woodland and Forest Alliance, and historically, was likely the *Quercus lobata* / grass Association. This association is listed as a Sensitive Natural Community (SNC); however, we were unable to confirm this during surveys. The sloped portion of the project area was identified as the Madrone (*Arbutus menziesii*) Forest Alliance and, more specifically, the *Arbutus menziesii - Umbellularia californica* Association which is listed as a SNC.

Overstory species include oak (*Quercus lobata, Q. wislizeni*), madrone (*Arbutus menziesii*), tanoak (*Notholithocarpus densiflorus*), and bay (*Umbellularia californica*). The midstory is sparse and includes California nutmeg (*Torreya californica*), red elderberry (*Sambucus racemose*), inland scrub oak (*Quercus berberidifolia*), California buckeye (*Aesculus californica*), and hardwood regeneration. Understory species include modesty (*Whipplea modesta*), bull thistle (*Cirsium vulgare*), bur-chervil (*Anthriscus caucalis*), *Gallium porrigens*, *Claytonia* spp., sanicle (*Sanicula crassicaulis*), honeysuckle (*Lonicera hispidula*), California buttercup (*Ranunculus occidentalis*), sock-destroyers (*Torilis arvensis*), *Cardamine* spp., ferns (*Dryopteris arguta, Polystichum munitum*), and grasses (*Melica* sp., *Dactylis glomerata*). For a full list of species observed see Appendix C.

<u>Valley Oak (*Quercus lobata*) Woodland and Forest Alliance (S3, G3)</u>
Quercus lobata is dominant or co-dominant in the tree canopy with *Aesculus californica, Quercus agrifolia, Quercus douglasii, Quercus kelloggii, Quercus wislizeni,* and/or *Umbellularia californica*. Shrubs are sparse and may include *Toxicodendron diversilobum.* Understory species include *Bromus diandrus* and/or *Bromus hordeaceus*.

<u>Madrone (*Arbutus menziesii*) Forest Alliance (S4.2, G4)</u>
Arbutus menziesii is dominant or co-dominant in the tree canopy with *Acer macrophyllum, Notholithocarpus densiflorus, Pseudotsuga menziesii, Quercus agrifolia, Quercus chrysolepis, Quercus kelloggii, Quercus wislizeni,* and *Umbellularia californica*.

Photo 8. Madrone forest along the southern boundary of the project area. The existing skid road leading up to the proposed camp site is visible in the top left corner. Photo taken on April 7, 2023, by Stephanie Martin.

5.0 Discussion and Mitigations

Most of the proposed development activities will occur in areas where non-native grasses dominate or where the natural vegetation has already been disturbed. Given that the project has potential to result in impacts to a SNC, *Arbutus menziesii - Umbellularia californica* Association, as well as "high" and "moderate" special-status plant species, we recommend the following avoidance and minimization recommendations:

- All construction vehicles utilize only existing footprints or roadways.
- Additional botanical surveys should be conducted in undisturbed Madrone Forest, should additional skids/trail/road construction be necessary on the north-facing slope.
- Additional botanical surveys should be conducted in areas not previously included in project plans.
- Limit the number of trees cut in Madrone Forest to those necessary for project outcomes.
- Should further vegetation clearing activities take place a nesting bird survey should take place no sooner than seven days prior to the event.
- Instruct employees and subcontractors to honor project boundaries and prohibit access of heavy equipment, vehicular traffic or storage of construction materials within sloped project area.

Because of the location of the proposed development activities and the proximity of the parcel-to-human interface (notably Highway 20 and Blue Lakes Resort) most of the wildlife species found in Appendix B are unlikely to occur in the direct vicinity. The few species that have some habitat components present, or adjacent to the parcel, will not be affected by the development in such a way to be considered detrimental to the overall success of any of those species.

6.0 References

Baldwin, B.G., Goldman, D.H., Keil, D.J., Patterson, R., Rosatti, T.J., Wilken, D.H. 2012. The Jepson Manual Vascular Plants of California. University of California Press, Berkeley, CA. California Department of Fish and Game.

