Coastal Act Compliance Report

Caspar Point Subdivision
T.R. Paradise & F. Davidson
12521 Seadrift Avenue
Caspar, CA 95420
Mendocino County

KJELDSEN BIOLOGICAL CONSULTING
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For

T. Paradise and F. Davidson

July 2016
Updated August 2018

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PROJECT NAME: Tom Paradise and Fiona Davidson
Single Family Residence
12521 Seadrift Avenue
Caspar, CA 95420

PROPERTY OWNER: T. Paradise and F. Davidson

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PERIOD OF STUDY September 2015 - June 2016

Updated 2018 as per California Department of Fish and Wildlife Comments and site visit July 18, 2018.

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EXECUTIVE SUMMARY

This study was conducted at the request of T. Paradise and F. Davidson, as background information necessary for project permits and regulatory compliance. The project proposes the construction of a residence on a lot.

The findings presented are the result of an onsite review and analysis of background documentation available. Our field study was conducted from September 2015 to June 2016. Our findings are the following:

- The project proposes a single family residence within an existing 2.0-acre sub-division lot;
- The lot is an interior lot surrounded by developed landscape (residences and access roads);
- The habitat on the site consists of native tree cover of shore pine (*Pinus contorta* var. *contorta*), wax myrtle and tan oak, shrub understory of huckleberry and non-native introduced species and a herbaceous layer of ferns, grasses, sedges and non-native species. All plants and animals identified on the property are listed in Appendix A;
- The vegetation alliance on the site is Forest or Woodland Alliance of *Pinus contorta* ssp. *contorta* Shore Pine Forest. This alliance is listed as an ESHA in the Mendocino coastal zone. The present site conditions show a single age class of this Woodland Alliance. Historic photographs of the Caspar Mill show the site as a treeless lumber storage area;
- No special-status plant or animal species were identified on the property;
- The California Department of Fish and Wildlife Natural Diversity Data Base shows records of several special-status plant species in the vicinity of the property;
- No streams or drainages with a definable bed and or bank are present on the property. A seasonal wetland swale that conveys water from upland adjoining properties traverses the site from the northeast corner to Seadrift Avenue. This seasonal wetland swale holds and conveys water during the rainy season and supports wetland plants. This seasonal wetland swale meets the California Coastal Commission definition as a wetland;
- The site is within a coastal terrace that has a gentle slope to the southwest. Drainage from the site is into a roadside ditch along Seadrift Avenue. A culvert under Seadrift Avenue conveys seasonal stormwater to an open drainage on the south side of Seadrift Avenue;

- We did not identify any nesting or roosting habitat for local avian species or bats on the property. The site does not show any evidence of function as a significant wildlife corridor;
- There was no evidence to indicate that the project would significantly disrupt any wildlife dens, aquatic life, bat roosting, bird nesting or wildlife corridors;
- We find that there is no reason to recommend any follow-up surveys for specific biological, or botanical species and no need for a certified wetland delineation.

The proposed project location is in the least environmentally sensitive area. A Buffer Zone Reduction Analysis is included to reduce the required 100-foot buffer to 50-feet from the Seasonal Wetland Swale.

Recommendations

Recommendation 1.1: Targeted removal of only those species that are within the footprint of the proposed footprint. Erect and maintain high-visibility construction fencing delineating the boundary between selected vegetation removal/ground-disturbance and non-removal areas throughout the construction period.

Recommendation 1.2 Prior to any ground disturbing or tree clearing, construction fence should be installed to prevent any intrusion into the 50 ft. buffer zone along the Seasonal Wetland Swale ESHA on the east side of the property.

Recommendation 1.3 Prior to any ground disturbing or tree clearing, construction fencing should be installed outside of the building envelope to protect the Shore Pine ESHA.

Recommendation 1.4 Where feasible, utilize the proposed footprint/proposed development area for staging and all construction materials.

Recommendation 1.5 Construction worker parking must be within the fenced construction area or off site.

Recommendation 1-6 Implementation of standard erosion best management practices such as straw waddles, silt fencing, etc. to prevent sediment migration. Where feasible, conduct work during the dry season to reduce sediment migration. Reseed and/or replant with fast-growing native herbaceous species to reinforce areas of loosened or exposed soil.

Recommendation 1.7 Replacement planting of Shore Pine at a one to one ratio on portions of the property on the east side of the parcel. Replacement plantings will provide for a new generation of Shore Pines replacing the existing age class that is showing evidence of decline and dead trees.

Recommendation 1.8 Retain the existing vegetation outside of the footprint in a natural state preserving a portion of the Shore Pine ESHA

Recommendation 1.9 During construction, materials, including but not limited to lumber,

concrete, finish wares, hand tools, power tools, generators, vehicles, heavy equipment, should be staged within the proposed driveway. Spill prevention devices should be utilized for all toxic liquids including but not limited to gasoline, diesel, motor oil, solvents, paints, and herbicides.

Recommendation. 2.0 Construction fencing should be installed along the 50-ft. buffer zone of the Wetland Swale ESHA to prevent any intrusion into this buffer zone during construction.

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A. INTRODUCTION

This study was conducted at the request of T. Paradise and F. Davidson, as background information necessary for permits and regulatory compliance.

The application proposes the construction of a single family residence on an interior lot of the Caspar Point Subdivision. The 2.0-acre lot is on the corner of Seadrift Avenue and Pacifica Drive on the west side of State Highway 1. The site is within the USGS Mendocino Quadrangle. Plate I illustrates the project site. Plate III provides an aerial photograph of the site.

The findings presented are the results of on-site Scoping Survey and analysis of background materials conducted by Kjeldsen Biological Consulting.

A.1 Purpose

The purpose of this report is to identify and provide an analysis of potential impacts of the project based on an on-site study of the property as listed below:

1. Provide a brief description of the proposed development;
2. Literature search to identify special-status species identified by the California Department of Fish and Wildlife (DFW), California Native Plant Society (CNPS), U.S. Fish and Wildlife Service, and wildlife species protected by the Migratory Bird Treaty Act;
3. Provide a list of special-status plant species (based on a Quadrangle and region listed by California Native Plant Society (CNPS) and California Department of Fish and Wildlife (CDFW), California Natural Diversity Database (CNDDB) search) including current Federal/State endangerment, Global/State ranking, and CNPS ranking where applicable;
4. Provide a description of plant communities present, and their current Federal/State endangerment, Global/State ranking, and CNPS ranking, and identify the plant communities/alliances present, including current Federal/State endangerment, Global/State ranking, and CNPS ranking where applicable, and quality/quantity of habitat;
5. Identify any California Coastal Commission listed Environmentally Sensitive Habitat Areas (ESHA) on the property or within the footprint of the proposed development: If ESHA is identified provide a Buffer Analysis;
6. Provide a description of wetland, riparian, stream, and other water bodies with potential for presence of associated wildlife species including nesting birds if present;
7. Recommend follow-up surveys, including specific biological, botanical and wetland delineation if necessary.

B. METHODOLOGY

Our fieldwork for the proposed project was conducted on September 4, 2015, January 24, February 6, 15, March 22, April 3, May 15, and June 12, 2016. Our fieldwork was conducted by walking the site and around the perimeter the property. Biological resources were recorded in field notes and the site conditions documented with photographs.

B.1 Project Scoping

The scoping for the project considered location and type of habitat and or vegetation types present on the property or associated with potential special-status plant species known for the Quadrangle, surrounding Quadrangles, the County or the region. Our scoping also considered records in the most recent version of the California Department of Fish and Wildlife; California Natural Diversity Data Base (CDFW CNDDB Rare Find-5), Biogeographic Information and Observation System Online mapping tool, the California Native Plant Society (CNPS) Electronic Inventory of Rare or Endangered Plants and U.S Fish and Wildlife species list for the Quadrangle. "Target" special-status species are those listed by the State, the Federal Government or the California Native Plant Society or considered threatened in the region. Our scoping is also a function of our familiarity with the local flora and fauna as well as previous projects on other properties in the area.

We also considered species that are known for the surrounding Quadrangles which would potentially be present based on habitat available on property (Appendix B). The special-status species listed in Appendix B with habitat requirements that are present on the project sites or immediate vicinity are considered and included in our findings and comments below. Those species with specific habitat conditions not present within the project footprint such as vernal pools or hot springs are not discussed.

A list of special-status species identified for the project site by the California Department of Fish & Wildlife (CDFW) Natural Diversity Data Base Rare Find, California Native Plant Society (CNPS) based on a surrounding quadrangle search, and U.S. Fish and Wildlife Service list for the Quadrangles included as an appendix A.

Google historic aerial photographs as well as historic photographs of the Caspar Mill were reviewed to provide a context for biological analysis of the project site.

B.2 Plants, Animals, Sensitive Communities

Plants Field surveys were conducted identifying and recording all species on the site and in the near proximity. The small size of the property facilitated our field studies.

The fieldwork for identifying special-status plant species is based on our knowledge and many years of experience in conducting special-status plant species surveys in the region. Plants were identified in the field or reference material was collected when necessary, for

verification using laboratory examination with a binocular microscope and reference materials. Herbarium specimens from plants collected on the project site were made when relevant. Voucher material for selected individuals is in the possession of the authors and shown in the attached plant list with an @ in front of the taxon. All plants observed (living and/or remains from last season's growth) were recorded in field notes and are listed in Appendix A.

Typically, blooming examples are required for identification however; it is not the only method for identifying the presence of or excluding the possibility of rare plants. Vegetative morphology and dried flower or fruit morphology, which may persist long after the blooming period, may also be used. Skeletal remains from previous season's growth can also be used for identification. Some species do not flower each year or only flower at maturity and therefore must be identified from vegetative characteristics. For some plants unique features such as the aromatic oils present are key indicator. For some trees and shrubs with unique vegetative characteristics flowering is not needed for proper identification. The vegetative evaluation as a function of field experience can be used to identify species outside of the blooming period to verify or exclude the possibility of special-status plants in a study area.

Habitat is also a key characteristic for consideration of special-status species in a study area. Many special-status species are rare in nature because of their specific and often very narrow habitat or environmental requirements. Their presence is limited by specific environmental conditions such as: hydrology, microclimate, soils, nutrients, interspecific and intraspecific competition, and aspect or exposure. In some situations special-status species particularly annuals may not be present each year and in this case one has to rely on skeletal material from previous years. A site evaluation based on habitat or environmental conditions is therefore a reliable method for including or excluding the possibility of special-status species in an area.

Animals were identified in the field by their sight, sign, or call. Our field techniques consisted of surveying the area with binoculars and walking the perimeter of the project site. Existing site conditions were used to identify habitat, which could potentially support special status animal species. All animal life was recorded in field notes and is presented in Appendix A.

Trees were surveyed to determine whether occupied raptor nests were present within the proximity of the project site (i.e., within a minimum 500 feet of the areas to be disturbed). Surveys consisted of scanning the trees on the property (500 ft +) with binoculars searching for nest or bird activity. Our search was conducted from the property and by walking under existing trees looking for droppings or nest scatter from nests that may be present that were not observable by binoculars.

Aerial photos were viewed to look at the habitat surrounding the site and the potential for wildlife movement from adjoining properties onto or through the site.

Sensitive Communities
CDFW Natural Diversity Data Base uses environmentally sensitive plant communities for plant populations that are rare or threatened in nature. Sensitive habitat is defined as any area which meets one of the following criteria: (1) habitats containing or supporting "rare and endangered" species as defined by the State Fish and Wildlife Commission, (2) all perennial and intermittent streams and their tributaries, (3) coastal tide lands and marshes, (4) coastal and offshore areas containing breeding or nesting sites and coastal areas used by migratory and resident water-associated birds for resting areas and feeding, (5) areas used for scientific study and research concerning fish and wildlife, (6) lakes and ponds and adjacent shore habitat, (7) existing game and wildlife refuges and reserves, and (8) sand dunes.

Jurisdictional Wetlands
The term "Wetland" is defined as those areas, which are inundated or saturated, by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas (Part 230-Section 404 (b) (1), section 230.3 Federal Register, Vol. 45, No. 249). Wetlands also include less conspicuous types such as vernal pools and other seasonal wetlands.

Seasonal Wetlands
In many regions especially in western states, depression areas occur which have wetland indicators of all three parameters during the wetter portion of the growing season, but normally lack wetland indicators of hydrology and/or vegetation during the drier portion of the growing season. Obligate hydrophyte and facultative wetland plant species normally are dominant during the wetter portion of the growing season, while upland species (annuals) may be dominant during the drier portion of the growing season. These areas may be inundated during the wetter portion of the growing season, realizing that wetland hydrology indicators may be totally lacking during the drier portion of the growing season.

Definition of Wetlands under the California Coastal Commission
The California Coastal Commission (CCC), through adoption of the California Coastal Act, (CCA) regulates activities within wetlands that occur within the Coastal Zone. The Coastal Commission's definition and interpretation of wetlands differs from the federal definition. Under normal circumstances, the federal definition requires all three wetland identification parameters to be met, whereas the Coastal Commission definition (using the Cowardin [1979] definition) requires the presence of at least one of these parameters. The Coastal Commission's definition requires that wetlands must have one or more of the following three attributes:

(1) At least periodically, the land supports predominantly hydrophytes (at least 50 percent of the aerial vegetative cover);
(2) The substrate is predominantly undrained hydric soil; and
(3) The substrate is non-soil and is saturated with water or covered by shallow water at some time during the growing season (Cowardin et al., 1979).

Wetlands are lands where the water table is at, near, or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes, and shall also include those types of wetlands where vegetation is lacking and soil is poorly developed or absent as a result of frequent or drastic fluctuations of surface water levels, wave action, water flow, turbidity or high concentrations of salt or other substance in the substrate. Such wetlands can be recognized by the presence of surface water or saturated substrate at some time during each year and their location within, or adjacent to, vegetated wetlands or deepwater habitats. The California Coastal Act and Mendocino County Local Coastal Plan (LCP) define wetlands as: lands within the Coastal Zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens. Public Resources Code Section 30121.

The California Coastal Commission (CCC) considers this definition as requiring the observation of one diagnostic feature of a wetland, such as wetland hydrology, dominance by wetland vegetation (hydrophytes), or presence of hydric soils, as a basis for asserting jurisdiction under the CCA. In addition to the above definition, the Statewide Interpretive Guidelines for Identifying and Mapping Wetlands and Other Wet Environmentally Sensitive Habitat Areas (CCC 1981) provide technical criteria for use in identifying and delineating wetlands and other ESHAs within the Coastal Zone. The technical criteria presented in the guidelines are based on the CCA definition and indicate that wetland hydrology is the most important parameter for determining a wetland, recognizing that:

> *"the single feature that most wetlands share is soil or substrata that is at least periodically saturated with or covered by water, and this is the feature used to describe wetlands in the Coastal Act. The water creates severe physiological problems for all plants and animals except those that are adapted for life in water or in saturated soil, and therefore only plants adapted to these wet conditions (hydrophytes) could thrive in these wet (hydric) soils. Thus, the presence or absence of hydrophytes and hydric soils make excellent physical parameters upon which to judge the existence of wetland habitat areas for the purposes of the Coastal Act, but they are not the sole criteria."*

The Technical Criteria requires that saturation of soil in a wetland must be at or near the surface continuously for a period of time. The meaning of "at or near the surface" generally is considered to be approximately one-foot from the surface or less (the root zone), and the saturation must be continuously present for a period of time (generally more than two weeks) in order to create the necessary soil reduction (anaerobic) processes that create wetland conditions. For example, water from rain during a storm that causes saturation near the surface but then evaporates or infiltrates to 18 inches or deeper below the surface shortly after the storm does not meet the generally accepted criteria for wetland hydrology.

The presence of wetland classified plants or the presence of hydric soils (generally referred to as the "one parameter approach") can be used to identify an area as a wetland in the Coastal Zone. There is a correlation between the presence of wetland plants, wetland hydrology, and/or hydric soils occurring together, especially in natural undisturbed areas, and in many

cases where one of these parameters is found (e.g., wetland plants), the other parameters will also occur. But there are situations which can result in the presence of wetland classified plants without wetland conditions, and these areas are not wetlands. Where these conditions occur, the delineation study must carefully scrutinize whether the wetland classified plants present are growing as hydrophytes, reducing (anaerobic) conditions caused by the presence of wetland hydrology, or for some other (non-wetland) reason. Examples may include wetland-classified plants which are also salt-tolerant (e.g., alkali heath) that may be responding to either wetland conditions or saline soil conditions, but not necessarily both, and deep-rooted trees (e.g., willows) which are able to tap into deep groundwater sources and can grow in dry surface soils, but are also found in wetland conditions where surface water is present. Hydric soils can also occur in upland areas, especially in areas where historic disturbances may have exposed substratum, or in densely vegetated grasslands (Mollisols). Similarly, the delineation must determine if the hydric soil indicators are the result of frequent anaerobic conditions or of non-wetland conditions.

"Tributaries to Waters of the U.S."
Tributaries to waters of the U.S. are defined as creeks, streams, rivers, and seasonal stream channels with a definable bed and bank (ACOE and CDFW).

Waters of the U. S. (WOTUS)
Waters of the U.S. are defined as wetlands, ponds, lakes, creeks, streams, rivers, ephemeral drainages, ditches and seasonally ponded areas (EPA and ACOE Rule August 28, 2015). Seasonal stream channels with a definable bed and bank fall within the jurisdiction of EPA, ACOE and CDFW. "Waters of the State" are determined by the evaluation of continuity, "ordinary high water mark," definable bed and bank, evidence of or ability to transport sediment and/or a blue line on USGS Quadrangle Map.

Environmentally Sensitive Habitat Area (ESHA)
The project site was reviewed to identify any ESHA as defined in the Mendocino County Zoning Code (CZC). Section 20.496.010 defines 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. In Mendocino County environmentally sensitive habitat areas include, but are not limited to anadromous fish streams, sand dunes, rookeries and marine mammal haul-out areas, wetlands, riparian areas, areas of pygmy vegetation that contain species of rare or endangered plants, and habitats of rare and endangered plants and animals.

The Mendocino County Local Coastal Plan (LCP) and California Coastal Commission (CCC) Guidelines contain definitions for specific types of ESHAs, including: wetlands, estuaries, streams and rivers, lakes, open coastal waters and coastal waters, riparian habitats, other resource areas, and special-status species and their habitats. For the purposes of this report, we have taken into consideration any areas that may meet the definition of ESHA as defined by the CCA, CCC Guidelines, or the Mendocino County LCP.

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C. RESULTS / FINDINGS

The site is located north west of the community of Caspar. The project area is within a geographic subdivision of the larger California Floristic Province, which is strongly influenced by the Pacific Ocean. The region is in a climate Zone "Ocean influenced Northern and Central California" characterized as an area with ocean or cold air influence.

The Study Area is located in the coastal fog belt of Mendocino County. Average annual precipitation for Fort Bragg, located approximately 12 aerial miles north, is 41.25 inches, with the majority falling as rain and fog drip in the winter months (December through March). The mean daily low and high temperatures in degrees Fahrenheit range from 39.5 in December to 66.4 in August/September. The property is within the influence of ocean salt spray.

The property is separated from the coastline by subdivision access roads and developed lots. The 2-acre interior lot is part of a subdivision that was created on lands of the Caspar Mill which ceased operation in 1955. Historic photographs show that the site was used for lumber drying and storage prior to loading on ships for ocean transport (Wurm, 1986). It was later used as a horse pasture.

C.1 Biological Setting

The proposed building site is on single family residential lot. Our survey covered the entire property and the proposed project footprint, and immediate surrounding habitat. The aerial photo illustrates the site (Plate III) and the photographs (Figures 1 to 4) that follow further document existing conditions. The rectangular lot is at the corner of Seadrift Avenue and Pacifica Drive. There are single family residences surrounding the property on similar or larger parcels.

Figure 1. View of the property illustrating the Shore Pine Woodland ESHA and understory.

Figure 2. View of the wetland swale that traverses from the northeast corner to the roadside ditch on Seadrift Avenue.

Photo 3. View of the parcel from Seadrift Avenue in the area where the residence is proposed.

C.2 Special-status Species

Special-status organisms are plants or animals that have been designated by Federal or State agencies as rare, endangered, or threatened. Section 15380 of the California Environmental Quality Act [CEQA (September, 1983)] has a discussion regarding non-listed (State) taxa. This section states that a plant (or animal) must be treated as Rare or Endangered even if it is not officially listed as such. If a person (or organization) provides information showing that the taxa meets the State's definitions and criteria, then the taxa should be treated as such.

A map from the CDFW CNDDB Rare Find-3 shows known special-status species in the proximity of the project as shown on Plate II. These taxa as well as those listed in Appendix B (Special-status Species known for the Quadrangle and Surrounding Quadrangles) were considered as part of our scoping for the project site and property.

Special-status plant species are limited in nature and are rare as a result of specific growth requirements or conditions and or biological factors such as competition and succession. Historic land use and introduction of non-native species is also a significant contributing factor responsible for their scarcity.

Table I. Information and analysis of target plant species. The taxa included in the table are selected based on the CDFW CNDDB occurrence within 5 miles of the project site and species known from the surrounding Quadrangles or listed by USFWS (The status or ranking is presented in Appendix B). Columns are arranged alphabetically by scientific name.

Scientific Name Common Name	**Species Habitat Association or Plant Community**	**Habitat present**	**Bloom Time**	**Obs. on Site**	**Analysis of Habitat for presence or Absence**
Abronia umbellate ssp. breviflora Sand Verbena	Sand Dunes Coastal Strand	No	March-July	No	Lack of habitat.
Agrostis blasdalei Blasdale's Bent Grass	Coastal bluff scrub	No	May-June	No	Requisite habitat and vegetation associates absent.
Arctostaphylos mendocinoensis Pygmy manzanita	Pygmy Forest.	No	May – June	No	Requisite habitat and vegetation associates absent.
Astragalus agnicidus Humboldt Milk Vetch	Broadleaved Upland Forest, North Coast Coniferous Forest Disturbed Areas.	No	June – Sept.	No	Requisite habitat and vegetation associates absent.
Blennosperma nanum var. robustum Point Reyes Blennosperma	Coastal Bluff	No	April-June	No	Absence of requisite habitat.
Calystegia purpurea ssp. *saxicola* Coastal Bluff Morning-glory	Coastal dunes, Coastal Scrub.	No	May-August	No	Requisite habitat and vegetation associates absent.
Campanula californica Swamp Harebell	Seeps in Woodlands.	Yes	July - August	No	Species was not observed during our spring survey. Historic use of site as horse pasture and lumber storage yard.
Caryx californica California Sedge	Bogs and Fens.	Yes	May-Aug.	No	No bog or fen present. Species was not observed during our spring survey.
Caryx lenticularis var. *limonophila* Lagoon Sedge	Wet Places.	Yes	June-Aug.	No	Species was not observed during our spring survey. Historic use of site as horse pasture and lumber storage yard.