Calflora: Information on California plants for education, research, and conservation. 2023. Berkeley, California: The Calflora Database. Accessed online at https://www.calflora.org/.

California Natural Diversity Database (CNDDB). 2023. California Department of Fish and Wildlife, Biogeographic Data Branch. RareFind Version 5.

California Department of Fish and Game (CDFG). 2018. Protocols for Surveying and Evaluating Impacts to Special-status Native Plant Populations and Sensitive Natural Communities. The Resource Agency, Sacramento, CA.

California Department of Fish and Game. 2010. California Terrestrial Natural Communities List. Biogeographic Data Branch. https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities#natural%20communities%20lists

California Invasive Plant Council (Cal-IPC), 2015. California Invasive Plant Inventory Database. http://www.cal- ipc.org/paf/

California Native Plant Society (CNPS). 2023. Inventory of Rare and Endangered Plants (online edition, v8-02).
California Native Plant Society. Sacramento, CA. http://www.rareplants.cnps.org.

CalPhotos Database. 2007. University of California, Berkeley. Accessed online at https://calphotos.berkeley.edu/flora/.

Holland, Robert F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. California Department of Fish and Game. Sacramento, California.

Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at the following link: http://websoilsurvey.sc.egov.usda.gov/. Accessed 09/07/2022.

Jepson Flora Project (eds.). 2022. Jepson eFlora. Accessed online at https://ucjeps.berkeley.edu/eflora/.

Sawyer, J. O. and T. Keeler-Wolf. 2009. A Manual of California Vegetation, Second Edition. California Native Plant Society, Sacramento, CA.

Appendix A. Special-Status Plant Species and Communities Scoping List.

Scientific Name **Common Name**	**Fed List**	**State List**	**Global Rank**	**State Rank**	**CA Rare Plant Rank**	**Associated Habitat**	**Blooming Period**	**Potential to Occur**
Amsinckia lunaris bent-flowered fiddleneck	None	None	G3	S3	1B.2	Cismontane woodland, coastal bluff scrub, valley and foothill grassland. 3-500 meters in elevation.	Mar-Jun	Unlikely
Arctostaphylos manzanita subsp. *elegans* Konocti manzanita	None	None	G5T3	S3	1B.3	Chaparral, cismontane woodland, lower montane coniferous forest. Volcanic. 395-1,615 meters in elevation.	(Jan) Mar-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). 450-1,035 meters in elevation.	Feb-Apr	None
Astragalus breweri Brewer's milk-vetch	None	None	G3	S3	4.2	Chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland (openings, often gravelly). Serpentinite (often), Volcanic. 90-730 meters in elevation.	Apr-Jun	None
Brasenia schreberi watershield	None	None	G5	S3	2B.3	Marshes and swamps (freshwater). 0-2,200 meters in elevation.	Jun-Sep	None
Calycadenia micrantha small-flowered calycadenia	None	None	G2	S2	1B.2	Chaparral, meadows, and seeps (volcanic), valley and foothill grassland. Sparsely vegetated areas. Roadsides, rocky, scree, serpentinite (sometimes), talus. 5-1,500 meters in elevation.	Jun-Sep	High
Camissonia lacustris grassland suncup	None	None	G2	S2	1B.2	Chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland. Granitic, gravelly, serpentinite. 180-1,220 meters in elevation.	Mar-Jun	Moderate