Scientific Name Common Name	Species Habitat Association or Plant Community	Habitat present	Bloom Time	Obs. on Site	Analysis of Habitat for presence or Absence
Carex livida Livid Sedge	Bogs and Fens.	Yes	June	No	No bog or fen present habitat. Species was not observed during our spring survey.
Carex lyngbyei Lyngbey's Sedge	Brackish Waters.	No	May-July	No	Lack of brackish waters.
Carex saliniformis Deceiving Sedge	Coastal Prairie.	No	June	No	Requisite habitat and vegetation associates absent.
Castilleja ambigua ssp humboldtiensis Humboldt Bay Owl's-clover	Marshes and Swamps.	No	April-Aug.	No	Drainage on site is seasonal. Historic use of site as horse pasture and lumber storage yard
Castilleja mendocinensis Mendocino Coast Indian Paintbrush	Coastal Bluff Scrub, Closed Cone Coniferous Forest, Coastal dunes, Coastal Prairie.	No	April – Aug.	No	Requisite habitat and vegetation associates absent. Species was not observed during our spring survey.
Castilleja litoralis Oregon Coast Paintbrush	Dry Coastal Bluffs.	No	May – Aug.	No	Requisite habitat absent.
Chorizanthe howellii Howell's Spineflower	Coastal Dunes	No	May-July	No	Absence of typical habitat and vegetation associates.
Clarkia amoena ssp. *whittneyi* Whitney's Farewell-to-spring	Open Coastal Scrub	No	July-Aug.	No	Absence of requisite habitat.
Cornus canadensis Bunchberry	Moist Forests, Bogs	No	May-July	No	Lack of Habitat. Species was not observed during our spring survey.
Cuscuta pacifica var. *papillata* Mendocino Dodder	Grows on herbs in coastal inter-dune depressions	No	July-Oct.	No	Absence of typical habitat and vegetation associates.
Erigeron supplex Narrow-leaved Daisy	Coastal Bluff Scrub, Coastal Prairie	No	May-July	No	Absence of requisite habitat required for presence.
Erysimum concinnum Bluff Wallflower	Coastal Bluffs, Dunes, Coastal Prairie	No	March -June		Lack of suitable habitat

Scientific Name Common Name	**Species Habitat Association or Plant Community**	**Habitat present**	**Bloom Time**	**Obs. on Site**	**Analysis of Habitat for presence or Absence**
Erysimum menziesii Menziesii Wallflower	Coastal Dunes, Headlands, Cliffs	No	Jan.-Aug.	No	Lack of suitable habitat.
Gilia capitata ssp. chamissonis Blue Coast Gilia	Coastal Strand, Dunes	No	April-July	No	Absence of requisite habitat.
Gilia millefoliata Dark-eyed Gilia	Coastal Strand, Dunes	No	April-July	No	Absence of requisite habitat.
Hespervax sparsiflora var. *brevifolia* Short –leaved Flax	Coastal Bluff Scrub, Coastal Dunes 0-250 Meters	No	March-June	No	Requisite habitat and edaphic requirements absent on the site or in the immediate vicinity.
Hesperocyparis pygmaea =(Callitropsis) Pygmy cypress	Closed-cone Coniferous Forest (podzol-like soil)	No	Tree	No	Requisite habitat and vegetation associates absent.
Horkelia marinensis Point Reyes Horkelia	Coastal Dunes	No	May-Sep.	No	Absence of edaphic conditions required for presence.
Hosackia gracilis (=Lotus formissimus) Harlequin Lotus	Wet meadows near coast	Yes	April-June		Drainage on site is seasonal. Species was not observed during our spring survey.
Juncus supiniformis Hair-leaved Rush	Bogs and Fens	No	April-June	No	No evidence of a bog or fen. Absence of requisite mesic habitat.
Kopsiopsis hookeri Small Ground Cone	Open Woodland, Mixed Conifer Forest host plant *Gaultheria shallon*	No	May	No	Absence of host plant.
Lasthenia burkei Burke's Goldfields	Vernal Pools	No	April –June	No	Requisite aquatic habitat absent on the site or in the immediate vicinity.
Lasthenia californica ssp. *bakeri* Baker's Goldfields	Open Grasslands Closed-cone Coniferous Forest openings	No	April-Oct.	No	Requisite habitat and vegetation associates absent.

Scientific Name Common Name	Species Habitat Association or Plant Community	Habitat present	Bloom Time	Obs. on Site	Analysis of Habitat for presence or Absence
Lasthenia californica ssp macrantha Perennial Goldfields	Coastal Bluff, Coastal Dunes	No	Jan-Nov.	No	Absence of typical habitat and vegetation associates.
Lasthenia conjugens Contra Costa Goldfields	Wet Meadows, Vernal Pools	No	May-June	No	Lack of suitable mesic habitat.
Lilium maritimum Coast Lily	North Coast Coniferous Forests in bogs and marshes	No	May-July	No	Requisite habitat absent on the project site. Species was not observed during our spring survey.
Lycopodium clavatum Running-pine	North Coast Coniferous Forest, Marshes and Swamps	No	July-Aug.	No	Absence of typical habitat and vegetation associates.
Microseris borealis Northern Microseris	Bogs and Fens.	No	June-Sep.	No	Absence of requisite mesic habitat.
Mitellastra caulescens Leafy-stemmed Mitrewort	Wet Shady Areas.	No	May-July	No	Lack of Habitat
Packera bolanderi var. *bolanderi* Sea Coast Ragwort	Sand Barrens Coastal Scrub, North Coast Conifer Forests	No	June-July	No	Absence of requisite habitat.
Pinus contortus var. *bolanderi* Bolander's Beach Pine	Coastal Terrace White Sands of Pygmy Forest	No	NA	No	Not present the Pine on site is Shore Pine *Pinus contorta* var. *contorta*.
Puccinella pumila Dwarf Alkali Grass	Marshes and Flats.	No	July	No	Lack of habitat.
Ramalina thrausta Angle Hair Lichen	On Conifers in Forests with high humidity.	No	NA	No	Lack of suitable habitat.
Rhynchospora alba White Beaked-rush	Marshes and Swamps	No	July-Aug.	No	Absence of requisite mesic habitat on the site.
Sanguisorba officinalis Great Burnet	Bogs and Fens.	No	July-Oct.	No	Absence of requisite mesic habitat on the site.

Scientific Name Common Name	Species Habitat Association or Plant Community	Habitat present	Bloom Time	Obs. on Site	Analysis of Habitat for presence or Absence
Sidalcea malachroides Maple-leaved Checkerbloom	Broadleaved Upland Forest, Coniferous Forest; Woodlands And clearings near coast; often In disturbed areas	No	April-Aug.	No	Absence of typical habitat and vegetation associates.
Sidalcea malviflora ssp. *patula* Siskiyou Checkerbloom	Open Coastal Forests, Bluffs	No	May-Aug.	No	Lack of habitat.
Trifolium amoenum, Two-fork Clover	Coastal Bluff Scrub, Valley and Foothill Grassland (Sometimes Serpentinite)	No	April-June	No	Historical use of the site precludes presence. This species is vulnerable to disturbance and livestock grazing.
Trifolium trichocalyx Monterey Clover	Open Closed-cone Pine Woodland, Roadsides	No	April-June	No	Closed canopy, Lack of habitat.
Usnea longissima Long-beard Lichen	North Coast Coniferous Forest, Broadleaved Upland Forest; grows in the "redwood zone" on a variety of trees	No	N/A	No	Historic clearing of site precludes presence.
Viola paulistris Alpine Marsh Violet	Marshes, Stream Banks, Swamps	No	April-July	No	Lack of mesic habitat.

A total of 50 special-status plant species have been documented within the regional vicinity of the property. The potential for these species to occur within the Study Area are summarized in the table above including justification for concluding negative results during our field studies. Appendix B provides agency lists and their status. Of the special-status plant species that have been documented for the region we find that they do not have the potential to occur within the Study Area due to one or more of the following reasons:

- Hydrologic conditions necessary to support the special-status plant species are not present;
- Edaphic (soil) conditions necessary to support the special- status plant species are not present;
- Topographic conditions necessary to support the special-status plant species are not present;
- Unique pH conditions necessary to support the special-status plant species are not present;
- Associated vegetation communities necessary to support the special-status plant species are not present;
- Surrounding development and historic land use of the site and the vicinity; and
- The Study Area is geographically isolated (e.g. below elevation, coastal environs) from the documented range of the special-status plant species.

The following special status plant species known to occur close proximity (Plate II) are discussed below in detail:

Blasdale's Bentgrass (*Agrostis blasdalei*)
No indications for presence. CNPS Rank 1B. High Potential. Blasdale's bentgrass is a perennial graminoid in the grass family (Poaceae) that blooms from May to July. It typically occurs in bare or sparsely vegetated areas in coastal dune, coastal bluff scrub, and coastal prairie habitat at elevations ranging from 15 to 490 feet. Typical associated species include sweet vernal grass (*Anthoxanthum odoratum*), velvet grass (*Holcus lanatus*), tree lupine (*Lupinus arboreus*), manycolored lupine (*L. variicolor*), bracken fern (*Pteridium aquilinum*), seaside fleabane (*Erigeron glaucus*), sea lettuce (*Dudleya farinosa*), sea pink (*Armeria maritima*), and common yarrow (*Achillea millefolium*). Blasdale's bentgrass was not observed on the property.

Coastal Bluff Morning-glory (*Calystegia purpurata* ssp. *saxicola*)
No indications for presence. CNPS Rank 1B. Coastal bluff morning-glory is a perennial forb in the morning-glory family (Convolvulaceae) that blooms from May to September. It typically occurs on bluffs within coastal dune and coastal scrub habitat at elevations ranging from 30 to 330 feet. Typical associated species include Bishop pine (*Pinus muricata*), shore pine (*Pinus contorta ssp. contorta*), coyote brush (*Baccharis pilularis*), tree lupine (*Lupinus arboreus*), poison oak (*Toxicodendron diversilobum*), Douglas iris (*Iris douglasiana*), California blackberry (*Rubus ursinus*), sea lettuce (*Dudleya farinosa*), bracken fern (*Pteridium aquilinum*), ice plant (*Carpobrotus edulis*), seaside woolly sunflower (*Eriophyllum staechadifolium*), common velvet grass (*Holcus lanatus*), sweet vernal grass (*Anthoxanthum odoratum*), and little rattlesnake grass (*Briza maxima*). Coastal bluff morning glory was not found to occur within the Study Area.

California Sedge (*Carex californica*)
(Not Observed) CNPS Rank 2B. California sedge is perennial rhizomatous graminoid in the sedge family (Cyperaceae) that blooms from May to August, but is identifiable into fall based on fruit structures. It typically occurs in wet meadows and drier margins of marshes underlain by acidic soils with cemented hardpans in bog, fen, meadow, coastal prairie, meadow, marsh, and closed-cone coniferous forest (pygmy forest) habitat at elevations ranging from 290 to 1090 feet. This species has a wetland indicator status of facultative wetland (FACW) on the National Wetland Plant List. Typical associated species include pygmy cypress (*Hesperocyparis pygmaea*), Bolander's pine (*Pinus contorta ssp.bolanderi*), Bishop pine (*Pinus muricata*), Labrador tea (*Rhododendron diversilobum*), wax myrtle (*Morella californica*), Mendocino manzanita (*Arctostaphylos nummularia ssp. mendocinensis*), evergreen huckleberry (*Vaccinium ovatum*), bunchberry (*Cornus canadensis*), bracken fern (*Pteridium aquilinum*), and coast lily (*Lilium maritimum*).

Deceiving Sedge (*Carex saliniformis*)
(Not Observed) CNPS Rank 1B. Deceiving sedge is a perennial graminoid in the sedge family (Cyperaceae) that blooms from June to July, but is identifiable into August based on fruit and vegetative characters. It typically occurs in mesic areas of coastal prairie, coastal

scrub, meadows, seeps, and coastal salt marsh habitat at elevations ranging from 10 to 750 feet. This species has a wetland indicator status of facultative wetland (FACW) on the National Wetland Plant List. Typical associated species include marsh sandwort (*Arenaria paludicola*), slough sedge (*Carex obnupta*), witch grass (*Panicum acuminatum*), low bulrush (*Isolepis cernua*), golden-eyed grass (*Sisyrinchium californicum*), blue-eyed grass (*S. bellum*), bracken fern (*Pteridium aquilinum*), common velvet grass (*Holcus lanatus*), coastal tufted hair grass (*Deschampsia cespitosa* ssp. *holciformis*), California oat grass (*Danthonia californica*), strawberry (*Fragaria chiloensis*), hawkbit (*Leontodon saxatilis*), and Douglas iris (*Iris douglasiana*).

Mendocino Paintbrush (*Castilleja mendocinensis*)
(Not Observed) CNPS Rank 1B. This taxon is recorded in the CDFW CNDDB for bluffs near the property. Mendocino paintbrush is a perennial hemiparasitic forb in the broomrape family (Orobanchaceae) that blooms from April to August. It typically occurs on coastal bluff faces and near bluff edges within coastal bluff scrub, closed-cone coniferous forest, coastal dune, coastal prairie, and coastal scrub habitat at elevations ranging from 0 to 520 feet. This taxon is typically associated with shore pine (*Pinus contorta* ssp. *contorta*), Bishop pine (*P. muricata*), coyote brush (*Baccharis pilularis*), blue blossom (*Ceanothus thyrsiflorus* var. *thyrsiflorus*), sticky monkey (*Mimulus aurantiacus*), poison oak (*Toxicodendron diversilobum*), common yarrow (*Achillea millefolium*), coast angelica (*Angelica hendersonii*), varied lupine (*Lupinus variicolor*), sea lettuce (*Dudleya farinosa*), sea pink (*Armeria maritima* ssp. *californica*), coastal buckwheat (*Eriogonum latifolium*), Blasdale's bentgrass (*Agrostis blasdalei*), coast onion (*Allium dichlamydeum*), beach knotweed (*Polygonum paronychia*), seaside daisy (*Erigeron glaucus*), beach strawberry (*Fragaria chiloensis*), and common woolly sunflower (*Eriophyllum lanatum* var. *arachnoideum).*

Swamp Harebell (*Campanula californica*)
(Not Observed) - CDFW CNDDB Rare Find-5 map shows records of the swamp harebell near the parcel. The swamp harebell is identifiable by its vegetation and is common in coastal forest sites particularly where there has been recent disturbance. The forest litter and vegetation associates does not provide suitable habitat for this species. It is unlikely that this species would be present and it is concluded that additional surveys are not necessary.

Howell's Spineflower (*Chorizanthe howellii*)
(Not Observed) Federal Endangered, State Threatened, CNPS Rank 1B. Howell's spineflower is an annual forb in the knotweed family (Polygonaceae) that blooms from May to July. It typically occurs dunes, slopes, and grassy areas underlain by sandy substrates in coastal dune, coastal prairie, and coastal scrub habitat at elevations ranging from 0 to 115 feet. This plant is typically associated with beach suncup (*Camissoniopsis cheiranthifolia*), beach sage (*Artemisia pycnocephala*), round-headed Chinese houses (*Collinsia corymbosa*), Menzies' wallflower (*Erysimum menziesii ssp. menziesii*), dwarf plantain (*Plantago erecta*), European hair grass (*Aira caryophyllea*), rattlesnake grass (*Briza maxima*), and maritime brome (*Bromus maritimus*).

Short-leaved Evax (*Hesperevax sparsiflora* var. *brevifolia*)
(Not Observed) CNPS Rank 1B. Short-leaved flax is an annual forb in the sunflower family

(Asteraceae) that germinates and leafs-out in late winter, blooms from March to June, and senesces in late summer. It typically occurs on sandy substrate on bluffs and flats in coastal bluff scrub and coastal dune habitat at elevations ranging from 0 to 700 feet. Typical associatess include round-head Chinese houses (*Collinsia corymbosa*), beach suncup (*Camissoniopsis cheiranthifolia*), North Coast phacelia (*Phacelia insularis var. continentis*), seacoast angelica (*Angelica lucida*), beach sage (*Artemisia pycnocephala*), Howell's spineflower (*Chorizanthe howellii*), Mendocino paintbrush (*Castilleja mendocinensis*), seaside buckwheat (*Eriogonum latifolium*), and seaside daisy (*Erigeron glaucus*).

Perennial Goldfields (*Lasthenia californica* ssp. *macrantha*)
(Not Observed) CNPS Rank 1B Recorded in the CDFW CNDDB for costal bluffs near the site. Perennial goldfields are annual to perennial forbs in the sunflower family (Asteraceae) that bloom from January to February. It typically occurs on mesas, benches, and bluff faces in coastal bluff scrub, coastal dune, and coastal scrub at elevations from 15 to 1,690. Typica associated species include coyote brush (*Baccharis pilularis*), poison oak (*Toxicodendron diversilobum*), California blackberry (*Rubus ursinus*), brownie thistle (*Cirsium quercetorum*), Douglas iris (*Iris douglasiana*), sea lettuce (*Dudleya farinosa*), California buttercup (*Ranunculus californicus*), Pacific reed grass (*Calamagrostis nutkaensis*), Italian rye grass (*Festuca perennis*), selfheal (*Prunella vulgaris*), English plantain (*Plantago lanceolata*), dwarf checkerbloom (*Sidalcea malviflora*), beach strawberry (*Fragaria chiloensis*), narrow-leaf mule's-ears (*Wyethia angustifolia*), coast angelica (*Angelica hendersonii*), soap plant (*Chlorogalum pomeridianum*), and coast coyote thistle (*Eryngium armatum*).

Coast Lily (*Lilium maritimum*)
(Not Observed) CNPS Rank 1B.1. The coast lily is known from conditions similar to that of the parcel. The coast lily is identifiable by its vegetation and is common in coastal forest sites. This species reproduces from bulbs. Coast lily is in the lily family (Liliaceae) that blooms from May to August. It typically occurs on sandy, acidic often hummocky substrates derived from marine sediments and sedimentary rock in bogs, closed-cone coniferous forest. It is unlikely that this species would be present.

Thin-Lobed Horkelia (*Horkelia tenuiloba*)
(No evidence for Presence) CNPS Rank 1B.2. The thin-lobed horkelia is identifiable by its vegetation and is common in coastal forest sites. The nature of the project site does not provide suitable habitat for this species. It is unlikely that this species would be present and it is concluded that seasonal surveys are not necessary.

Table II. Information and analysis of target animal species. The taxa included in the table are selected based on the CDFW CNDDB Rare Find records for occurrence within 5 miles of the project site (see Plate II) and potential local target species. (The status or ranking is presented in Appendix B)..

Scientific Name **Common Name**	**Species Habitat Association or Plant Community**	**Habitat Present**	**Analysis of Habitat for presence or Absence**
Accipter gentilis Northern Goshawk	Nests in Old Growth or Mature Douglas-fir. Avian prey or small mammals	No	Lack of habitat for nesting and lack of habitat for feeding.
Aplodontia rufa nigra Point Arena Mountain Beaver	Fern Covered Slopes	No	Lack of habitat.
Arborims pomo Sonoma Tree Vole	Douglas-fir	No	Lack of habitat.
Ascphus truei Pacific Tailed Frog	Permanent cool streams in Forested areas with high precipitation	No	Lack of requisite habitat.
Bombus caliginosus Obscure Bumble Bee	Open grassy coastal prairies and Coast Range meadows	No	Lack of requisite habitat.
Bombus occidentalis Western Bumble Bee	Declining Populations due to Introduced pathogen. Open areas.	No	Lack of suitable habitat.
Brachyramphs marmoratus Marbled Murrelet	Coastal Nests in Old-growth	No	Lack of habitat.
Calileptoneta wapiti Mendocino Leptonetic Spider	Caves	No	Lack of requisite habitat.
Cerorhinca monocerata Rhinoceros Auklet	Coastal	No	Lack of habitat.
Coccyzus americanus occidentalis Western Yellow-billed Cuckoo	Riparian Forest and Woodlands along Permanent Streams	No	Requisite habitat absent.
Corynorhinus townsendii Townsend's Big-eared Bat	Caves, also in Buildings	No	Lack of habitat.
Charadrius alexandrinus nivosus Western Snowy Plover	A shore bird of ocean beaches.	No	Lack of habitat.

Scientific Name **Common Name**	**Species Habitat Association or Plant Community**	**Habitat Present**	**Analysis of Habitat for presence or Absence**
Danaus plexippus Monarch Butterfly	Milkweed, Migrates along Coast	No	Lack of host plant.
Dermochelys coriacea Leatherback Sea Turtle	Open Ocean	No	Lack of habitat
Eucyclogobius newberryi Tidewater Goby	Aquatic Habitat	No	Lack of habitat
Fratercula cirrhata Tuffed Puffin	Coastal blufs	No	Lack of habitat.
Helminthoglypta arrosa pomoensis Pomo Bronze Shoulderband	Endemic to Mendocino Redwood Forest Inland, Canyons between Navarro R. and Russian Gulch	No	Lack of habitat.
Lavinia symmetricus navarroensis Navarro Roach	Riverine	No	Lack of aquatic habitat.
Lycaeides arbyrognomon lotis (=Plebejus idas lotis) Lotis Blue Butterfly	Wet Meadows with Host Plant *Hosackia gracilis (=Lotus formissimus)*	No	Lack of habitat.
Oncorhynchus kisutch Coho Salmon	Aquatic.	No	Lack of aquatic habitat.
Phoebastria (=Diomedea) albatrus Short-tailed Albatross	Open Water. No Critical Habitat Established.	No	Lack of habitat.
Rana boylii Foothill Yellow-legged Frog	Streams with pools	No	Lack of aquatic habitat, pools, substrate and flowing water on the property.
Rana aurora Northern Red-legged Frog	Permanent pools of streams, marshes, and occasionally ponds. Prefers shorelines with extensive vegetation.	No	Lack of aquatic habitat. i.e No pools sufficient for breeding. Seasonal Swale only conveys water during storm events.
Rana draytonii California Red-legged Frog	Streams with pools, ponds, reservoirs,	No	Outside of known range for this species.
Rhyacotriton variegatus Southern Torrent Salamander	Inhabits cold streams, springs and seepages in Douglas-fir Forests.	No	Lack of requisite habitat.

Scientific Name Common Name	Species Habitat Association or Plant Community	Habitat Present	Analysis of Habitat for presence or Absence
Speyeria zerene brhrensiie Behren's Silverspot	Coastal Bluffs	No	Lack of host plant.
Strix occidentalis caurina Northern Spotted Owl	Old growth, forested deep canyons.	No	Lack of habitat.