Scientific Name **Common Name**	**Fed List**	**State List**	**Global Rank**	**State Rank**	**CA Rare Plant Rank**	**Associated Habitat**	**Blooming Period**	**Potential to Occur**
Carex comosa bristly sedge	None	None	G5	S2	2B.1	Coastal prairie, marshes, and swamps (lake margins), valley and foothill grassland. 0-625 meters in elevation.	May-Sep	Moderate
Ceanothus confusus Rincon Ridge ceanothus	None	None	G1	S1	1B.1	Chaparral, cismontane woodland, closed-cone coniferous forest. Serpentinite (sometimes), volcanic (sometimes). 75-1,065 meters in elevation.	Feb-Jun	Unlikely
Clarkia gracilis subsp. *tracyi* Tracy's clarkia	None	None	G5T3	S3	4.2	Chaparral (openings, serpentinite). 65-650 meters in elevation.	Apr-Jul	None
Coastal and Valley Freshwater Marsh	None	None	G3	S2.1	NA	Marshes.	NA	None
Cryptantha dissita serpentine cryptantha	None	None	G3	S3	1B.2	Chaparral (serpentinite). 395-580 meters in elevation.	Apr-Jun	None
Entosthodon kochii Koch's cord moss	None	None	G1	S1	1B.3	Cismontane woodland (soil). 180-1,000 meters in elevation.	NA	Moderate
Erythranthe nudata bare monkeyflower	None	None	G4	S4	4.3	Chaparral, cismontane woodland. Seeps, serpentinite. 200-700 meters in elevation.	May-Jun	None
Fritillaria purdyi Purdy's fritillary	None	None	G4	S4	4.3	Chaparral, cismontane woodland, lower montane coniferous forest. Serpentinite (usually). 175-2,255 meters in elevation.	Mar-Jun	Unlikely
Gratiola heterosepala Boggs Lake hedge-hyssop	None	Endangered	G2	S2	1B.2	Marshes and swamps (lake margins), vernal pools. Clay. 10-2,375 meters in elevation.	Apr-Aug	None
Grimmia torenii Toren's grimmia	None	None	G2	S2	1B.3	Chaparral, cismontane woodland, lower montane coniferous forest. Boulder and rock walls. Carbonate, openings, rocky, volcanic. 325-1,160 meters in elevation.	NA	None

Scientific Name **Common Name**	**Fed List**	**State List**	**Global Rank**	**State Rank**	**CA Rare Plant Rank**	**Associated Habitat**	**Blooming Period**	**Potential to Occur**
Hemizonia congesta subsp. *calyculata* Mendocino tarplant	None	None	G5T4	S4	4.3	Cismontane woodland, valley and foothill grassland. Clay soils, serpentinite (sometimes). 225-1,400 meters in elevation.	Jul-Nov	None
Hesperolinon adenophyllum glandular western flax	None	None	G2G3	S2S3	1B.2	Chaparral, cismontane woodland, valley and foothill grassland. serpentinite (usually). 150-1,315 meters in elevation.	May-Aug	Unlikely
Horkelia bolanderi Bolander's horkelia	None	None	G1	S1	1B.2	Chaparral, lower montane coniferous forest, meadows and seeps, valley and foothill grassland. Edges, vernally mesic. 450-1,100 meters in elevation.	(May) Jun-Aug	Unlikely
Kopsiopsis hookeri small groundcone	None	None	G4?	S1S2	2B.3	North Coast coniferous forest. 90-885 meters in elevation.	Apr-Aug	None
Layia septentrionalis Colusa layia	None	None	G2	S2	1B.2	Chaparral, cismontane woodland, valley and foothill grassland. Sandy, serpentinite. 100-1,095 meters in elevation.	Apr-May	None
Leptosiphon aureus bristly leptosiphon	None	None	G4?	S4?	4.2	Chaparral, cismontane woodland, coastal prairie, valley and foothill grassland. 55-1,500 meters in elevation.	Apr-Jul	High
Leptosiphon latisectus broad-lobed leptosiphon	None	None	G4	S4	4.3	Broad-leafed upland forest, cismontane woodland. 170-1,500 meters in elevation.	Apr-Jun	High
Lilium rubescens redwood lily	None	None	G3	S3	4.2	Broad-leafed upland forest, chaparral, lower montane coniferous forest, North Coast coniferous forest, upper montane coniferous forest. Roadsides (sometimes), serpentinite (sometimes). 30-1,910 meters elev.	(Mar) Apr-Aug (Sep)	Unlikely