There are no animals or insects recorded in the CDFW CNDDB for the vicinity of the property. Based on habitat type associated with the proposed project we conclude that it is unlikely that any of the species shown in the table above, or known for the region, would occur on the site.

Behren's Silver spot Butterfly (*Speyeria zerene berhrensii)*
Behren's silver spot butterfly requires dog violet (*Viola adunca*) as a host plant to be present. The dog violet is the larval host of the endangered Behren's silverspot butterfly. We did not observe any vegetation indicating that violets were present on the site.

California Red-legged Frog *(Rana draytonii*)
The project site occurs within the historical range but outside of the known range of the California red-legged frog. California red-legged frog inhabits permanent or nearly permanent water sources (quiet streams, marshes, and reservoirs). They are aquatic and prefer shorelines with extensive vegetation. The project sites do not contain habitat which would support this species. The property supports a seasonal wetland swale. This swale received water from upland rural residential properties. There are no pools with standing water for greater that two to three weeks. Standing water only exists following storm events. Soils within the seasonal wetland swale remain saturated but do not contain standing water for a significant period of time. No aquatic habitat for this species will be impacted by the proposed project. There is no breeding habitat for this species within or in the near vicinity of the proposed building site.

Based on habitat type associated with the proposed project we conclude that it is unlikely that any of the species shown in the table above, or known for the region, would occur on the site.

Habitat impacted by the proposed project is such that it will not substantially reduce or restrict the range of listed animals. Listed animals do not have the potential to utilize habitat at the project site because of the lack of potential roosting habitat for bats, the absence of suitable aquatic habitat, and the historic disturbance and use of the property.

C.3 Plant Communities Present

The property appears to be a fallow field that was fenced at one time and has reverted to a woodland. Tree cover on the site appears to be of a single age class. The shrubs include naturalized species such as: English Holly, English Ivy, Barberry, French Broom, Fuchsia and Cotoneaster.

A Manual of California Vegetation Second Edition criteria for vegetation classification shows that the site consists of ***Pinus contorta* ssp. *contorta*** Forest Alliance Shore Pine Forest as delineated below.

Forest or Woodland Alliances

Woodland Alliances are characterized by a dominant tree overstory and different degrees of understory development. Fire management, canopy age and degree of closure, windfalls, historic use, grazing, substrate base, aspect and rainfall are variables that control the degree of understory shrubs, herbs and tree recruitment.

Pinus contorta* ssp. *contorta Forest Alliance Beach (=Shore Pine) Pine Forest

Pinus contorta ssp. *contorta* is dominant in the tree canopy with *Abies grandis Arbutus menziesii, Picea sitchensis, Pinus muricata, Pseudotsuga menziesii* and *Tsuga heterophylla.* Trees <25 m; canopy is intermittent to continuous. Shrubs are common or rare. Herbaceous layer is sparse or abundant; moss and lichen are usually abundant. Membership rules >50% relative cover in the tree layer. This alliance is found on dunes, seaside bluffs or rocky headlands with salt spray and winds.

Wildlife: Shore Pine Woodlands are not as productive for wildlife as other woodlands but they often form a significant cover resource for wildlife and nesting trees for birdlife. Numerous insects also feed on these trees and they provide structure for lichens. The wildlife associated with Shore Pines includes the following: deer, squirrels, coyote, striped skunk, bobcat, fox and numerous rodents. Reptiles in this habitat include: western fence lizard, alligator lizard, king snake, and common gopher snake. Amphibians include: salamanders, frogs, newts, and toads. Many of California's birds are associated with this habitat.

Shore Pine Forest: Within the Study Area, the shore pine forest contains very little vertical structure with a relatively sparse shrub component and short, dense herbaceous layer. The overstory is dominated by Shore Pine (*Pinus contorta* ssp. *contorta*). It is apparent that the property contains a single age class of this species.

We interpret this as evidence that the site was at one time cleared and used as pastureland. This conclusion if further supported by the historic photographs of the Caspar Lumber Company Mill showing that the site was part of the mill lumber storage yard and shipping area (Wurm, 1986).

Pinus contorta* ssp. *contorta Forest Alliance Beach (=Shore Pine) Pine Forest is by CCC defined as an ESHA.

C.4 Wetlands

The site is within a coastal terrace and is relatively level. Drainage from the site is into roadside ditches along Seadrift Avenue and Pacifica Drive. There is a 24-inch culvert that conveys water from the roadside ditch along Seadrift Avenue to an open seasonal drainage with bed and bank on property to the south. The roadside ditches have altered the hydrology but not to the extent that the site is well drained.

The site contains a seasonal wetland swale that retains water and contains a dominance of wetland plants. This ESHA (Seasonal Wetland Swale) begins from the northeast edge of the property and transverses the south portion of site conveying surface runoff from adjoining properties to the roadside ditch thence a culvert.

This area meets the CCC definition of a wetland based on %50 hydric vegetation, and as such is defined as an ESHA. The location of this wetland is mapped in Plate V.

• **Riparian Habitat-** is by all standards considered sensitive. Riparian Vegetation functions to control water temperature regulate nutrient supply (biofilters), bank stabilization, rate of runoff, wildlife habitat (shelter and food), release of allochthonous material, release of woody debris which functions as habitat and slow nutrient release, and protection for aquatic organisms. Riparian vegetation is also a moderator of water temperature and has a cascade effect in that it relates to oxygen availability. No riparian vegetation is present on the property.

Jurisdictional Wetlands or Waters of the U.S.

• **"Waters of the U.S.** The project as proposed will not impact any seasonal drainages or drainages which would be considered "Waters of the State" and "Waters of the U.S." The proposed project will avoid the seasonal wetland swale on the property.

• **Wetlands-** These are areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. The proposed project will avoid the seasonal wetland swale on the property. The lot configuration is such that the buffer for this feature will be 50 ft.

A 50-foot buffer is sufficient to protect this resource on the property.

• **Vernal Pools-** are a type of seasonal wetland that have a distinct flora and fauna, an impermeable or slowly permeable substrate and contain standing water for a portion of the year. They are characterized by a variable aquatic and dry regime with standing water during the spring plant growth regime. They have a high degree of endemism of flora and fauna. The property does not contain any evidence of vernal pools.

C.5 Analysis of Quality/Quantity of Habitat Impacted

The quality of the habitat due to the surrounding development is of low value for wildlife use. The quantity of the habitat lost is of small size. The footprint of the project is relatively small in that it is a driveway a building envelope for a house, garage and guesthouse. Shore Pine ESHA will be impacted by the proposed project.

C.6 Environmentally Sensitive Habitat

Environmentally Sensitive Habitat Areas (ESHAs) are defined in the Mendocino County Coastal Zoning Code (CZC) Section 20.496.010 as follows:

> *"Environmentally Sensitive Habitat Area" means 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 easily be disturbed or degraded by human activities or developments. In Mendocino County, environmentally sensitive habitat areas include, but are not limited to: anadromous fish streams, sand dunes, rookeries and marine mammal haul-out areas, wetlands, riparian areas, areas of pygmy vegetation that contain species of rare or endangered plants, and habitats of rare and endangered plants and animals.*

Table III. List of potential ESHA's that occur in the area or have, potential for occurrence on the project site.

Common Name	CNDDB	Element Rank	Observed or Habitat on Site
Shore Pine Forest	G4	S2.1	Yes
Northern Bishop Pine Forest	G2	S2.2	No
Mendocino Pygmy Cypress Forest	G2	S2.1	No
Grand Fir Forest	G1	S1.1	No
Coastal Terrace Prairie	G2	S2.1	No
Native Grassland	G3	S3.1	No
North Coast Riparian Scrub	G3	S3.2	No

The sensitive habitat types in the region consist of Coastal Bluffs, Bishop Pine Forests, Pygmy Cypress Woodlands, Vernal Pools, Fresh Water and Salt Marshes and Serpentine Communities. The habitat on the property consists of a complete cover of Shore Pine Woodlands.

• **Migratory Corridors-** Natural areas interspersed with developed areas are important for animal movement, increasing genetic variation in plant and animal populations, reduction of population fluctuations, and retention of predators of agricultural pests and for movement of

wildlife and plant populations. Wildlife corridors have been demonstrated to not only increase the range of vertebrates including avifauna between patches of habitat but also facilitate two key plant-animal interactions: pollination and seed dispersal. Corridors and also preserve watershed connectivity. Corridor users can be grouped into two types: passage species and corridor dwellers. The data from various studies indicate that corridors should be at least 100 feet wide to provide adequate movement for passage species and corridor dwellers in the landscape. The seasonal wetland swale on the property can function as a wildlife corridor allowing movement through the property. This area will remain in tact and will continue to function as a wildlife corridor. There were no identifiable wildlife corridors associated with the footprint of the proposed project.

• **Nesting or Breeding Habitat, or Unique Plant Distributions or Populations-** We found no indications of nesting raptors or special-status birds on the property or in the near vicinity of the project sites. We did not observe any active nests, whitewash or nest droppings, perching associated with the project site. The property has potential nesting habitat in trees, standing snags, and shrubs. Protection of the eastern portion of the property in its natural state will continue to provide potential nesting habitat on the property. No significant bird rookeries were present on the proposed project footprint.

The Migratory Bird Treaty Act (MBTA) of 1918 makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in CFR Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). The MBTA also prohibits disturbance or harassment of nesting migratory birds at any time during their breeding season. No raptor nests, whitewash from nests on the project site was observed.

Very few burrows were observed, but small mammals and songbirds likely utilize habitats on the project site for foraging and cover. No significant wildlife dens or burrows were observed

Shore Pine Woodland on the property and are considered an Environmentally Sensitive Habitat Area (ESHA) as defined in the Mendocino County Zoning Code (CZC). Section 20.496.010. The project will impact approximately 33% of this habitat on the property.

Seasonal Wetland Swale- LUP Policy 3.1-7 states the following:

> *A buffer area shall be established adjacent to all environmentally sensitive habitat areas. The purpose of this buffer area shall be to provide for a sufficient area to protect the environmentally sensitive habitat from significant degradation resulting from future developments. The width of the buffer area shall be a minimum of 100 feet, unless an applicant can demonstrate, after consultation and agreement with the California Department of Fish and Game, and County Planning Staff, that 100 feet is not necessary to protect the resources of that particular habitat area and the adjacent upland transitional habitat function of the buffer from possible significant disruption caused by the proposed development. The buffer area shall be measured from the outside edge of the environmentally sensitive habitat areas and shall not be less than 50 feet in width. New*

land division shall not be allowed which will create new parcels entirely within a buffer area.

Developments permitted within a buffer area shall generally be the same as those uses permitted in the adjacent environmentally sensitive habitat area and must comply at a minimum with each of the following standards:

1. *It shall be sited and designed to prevent impacts which would significantly degrade such areas;*
2. *It shall be compatible with the continuance of such habitat areas by maintaining their functional capacity and their ability to be self-sustaining and to maintain natural species diversity; and*
3. *Structures will be allowed within the buffer area only if there is no other feasible site available on the parcel. Mitigation measures, such as planting riparian vegetation, shall be required to replace the protective values of the buffer area on the parcel, at a minimum ratio of 1:1, which are lost as a result of development under this solution.*

C.7 Buffer Zone Analysis

Projects that propose development with a buffer less than 100 feet from an ESHA must provide information that demonstrates that a reduced buffer width will not have a significant adverse impact on the habitat. Where the minimum buffer width cannot be achieved, information must be provided to demonstrate that there is no other feasible site available on the parcel. The following buffer zone analysis addresses each of the development criteria described in the Mendocino County Zoning Code 20.496.020 "**ESHA -- Development Criteria"** and is presented in table format for ease of use.

Section 20.496.020 Coastal Zoning Code	
(A) Buffer Areas. A buffer area shall be established adjacent to all environmentally sensitive habitat areas. The purpose of this buffer area shall be to provide for a sufficient area to protect the environmentally sensitive habitat from degradation resulting from future developments and shall be compatible with the continuance of such habitat areas.	Due to the Shore Pine presence on the entire property there is no other feasible site available on the parcel that will provide a 100-foot buffer from this ESHA's on the property. The Seasonal Wetland Swale is located on the east side of the parcel. A buffer reduction to 50-ft will avoid impacts to this ESHA. A 100-ft ESHA buffer would makes the building envelope unfeasible and no other site available on the parcel.
(A)(1) Width. The width of the buffer area shall be a minimum of one hundred (100) feet, unless an applicant can demonstrate, after consultation and agreement with the California Department of Fish	The minimum buffer width cannot be achieved on the property. The entire parcel is covered with a Shore Pine ESHA.

and Game, and County Planning staff, that one hundred (100) feet is not necessary to protect the resources of that particular habitat area from possible significant disruption caused by the proposed development. The buffer area shall be measured from the outside edge of the Environmentally Sensitive Habitat Areas and shall not be less than fifty (50) feet in width. New land division shall not be allowed which will create new parcels entirely within a buffer area. Developments permitted within a buffer area shall generally be the same as those uses permitted in the adjacent Environmentally Sensitive Habitat Area.	The proposed location will impact approximately 1/3 of the Shore Pine ESHA. The project has been relocated to provide a 50-ft buffer for the Seasonal Wetland Swale ESHA. This proposed buffer will protect and preserve this resource. The Project does not include a division of land.
(A)(1)(a) Biological Significance of Adjacent Lands. The degree of significance depends upon the habitat requirements of the species in the habitat area.	The proposed build out is for a lot within an existing subdivision. The lot is surrounded by single family residences and or paved access roads with drain ditches.
(A)(1)(b) Sensitivity of Species to Disturbance. The width of the buffer zone shall be based, in part, on the distance necessary to ensure that the most sensitive species of plants and animals will not be disturbed significantly by the permitted development.	There are no options to provide for a buffer around the Shore Pine ESHA or a 100-ft. buffer around the Seasonal Wetland swale on the east side of the parel The proposed location is the best option leaving the east side of the parcel in a natural state.
(A)(1)(b)(i) Nesting, feeding, breeding, resting, or other habitat requirements of both resident and migratory fish and wildlife species.	We found no evidence of any nesting, feeding, breeding, resting, or other habitat requirements of both resident and migratory fish and wildlife species.
(A)(1)(b)(ii) An assessment of the short-term and long-term adaptability of various species to human disturbance.	Historic photographs of the area show that the site was used by the Caspar Lumber Mill as a lumber drying yard and storage yard for shipping lumber by ship.
(A)(1)(b)(iii) An assessment of the impact and activity levels of the proposed development on the resource.	Approximately 1/3 of the population of Shore Pine will be directly impacted by development. Significant portions of the populations will be retained.
(A)(1)(c) Susceptibility of Parcel to Erosion. The width of the buffer zone shall be based, in part, on an assessment of the slope, soils, impervious surface coverage, runoff characteristics, and vegetative cover of the parcel and to what degree the development will change the potential for erosion. A sufficient buffer to allow for the interception of any additional material eroded as a result of the proposed development should be provided.	The potential for erosion on the currently vegetated portions of the parcel will increase in the short term due to soil disturbance associated with construction activities. To address short-term impacts to soil and water quality, erosion control measures will be implemented during construction (BMP's).

(A)(1)(d) Use of Natural Topographic Features to Locate Development	The project proposes a residence within an open lot
(A)(1)(e) Use of Existing Cultural Features to Locate Buffer Zones. Cultural features (e.g., roads and dikes) shall be used, where feasible, to buffer habitat areas. Where feasible, development shall be located on the side of roads, dikes, irrigation canals, flood control channels, etc., away from the ESHA.	The proposed location of the development will result in the least impact to the ESHA and will avoid the seasonal wetland swale.
(A)(1)(f) Lot Configuration and Location of Existing Development. Where an existing subdivision or other development is largely built-out and the buildings are a uniform distance from a habitat area, at least that same distance shall be required as a buffer zone for any new development permitted. However, if that distance is less than one hundred (100) feet, additional mitigation measures (e.g., planting of native vegetation) shall be provided to ensure additional protection.	The entire lot is a Shore Pine ESHA. Mitigation for soil disturbance during construction will consist of BMPs and revegetation with natives where possible.
(A)(1)(g) Type and Scale of Development Proposed. The type and scale of the proposed development will, to a large degree, determine the size of the buffer zone necessary to protect the ESHA. Such evaluations shall be made on a case-by-case basis depending upon the resources involved, the degree to which adjacent lands are already developed, and the type of development already existing in the area.	The required 100 foot buffer widths cannot be establish on the property. A 50- foot buffer from wetland swale ESHA is sufficient to protect this resource and will not negatively impact the resource.
(A)(2) Configuration. The buffer area shall be measured from the nearest outside edge of the ESHA (e.g., for a wetland from the landward edge of the wetland; for a stream from the landward edge of riparian vegetation or the top of the bluff).	A 50- foot buffer from the outside edge fo the wetland ESHA's will protect this resource.
(A)(3) Land Division. New subdivisions or boundary line adjustments shall not be allowed which will create or provide for new parcels entirely within a buffer area.	The project does not include subdividing the property or adjusting the property lines.
(A)(4) Permitted Development. Development permitted within the buffer area shall comply at a minimum with the following standards: **(a)** Development shall be compatible with the continuance of the adjacent habitat area by maintaining the functional capacity, their ability to	It is anticipated, that upon completion of the residence the adjacent habitat will be self-sustaining and maintain the ESHA's on the parcel.

be self-sustaining and maintain natural species diversity.	
(A)(4)(b) Structures will be allowed within the buffer area only if there is no other feasible site available on the parcel.	1) No other location for a residence is possible due to the ESHA on the parcel. 2) The proposed location will cause the least amount of impact to ESHA on the property. 3) The proposed house site is in the least environmentally sensitive area on the property.
(A)(4)(c) Development shall be sited and designed to prevent impacts which would degrade adjacent habitat areas. The determination of the best site shall include consideration of drainage, access, soil type, vegetation, hydrological characteristics, elevation, topography, and distance from natural stream channels. The term "best site" shall be defined as the site having the least impact on the maintenance of the biological and physical integrity of the buffer strip or critical habitat protection area and on the maintenance of the hydrologic capacity of these areas to pass a one hundred (100) year flood without increased damage to the coastal zone natural environment or human systems.	Development has been sited and designed based on a number of considerations, including topography, easements, avoidance of ESHA, and access. By not disturbing the vegetated area on the east side of the property a portion of the Shore Pine ESHA will be retained, and the seasonal wetland swale will be avoided. The proposed building envelope will have the least impact on the biological and physical integrity of the habitat on the property, and on the maintenance of the hydrologic capacity of these areas.
(A)(4)(d) Development shall be compatible with the continuance of such habitat areas by maintaining their functional capacity and their ability to be self-sustaining and to maintain natural species diversity	The proposed building envelope will maintain the functional capacity and the ability of the ESHA'S on the property to be self-sustaining and will maintain natural species diversity.
(A)(4)(e) Structures will be allowed within the buffer area only if there is no other feasible site available on the parcel. Mitigation measures, such as planting riparian vegetation, shall be required to replace the protective values of the buffer area on the parcel, at a minimum ratio of 1:1, which are lost as a result of development under this solution.	Replacement planting of Shore Pine at a one to one ratio on portions of the property on the east side of the parcel. Replacement plantings will provide for a new generation of Shore Pines replacing the existing age class that is showing evidence of decline.
(A)(4)(f) Development shall minimize the following: impervious surfaces, removal of vegetation, amount of bare soil, noise, dust, artificial light, nutrient runoff, air pollution, and human intrusion into the wetland and minimize alteration of natural landforms.	The project has been designed to minimize impervious surfaces and the removal of vegetation. Vegetation will be removed only as needed for construction, and trees ≥ 6" dbh will remain where possible. Nutrient runoff and air pollution will not be generated by the project.
(A)(4)(g) Where riparian vegetation is lost due to development, such vegetation shall be replaced at a minimum ratio of one to one (1:1) to restore the protective values of the buffer area.	There is no riparian vegetation associated with the proposed house site.

(A)(4)(h) Aboveground structures shall allow peak surface water flows from a one hundred (100) year flood to pass with no significant impediment.	The site is not located within the 100-year flood zone.
(A)(4)(i) Hydraulic capacity, subsurface flow patterns, biological diversity, and/or biological or hydrological processes, either terrestrial or aquatic, shall be protected.	Hydrologic processes have been considered in the project design and will not be adversely impacted. The existing roadside ditches collect overland flow. Road entrance will not significantly alter the biological diversity associated with the ESHA.
(A)(4)(j) Priority for drainage conveyance from a development site shall be through the natural stream environment zones, if any exist, in the development area. In the drainage system design report or development plan, the capacity of natural stream environment zones to convey runoff from the completed development shall be evaluated and integrated with the drainage system wherever possible. No structure shall interrupt the flow of groundwater within a buffer strip. Foundations shall be situated with the long axis of interrupted impermeable vertical surfaces oriented parallel to the groundwater flow direction. Piers may be allowed on a case by case basis.	The ESHA consists of Shore Pines and does not include riparian habitat, which would require a wider buffer to protect habitat functions and values.
(A)(4)(k) If findings are made that the effects of developing an ESHA buffer area may result in significant adverse impacts to the ESHA, mitigation measures will be required as a condition of project approval. Noise barriers, buffer areas in permanent open space, land dedication for erosion control, and wetland restoration, including off-site drainage improvements, may be required as mitigation measures for developments adjacent to environmentally sensitive habitats. (Ord. No. 3785 (part), adopted 1991)	No significant adverse impacts to the ESHA's on the property area anticipated. The proposed house site is in the least environmentally sensitive site on the property. No mitigation is recommended. Potential impacts to ESHA's will require several mitigations outlined in the recommendations portion of this report.
Sec. 20.532.095 Coastal Zoning Code	
Required Findings for all Coastal Development Permits (4) The proposed development will not have any significant adverse impacts on the environment within the meaning of the California Environmental Quality Act.	Other than the Shore Pine ESHA impact the construction of a residence is not expected to result in significant impacts to the surrounding environment.

D. LEAST DAMAGING ALTERNATIVE LOCATION

The entire two-acre property supports a Shore Pine Forest ESHA, and there is a seasonal wetland swale ESHA on the east side of the parcel.

The original proposed building envelope would impact the seasonal wetland swale ESHA as well as the Shore Pine ESHA. The applicant has agreed to relocate the building envelope within the Shore Pine ESHA on the west side of the parcel and provide a 50-foot buffer for the seasonal wetland swale ESHA.

The least damaging alternative location is situated on the west side of the Study Area, based on the presence of on-site ESHA (e.g. wetlands, shore pine forest). The entire two-acre property is supports a Shore Pine ESHA and it is therefore impossible to honor a 100-foot ESHA buffer.

The alternate building envelope proposed for the west side of the property is located in the least sensitive area on the property.