Scientific Name **Common Name**	**Fed List**	**State List**	**Global Rank**	**State Rank**	**CA Rare Plant Rank**	**Associated Habitat**	**Blooming Period**	**Potential to Occur**
Monardella viridis green monardella	None	None	G3	S3	4.3	Broad-leafed upland forest, chaparral, cismontane woodland. 100-1,010 meters in elevation.	Jun-Sep	High
Navarretia jepsonii Jepson's navarretia	None	None	G4	S4	4.3	Chaparral, cismontane woodland, valley and foothill grassland. Serpentinite. 175-855 meters in elevation.	Apr-Jun	None
Northern Interior Cypress Forest	None	None	G2	S2.2	NA	Interior forest.	NA	None
Perideridia gairdneri subsp. *gairdneri* Gairdner's yampah	None	None	G5T3 T4	S3S4	4.2	Broad-leafed upland forest, chaparral, coastal prairie, valley and foothill grassland, and vernal pools. Vernally mesic. 0-610 meters in elevation.	Jun-Oct	None
Plagiobothrys lithocaryus Mayacamas popcornflower	None	None	GX	SX	1A	Chaparral, cismontane woodland, valley and foothill grassland. Mesic. 300-450 meters in elevation.	Apr-May	Unlikely
Ranunculus lobbii Lobb's aquatic buttercup	None	None	G4	S3	4.2	Cismontane woodland, North Coast coniferous forest, valley and foothill grassland, vernal pools. Mesic. 15-470 meters in elevation.	Feb-May	Unlikely
Serpentine Bunchgrass	None	None	G2	S2.2	NA	Grasslands.	NA	Unlikely
Silene bolanderi Bolander's catchfly	None	None	G2	S2	1B.2	Chaparral, 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). 420-1,150 meters in elevation.	May-Jun	Unlikely

Scientific Name **Common Name**	**Fed List**	**State List**	**Global Rank**	**State Rank**	**CA Rare Plant Rank**	**Associated Habitat**	**Blooming Period**	**Potential to Occur**
Streptanthus glandulosus subsp. *hoffmanii* Hoffman's bristly jewelflower	None	None	G4T2	S2	1B.3	Chaparral, cismontane woodland, valley and foothill grassland (often serpentinite). Rocky. 120-475 meters in elevation.	Mar-Jul	Unlikely
Tracyina rostrata beaked tracyina	None	None	G2	S2	1B.2	Chaparral, cismontane woodland, valley and foothill grassland. 90-1,270 meters in elevation.	May-Jun	Unlikely
Viburnum ellipticum oval-leaved viburnum	None	None	G4G5	S3?	2B.3	Chaparral, cismontane woodland, lower montane coniferous forest. 215-1,400 meters in elevation.	May-Jun	Unlikely

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

a. Species listed or proposed for listing as threatened or endangered under the federal Endangered Species Act (ESA)
b. Species that are candidates for possible future listing as threatened or endangered under the federal Endangered Species Act (ESA)
c. Species listed or proposed for listing by the State of California as threatened or endangered under the California Endangered Species Act (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)
h. 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 California Native Plant Society (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
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	G3T4, 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 rocky substrate in a variety of habitats.	Needs some cobble-sized substrate for egg-laying and at least 15 weeks to attain metamorphosis.	Northern Coast Ranges of the SF Bay Estuary, Klamath Mtns, and the Cascade Range.	Unlikely
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 | Redwood | Riparian forest | Riparian woodland	Coastal drainages from Humboldt County south to Sonoma County, inland to Lake County. An isolated population of uncertain origin in Santa Clara County.	Lives in terrestrial habitats, juveniles generally underground, and adults active at the surface in moist environments. Will migrate over 1 km to breed, typically in streams with moderate flow, clean, rocky substrate.	Humboldt Co. south to Sonoma Co., inland to Lake Co. Isolated pop. of uncertain origin in Santa Clara Co.	Unlikely
BIRDS								
Double-crested cormorant	*Nannopterum auritum*	G5, S4 - CWL | ILC	March-August.	Riparian forest | Riparian scrub | Riparian woodland	Colonial nester on coastal cliffs, offshore islands, and along lake margins in the interior of the state.	Nests along the coast on sequestered islets, usually on ground with sloping surface, or in tall trees along lake margins.	Statewide.	None