The project will impact the Shore Pine Woodland, which is a recognized as a ESHA in Mendocino County. We estimate that the project will impact approximately 33 % of this habitat on the property.

E. SUMMARY / RECOMMENDATIONS

This study is provided as background information necessary for evaluating potential impacts of the proposed project on local biological resources.

The significance of potential impacts is a function of the scope and scale of the proposed project within the existing Federal, State and Local regulations and management practices. The determination of significance of impacts to biological resources consists of an understanding of the project as proposed and an evaluation of the context in which the impact may occur. The extent and degree of any impact on-site or off–site must be evaluated consistent with known or expected site conditions. Therefore, the significance of potential impacts is assessed relevant to a site-specific scale and the larger regional context.

The project's effect to on-site or regional biological resources is considered to be significant if the project results in:

- Alteration of unique characteristics of the area, such as sensitive plant communities and habitats (i.e. serpentine habitats, wetlands, riparian habitats);
- Adverse impacts to special-status plant and animal species;
- Adverse impacts to important or vulnerable resources as determined by scientific opinion or resource agency concerns (i.e. ESHA sensitive biotic communities, special status habitats; e.g. wetlands);
- Loss of critical breeding, feeding or roosting habitat; and
- Interference with migratory routes or habitat connectivity.

The property consists of a Shore Pine ESHA and a Seasonal Wetland Swale ESHA on the east side of the parcel. We estimate that the project will impact approximately 33 % of this habitat on the property**.**

There is no opportunity on the parcel to avoid impacts to the Shore Pine ESHSs. A reduction of buffer to 50-ft will allow a buffer and protection of the Seasonal Wetland Swale. Initial survey of the parcel necessitated a relocation of the initial proposed project footprint to avoid the Seasonal Wetland Swale and allow for a 50 ft buffer.

The project will impact the Shore Pine Woodland which is a recognized ESHA.

The scale and scope of the project is such that there is no reason to expect any impacts to local special-status species of plants or animals, critical habitat or wildlife corridors. The construction phase of the project has potential for dust, noise and soil erosion. Best management practices (BMPs) will reduce these impacts to less than significant levels.

RECOMENDATIONS

The following are recommended to compensate for development within the 100-buffer of ESHA, including the reduced 50 ft. buffer for the Seasonal Wetland Swale.

Recommendation 1.0: The proposed development will result in a loss of 1/3 of the Shore

Pine ESHA habitat on the property. Direct impacts include the removal of native Shore Pines and loss of a portion of the ESHA.

Recommendation 1.1: Targeted removal of only those species that are within the footprint of the proposed footprint. Erect and maintain high-visibility construction fencing delineating the boundary between selected vegetation removal/ground-disturbance and non-removal areas throughout the construction period.

Recommendation 1.2 Prior to any ground disturbing or tree clearing, construction fence should be installed to prevent any intrusion into the 50 ft. buffer zone along the Seasonal Wetland Swale ESHA on the east side of the property.

Recommendation 1.3 Prior to any ground disturbing or tree clearing, construction fencing should be installed outside of the building envelope to protect the Shore Pine ESHA.

Recommendation 1.4 Where feasible, utilize the proposed footprint/proposed development area for staging and all construction materials.

Recommendation 1.5 Construction worker parking must be within the fenced construction area or off site.

Recommendation 1.6 Implementation of standard erosion best management practices such as straw waddles, silt fencing, etc. to prevent sediment migration. Where feasible, conduct work during the dry season to reduce sediment migration. Reseed and/or replant with fast-growing native herbaceous species to reinforce areas of loosened or exposed soil.

Recommendation 1.7 Replacement planting of Shore Pine at a one to one ratio on portions of the property on the east side of the parcel. Replacement plantings will provide for a new generation of Shore Pines replacing the existing age class that is showing evidence of decline and dead trees.

Recommendation 1.8 Retain the existing vegetation outside of the footprint in a natural state preserving a portion of the Shore Pine ESHA.

Recommendation 1.9 During construction, materials, including but not limited to lumber, concrete, finish wares, hand tools, power tools, generators, vehicles, heavy equipment, should be staged within the proposed driveway. Spill prevention devices should be utilized for all toxic liquids including but not limited to gasoline, diesel, motor oil, solvents, paints, and herbicides.

Recommendation. 2.0 Construction fencing should be installed along the 50-ft. buffer zone of the Seasonal Wetland Swale ESHA to prevent any intrusion into this buffer zone during construction.

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E.2 Qualifications of Field Investigators

Chris K. Kjeldsen, Ph.D., Botany, Oregon State University, Corvallis, Oregon. He has over forty years of professional experience in the study of California flora. He was a member of the Sonoma County Planning Commission and Board of Zoning (1972 to 1976). He has over thirty years of experience in managing and conducting environmental projects involving impact assessment and preparation of compliance documents, Biological Assessments, CDFW Habitat Assessments, CDFW Mitigation projects, ACOE Mitigation projects and State Parks and Recreation Biological Resource Studies. Experience includes conducting special-status species surveys, jurisdictional wetland delineations, general biological surveys, 404 and 1600 permitting, and consulting on various projects. He taught Plant Taxonomy at Oregon State University and numerous botanical science and aquatic botany courses at Sonoma State University including sections on wetlands and wetland delineation techniques. He has supervised numerous graduate theses, NSF, DOE and local agency grants and served as a university administrator. He has a valid CDFW collecting permit.

Daniel T. Kjeldsen, B. S., Natural Resource Management, California Polytechnic State University, San Luis Obispo, California. He spent l994 to l996 in the Peace Corps managing natural resources in Honduras, Central America. His work for the Peace Corps in Central America focused on watershed inventory, mapping and the development and implementation of a protection plan. He has over ten years of experience in conducting Biological Assessments, CDFW Habitat Assessments, ACOE wetland delineations, wetland rehabilitation, and development of and implementation of mitigation projects and mitigation monitoring. He has received 3.2 continuing education units MCLE 27 hours in Determining Federal Wetlands Jurisdiction from the University of California Berkeley Extension. Attended Wildlife Society Workshop Falconiformes of Northern California Natural History and Management California Tiger Salamander 2003, Natural History and Management of Bats Symposium 2005, Western Pond Turtle Workshop 2007, and Western Section Bat Workshop 2011. Laguna Foundation & The Wildlife Project Rare Pond Species Survey Techniques 2009. A full resume is available upon request.

Plate I. Site / Location Map (Mendocino Quadrangle)

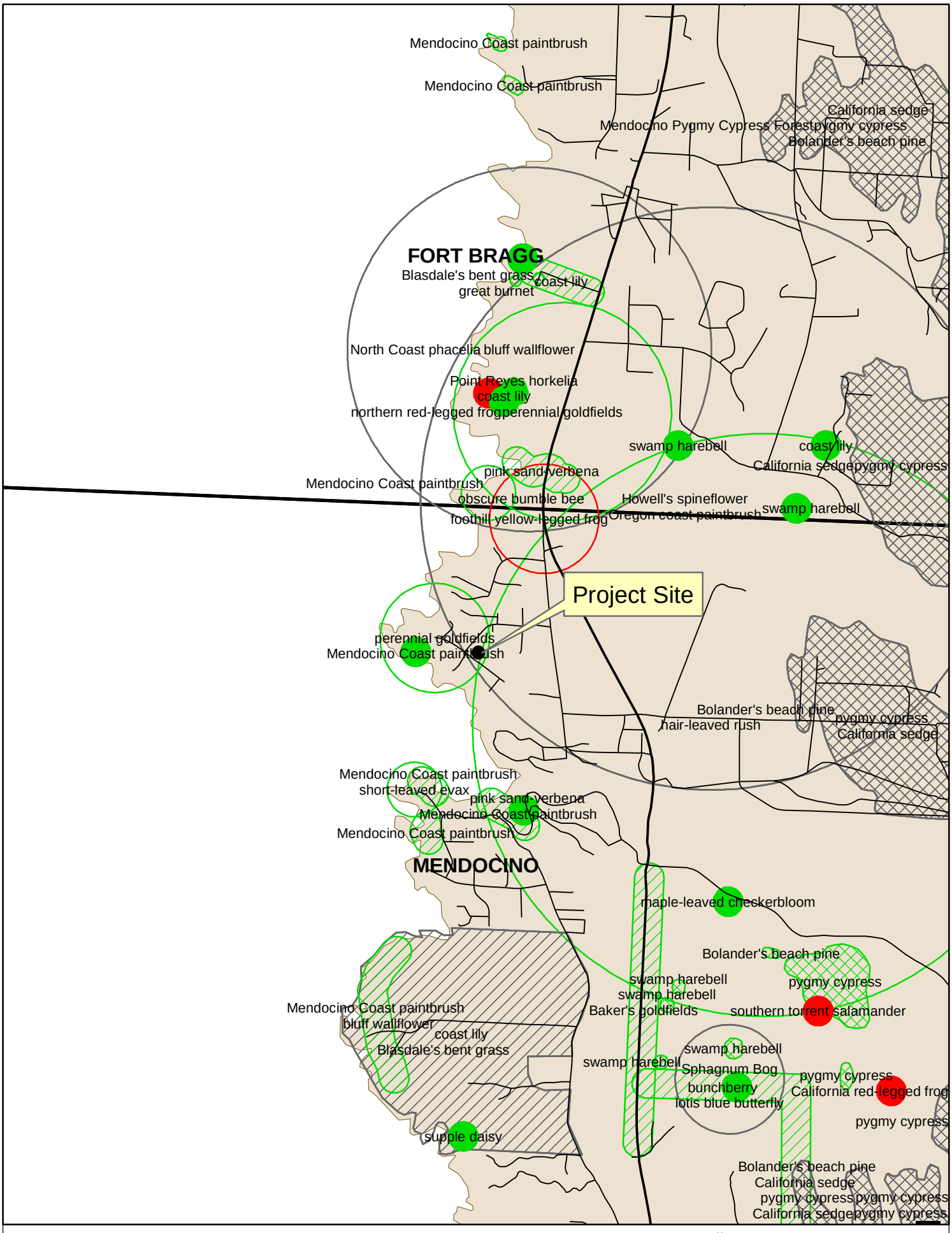

Plate II. CDFW CNDDB RareFind 3 Map

0 0.15 0.3 0.6 Miles

(Data Date January 2016)

Plate III. Aerial Photo / Survey Area

Plate IV. Biological Constraints / ESHA Map

Plate V. Wetland Map

APPENDIX A
Plants and Animals Observed Associated With The Project Site

PLANTS

The nomenclature for the list of plants found on the project site and the immediate vicinity follows: Brodo, Irwin M., Sylvia Duran Sharnoff and Stephen Sharnoff, 2001, for the lichens; S Norris and Shevrock - 2004, for the mosses; Doyle and Stotler - 2006 for liverworts and hornworts and Baldwin, B.G., D.H. Goldman, D.J.Keil, R.Patterson, T.J.Rosati, and D.H.Wilkens, editors, 2012 - for the vascular plants.. The plant list is organized by major plant group.

Habitat type indicates the general associated occurrence of the taxon on the project site or in nature.

Abundance refers to the relative number of individuals on the project site or in the region.