COMMON NAME	SCIENTIFIC NAME	STATUS	BREEDING SEASON	HABITATS	GENERAL HABITAT	MICROHABITAT	RANGE	POTENTIAL TO OCCUR
Grasshopper sparrow	*Ammodramus savannarum*	G5, S3 - CSSC | ILC	Late May and early June.	Valley & foothill grassland	Dense grasslands on rolling hills, lowland plains, valleys and on hillsides on lower mountain slopes.	Favors native grasslands with a mix of grasses, forbs, and scattered shrubs. Loosely colonial when nesting.	Summer resident from Mendocino, Trinity, and Tehama counties south, west of the Cascade–Sierra Nevada axis and south-eastern deserts, to San Diego Co.	None
Great blue heron	*Ardea herodias*	G5, S4 - CDF | ILC	Adults return Dec.-March. Males arrive at colonies and settle on nests; most males choose different nests each year.	Brackish marsh | Estuary | Freshwater marsh | Marsh & swamp | Riparian forest | Wetland	Colonial nester in tall trees, cliffsides, and sequestered spots on marshes.	Rookery sites near foraging areas: marshes, lake margins, tide flats, rivers and streams, and wet meadows.	Statewide.	Unlikely
Osprey	*Pandion haliaetus*	G5, S4 - CDF | CWL | ILC	Most are migratory, breeding starts in March and migrates 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 pine through mixed conifer habitats. Preys mostly on fish.	Large nests built in treetops within 15 miles of a good fish-producing body of water.	Statewide.	Moderate

COMMON NAME	SCIENTIFIC NAME	STATUS	BREEDING SEASON	HABITATS	GENERAL HABITAT	MICROHABITAT	RANGE	POTENTIAL TO OCCUR
Tricolored blackbird	*Agelaius tricolor*	G1G2, S2 - BLM | CSSC | IUCN | UBCC	Males typically arrive in late March.	Freshwater marsh | Marsh & swamp | Swamp | Wetland	Highly colonial species, most numerous in Central Valley and its vicinity. Largely endemic to California.	Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony.	Limited to the coastal areas of the Pacific coast of North America, from No. California to upper Baja California, MX.	None
FISH								
Clear Lake hitch	*Lavinia exilicauda chi*	G4T1, S1 - AVU | USFS	Late winter.	Aquatic | Sacramento/San Joaquin flowing waters | Sacramento/San Joaquin standing waters	Found only in Clear Lake, Lake County, and associated ponds. Spawns in streams flowing into Clear Lake.	Adults are found in the limnetic zone. Juveniles found in the nearshore shallow-water habitat hiding in the vegetation.	Found only in Clear Lake and tributaries of Lake County.	None
Clear Lake tule perch	*Hysterocarpus traskii lagunae*	G5T3, S3 - CSSC	Late winter.	Aquatic	Low-elevation lakes, streams, and estuarine environments. Typically require cool, well-oxygenated water.	Require cool, well-oxygenated water. Prefer water temperatures below 22°C.	Endemic to Clear Lake; likely absent from Lower Blue Lake, still common in Upper Blue Lake.	None
Sacramento perch	*Archoplites interruptus*	G1, S1 - ATH | CSSC | IUCN	Spawn from March through early August when water temperatures range from 18-29°C.	Aquatic | Sacramento /San Joaquin flowing waters | Sacramento /San Joaquin standing waters	Historically found in the sloughs, slow-moving rivers, and lakes of the Central Valley.	Prefers warm water. Aquatic vegetation is essential for young. Tolerates wide range of physio-chemical water conditions.	Russian River watershed.	None

COMMON NAME	SCIENTIFIC NAME	STATUS	BREEDING SEASON	HABITATS	GENERAL HABITAT	MICROHABITAT	RANGE	POTENTIAL TO OCCUR
INSECTS								
Blennosperma vernal pool andrenid bee	*Andrena blennospermatis*	G2, S1		Vernal pools	Bees nest in the uplands around vernal pools.	This bee is oligolectic on vernal pool Blennosperma.		Unlikely
Brownish dubiraphian riffle beetle	*Dubiraphia brunnescens*	G1, S1		Aquatic	Inhabits exposed, wave-washed willow roots.		Known only from the NE shore of Clear Lake, Lake County.	Unlikely
Obscure bumble bee	*Bombus caliginosus*	G2G3, S1S2 - IVU	Active February to 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 Central Valley.	Unlikely
Western bumble bee	*Bombus occidentalis*	G3, 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
MAMMALS								
American badger	*Taxidea taxus*	G5, S3 - CSSC | ILC	Mating occurs in late summer or early autumn, followed by delayed implantation.	Broadleaved upland forest | Cismontane woodland | Closed-cone coniferous forest | Coastal bluff scrub | Coastal dunes | Coastal	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils.	Needs sufficient food, friable soils, and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	Statewide except for humid coastal forests of Del Norte CO., and a portion of Humboldt Co.	Moderate

COMMON NAME	SCIENTIFIC NAME	STATUS	BREEDING SEASON	HABITATS	GENERAL HABITAT	MICROHABITAT	RANGE	POTENTIAL TO OCCUR
				prairie | Coastal scrub | Freshwater marsh | Lower montane coniferous forest | Marsh & swamp | Meadow & seep | North coast coniferous forest | Old growth | Redwood | Riparian forest | Riparian scrub | Riparian woodland | Salt marsh | Valley & foothill grassland				
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.	Unlikely
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	Forested habitats in the Sierra Nevada, Cascade, and Coast ranges, with scattered observations from forested areas in the Transverse Range.	Wide variety of coniferous and mixed woodland habitat.	Canada to northern Mexico.	Moderate

COMMON NAME	SCIENTIFIC NAME	STATUS	BREEDING SEASON	HABITATS	GENERAL HABITAT	MICROHABITAT	RANGE	POTENTIAL TO OCCUR
				coniferous forest | North coast coniferous forest | Upper montane coniferous forest				
Pallid bat	*Antrozous pallidus*	G4, S3 - BLM | CSSC | ILC | USFS	Mating occurs between late October and February. Young are born from April - July with peak birthing in May and June.	Chaparral | Coastal scrub | Riparian woodland | | Upper montane coniferous forest | Valley & foothill grassland	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting.	Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	Statewide; once common now uncommon in CA.	Unlikely
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	Throughout California in a wide variety of habitats. Most common in mesic sites.	Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.	Statewide; once common now uncommon.	Unlikely
MOLLUSKS								
Western ridged mussel	*Gonidea angulata*	G3, S2	Reproduction begins in spring.	Aquatic	Primarily creeks and rivers and less often lakes.	Prefer constant flow with low gradient, found on a wide variety substrate.	Originally in most of state, now extirpated from Central and Southern CA.	Unlikely

COMMON NAME	SCIENTIFIC NAME	STATUS	BREEDING SEASON	HABITATS	GENERAL HABITAT	MICROHABITAT	RANGE	POTENTIAL TO OCCUR
REPTILES								
Western pond turtle	*Emys marmorata*	G3G4, S3 - BLM | CSSC | IVU | USFS	Mating in April-May.	Aquatic | Artificial flowing waters | Klamath/North coast flowing waters | Klamath/North coast standing waters | Marsh & swamp | Sacramento/San Joaquin flowing waters | Sacramento/San Joaquin standing waters | South coast flowing waters | South coast standing waters | Wetland	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation.	Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	N. CA to British Columbia (west of Cascades/ Sierra Crest).	Unlikely

	Status Definitions:
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**

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
Potential to Occur:	
None	No habitat components meeting the species requirements are present.
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 were observed on the site or have been recorded (database observation) on the site in the recent past.

Appendix C. Observed Plants

Family	Scientific Name	Common Name
Dryopteridaceae - Wood Fern Family		
	Dryopteris arguta	California wood fern
	Polystichum munitum	western sword fern
Pteridaceae - Brake Fern Family		
	Pentagramma triangularis subsp. *triangularis*	goldenback fern
GYMNOSPERMS		
Taxaceae - Yew Family		
	Torreya californica	California nutmeg
MAGNOLIIDS		
Lauraceae - Laurel Family		
	Umbellularia californica	California bay
EUDICOTS		
Adoxaceae - Muskroot Family		
	Sambucus nigra subsp. *caerulea*	blue elderberry
Anacardiaceae - Sumac Family		
	Toxicodendron diversilobum	poison oak
Apiaceae - Carrot Family		
	Anthriscus caucalis	bur-chervil
	Osmorhiza berteroi	sweet cicley
	Sanicula crassicaulis	gamble weed
	Torilis arvensis	Japanese hedge parsley
Asteraceae - Aster Family		
	Adenocaulon bicolor	trail plant, silver arrow
	Artemisia douglasiana	mugwort
	Carduus pycnocephalus	Italian thistle
	Cirsium vulgare	bull thistle
	Hieracium albiflorum	hawkweed
Boraginaceae - Borage Family		
	Adelinia grande	hound's tongue
Brassicaceae- Mustard Family		
	Cardamine sp.	milk maids
Caprifoliaceae - Honeysuckle Family		
	Lonicera hispidula	honeysuckle
Caryophyllaceae - Pink Family		
	Silene laciniata subsp. *californica*	Cardinal catchfly
	Spergularia rubra	sand-spurrey
	Stellaria media	common chickweed
Ericaceae - Heath Family		
	Arbutus menziesii	madrone
Fabaceae - Pea Family		
	Cercis occidentalis	redbud
Fagaceae - Beech Family		
	Notholithocarpus densiflorus subsp. *densiflorus*	tan oak
	Quercus berberidifolia	scrub oak

	Quercus kelloggii	black oak
	Quercus lobata	valley oak
	Quercus wislizeni subsp. *wislizeni*	interior live oak
Grossulariaceae - Gooseberry Family		
	Ribes californicum subsp. *californicum*	hillside gooseberry
Lamiaceae - Mint Family		
	Stachys rigida subsp. *quercetorum*	hedge nettle
Montiaceae - Montia Family		
	Claytonia sp.	miner's lettuce
Myrsinaceae - Myrsine Family		
	Lysimachia latifolia	star flower
Philadelphaceae - Mock Orange Family		
	Whipplea modesta	yerba de selva, modesty
Plantaginaceae - Plantain Family		
	Plantago lanceolata	English plantain
Polemoniaceae - Phlox Family		
	Navarretia intertexta subsp. *intertexta*	needle-leaved navarretia
Ranunculaceae - Buttercup Family		
	Ranunculus sp.	buttercup
	Ranunculus occidentalis	western buttercup
Rosaceae - Rose Family		
	Cercocarpus betuloides	birch-leaf mt mahogany
	Rubus armeniacus (R. discolor)	Himalayan blackberry
	Rubus leucodermis	western raspberry
Rubiaceae - Madder Family		
	Galium porrigens subsp. *porrigens*	climbing bedstraw
Sapindaceae - Soapberry Family		
	Acer macrophyllum	big leaf maple
	Aesculus californica	California buckeye
Scrophulariaceae - Figwort Family		
	Verbascum thapsus	woolly mullein
Solanaceae - Nightshade Family		
	Solanum xanti	nightshade
Verbenaceae - Vervain Family		
	Vitis californica	California grape
MONOCOTS		
Liliaceae - Lily Family		
	Prosartes hookeri	Hooker's fairybell
Poaceae - Grass Family		
	Bromus commutatus	hairy chess
	Bromus madritensis	foxtail chess
	Cynosurus cristatus	crested dogtail
	Dactylis glomerata	orchard grass
	Elymus glaucus subsp. *glaucus*	blue wildrye
	Gastridium phleoides	nit grass
	Melica sp.	melic grass