MAJOR PLANT GROUP **Family** **Genus** **Common Name**	**Habitat Type**	**Abundance**

NCN = No Common Name, * = Non-native, @= Voucher Specimen

ALGAE		
CHLOROPHYCEAE		
Trentipholia ssp. NCN	On Bark of Treesw	Occasional
FUNGI		
Basidiomycota- Club Fungi		
TELIOMYCETES		
Endocronartium harkensii Western Pine Gall Rust	Parasite on Pines	Common
POLYPORACEAE		
Cryptoporus volvatus (Peck) Shear Veiled Polypore	Woodlands on Dead Conifers	Occasional
Trametes versicolor (L.) Lloyd Turkey Tail (=*Coriolus versicolor, Polyporus versicolor*	Woodlands on Dead Wood	Common
TRICHOLOMATACEAE		
Connopus acervatus (Fr.) Hughs, Mather& Petersen NCN (=*Collybia acervata)*	On Decaying Wood	Common
MOSSES		
MINACEAE		
Homalothecium nuttallii (Wilson) Jaeger NCN	Epiphytic on Trees	Common

MAJOR PLANT GROUP Family Genus Common Name	Habitat Type	Abundance

NCN = No Common Name, * = Non-native, @= Voucher Specimen

Isothecium stoloniferum Brid. NCN	Woodlands	Common
Kindbergia oregana (Sull) Ochyra NCN	Woodlands	Common
Pseudobraunia californica (Lesq.) Broth. NCN	Woodlands on Base of Trees	Common

LICHENS

FOLIOSE

@ *Alectoria sarmentosa* (Ach.) Ach. Witche's Hair	On Tree Limbs Near Coast	Common
@*Hypogymina heteophylla* L. H. Pike Seaside Tube Lichen	On Pines and Tan Oaks	Common
Hypogymnia inactiva (Krog) Ohlsson NCN	On Limbs	Common

FRUTICOSE

Cladonia ssp. NCN	On Soil	Common
@*Hypogymnia inactiva* (Krog) Ohlsson NCN	On Pine Branches	Common
@*Niebla cephalota* (Tuck.) Rundel & Bowler NCN	On Pine Coastal	Occasional
Ramalina farinacea (L.) Ach. NCN	On Tree Branches	Common
Ramalina menziesii Taylor non Tuck. Lace Lichen, Old Man's Beard	On Tree Branches	Common
@*Ramalina pollinaria* (Westr.) Ach. NCN	On Tree Branches	Occasional
Usnea filipendula Stirt. *NCN*	On Coastal Conifers	Common
Usnea fragilescens Hav. ex Lynge Inflated Beard Lichen	Coastal Conifers	Common
Usnea glabrata (Ach.) Vain. NCN	On Tree Branches	Common
@*Usnea scabrata* Nyl. Straw Beard Lichen	On Conifers	Common
Usnea intermedia=U. arizonica NCN	On Tree Branches	Common

MAJOR PLANT GROUP **Family** **Genus**	**Habitat Type**	**Abundance**
Common Name		

NCN = No Common Name, * = Non-native, @= Voucher Specimen

CRUSTOSE

@*Buellia oidalea* Coast Wood Button Lichen	Tree Limbs	Occasional

VASCULAR PLANTS FERNS

DENNSTAEDTIACEAE

Pteridium aquilinum (L.) var. *pubescens* Underw. Bracken Fern	Grasslands or Woodlands	Common

DRYOPTERIDACEAE

Polystichum munitum (Kaulf.) C Presl Sword Fern	Redwood or Riparian	Common

POLYPODIACEAE

Polypodium glycyrrhiza D. Eaton Licorice Fern	Woodlands	Common

WOODSIACEAE

Athyrium filix-fema (L.) Roth Western Lady Fern	Conifer Woodlands-Shade	Common

VASCULAR PLANTS DIVISION CONIFEROPHYTA--GYMNOSPERMS

PINACEAE

Aibes grandis (Douglas) Lindley Grand Fir	Young Seedling	Common
Pinus contorta Loudin. var. *contorta* Shore Pine	Coastal Dunes and Bluffs	Common
Pinus muricata D.Don Bishop Pine	In Vicinity Not on Property	Common
**Pinus radiata* D.Don Monterey Pine	Domestic Introduction	Occasional

TAXODIACEAE

Sequoia sempervirens (D.Don) Endl. Redwood	Probably Planted	Common

VASCULAR PLANTS DIVISION ANTHOPHYTA --ANGIOSPERMS
CLASS--DICOTYLEDONAE- TREES

EUDICOTS

FAGACEAE Oak Family

Notholithocarpus densiflorus (Hook&Arn.)Manos var. *densiflorus* Tan Oak	Woodlands	Common

MAJOR PLANT GROUP **Family** **Genus**	**Habitat Type**	**Abundance**
Common Name		

NCN = No Common Name, * = Non-native, @= Voucher Specimen

MYRICACEAE Wax Myrtle Family		
Morella californica (Cham.&Schldl.) Wilbur Wax Myrtle (=*Myrica californica)*	Coastal Scrub, Woodlands	Common
MYRTACEAE Myrtle family		
**Eucalyptus globulus* Labill Blue Gum	Ruderal Escape	Occasional
RHAMNACEAE Buckthorn Family		
Frangula purshiana ssp. *purshiana (*DC.)J.G.Cooper Cascara Sagrada (=*Rhamnus purshiana)*	Shrub/Scrub, Conifer F.	Common
ROSACEAE Rose Family		
**Malus sylvestris* Mill. Apple	Planted	Occasional
SALICACEAE Willow Family		
Salix laevigata Bebb. Red Willow	Moist Areas	Common

VASCULAR PLANTS DIVISION ANTHOPHYTA --ANGIOSPERMS
CLASS--DICOTYLEDONAE-SHRUBS AND WOODY VINES

EUDICOTS

AQUIFOLIACEAE Holly Family		
**Ilex aquifolium* L. English Holly	Escape	Occasional
**Hedra helix* L. English Ivy	Ruderal	Occasional
ASTERACEAE (Compositae) Sunflower Family		
Baccharis pilularis deCandolle Coyote Brush	Woodlands, Grasslands	Common
BEREBERIDACEAE Barberry Family		
**Berberis darwinii* Hook Darwin's Barberry from Chile	Coastal Conifer Forests Disturbed	Common
CAPRIFOLIACEAE Honeysuckle Family		
Lonicera hispidula Douglas var. *vacillans* Honeysuckle	Woodlands, Riparian	Occasional
Linocera involucrata (Rich.) Spreng Twinberry	Var. *ledbouriiI* Coastal Moist Areas	Common
ERICACEAE Heath Family		
Vaccinium ovatum Pursh. Huckleberry	Woodlands	Common

MAJOR PLANT GROUP **Family** **Genus**	**Habitat Type**	**Abundance**
Common Name		

NCN = No Common Name, * = Non-native, @= Voucher Specimen

FABACEAE (Leguminosae) Legume Family		
**Genista monspessulana* (L.) Johnson Broom, French Broom	Woodlands	Common
ONAGRACEAE Evening-Primrose Family		
Fuchsia magellanica Lam. Fuschia	Naturalized Escape	Common
ROSACEAE Rose Family		
**Cotoneaster pannosus* Franchet. Cotoneaster	Ruderal	Common
**Rubus armeniacus* Focke Himalayan Blackberry	Ruderal	Common
Rubus ursinus Chamis.&Schltdl. California Blackberry	Woodlands	Occasional
SOLANACEAE Nightshade Family		
**Solanum aviculare* G. Forst. Kangaroo Apple, New Zealand Nightshade	Ruderal, Wafe Naturalized	Occasional

VASCULAR PLANTS DIVISION ANTHOPHYTA --ANGIOSPERMS
CLASS--DICOTYLEDONAE-HERBS

EUDICOTS

APIACEAE (Umbelliferae) Carrot Family		
Cicuta douglasii (D.C.)J.M.Coult.&Rose Western Water Hemlock	Roadside ditch	Common
Sanicula crassicaulis DC. Pacific Sanicle	Woodlands	Common
ASTERACEAE (Compositae) Sunflower Family		
Agoseris heterophylla (Nutt.) Green Annual Agoseris	Ruderal	Occasional
**Circium vulgare* (Savi) Ten. Bull Thistle	Grasslands, Ruderal	Common
**Hypochaeris glabra* L. Cat's Ear	Ruderal	Common
**Hypochaeris radicata* L. Harry Cat's Ear	Ruderal	Common
**Senecio minimus* Poir. Coastal Burn Weed, Australian Fireweed (=*Erechtites minima)*	Ruderal, Woodlands, Grasslands	Occasional
**Sonchus oleraceus* L. Common Sow Thistle	Ruderal	Common
**Taraxacum officinale* F.H.Wigg Dandelion	Ruderal	Common

MAJOR PLANT GROUP **Family** **Genus**	**Habitat Type**	**Abundance**
Common Name		

NCN = No Common Name, * = Non-native, @= Voucher Specimen

BORAGINACEAE Borage or Waterleaf Family		
**Echium candicans* L. Pride of Madeira	Garden Escape	Occasional
BRASSICACEAE Mustard Family		
**Raphanus sativus* L. Wild Radish	Ruderal	Common
CARYOPHYLLACEAE Pink Family		
**Cerastium fontanum* Baumg. subsp.*vulgare* Mouse-ear-chickweed	Ruderal	Common
FABACEAE (Leguminosae) Legume Family		
**Trifolium repens* L. White Clover	Ruderal	Common
LAMIACEAE (Labiatae) Mint Family		
**Mentha pulegium* L. Pennyroyal	Ruderal	Occasional
Prunella vulgaris L. var. *lanceolata* Self-heal	Grasslands	Occasional
ONAGRACEAE Evening-primrose Family		
Epilobium ciliatum Raf. Subsp. *ciliatum* Northern Willow Herb	Ruderal	Common
OXILIDACEAE Oxalis Family		
**Oxalis corniculata* L. Oxalis, Yellow Wood Sorel	Ruderal	Common
PLANTAGINACEAE Plantain Family		
**Digitalis purpurea* L. Occasional Foxglove	Wet Shady Areas	
**Plantago lanceolata* L. English Plantain	Ruderal	Common
POLYGONACEAE Buckwheat Family		
**Rumex acetosella* L. Sheep Sorrel	Ruderal	Common
RUBIACEAE Madder Family		
Galium aparine L. Goose Grass	Woodlands, Riparian, Ruderal	Common
Galium trifidum L. var. *columbianum* Bedstraw	Woodlands	Common
VIOLACEAE Violet Family		
Viola sempervirens Green Evergreen Violet	Woodlands	Occasional

MAJOR PLANT GROUP Family Genus Common Name	Habitat Type	Abundance

NCN = No Common Name, * = Non-native, @= Voucher Specimen

VASCULAR PLANTS DIVISION ANTHOPHYTA --ANGIOSPERMS
CLASS--MONOCOTYLEDONAE-GRASSES

POACEAE Grass Family		
**Anthoxanthum odoratum* L. Sweet Vernal Grass	Grasslands	Common
Anthoxanthum occidentale (Buckley) Veldkamp California Sweet Grass, Vanilla Grass (=*Hierochloe occidentalis)*	Woodlands	Occasional
**Briza maxima* L. Large Quaking Grass, Rattlesnake Grass	Grasslands, Ruderal	Common
**Bromus diandrus* Roth Ripgut Grass	Ruderal, Grasslands	Common
Calamagrostis nutkaensis (J. Presl) Steud Pacific Reed Grass	Woodlands Moist Coast	Common
Deschampsia cespitosa Tufted Hairgrass	Woodlands	Occasional
Festuca californica Vassey California Fescue	Grasslands, Woodlands	Common
**Festuca perennis* (L.) Columubus & Sm. Perennial Rye Grass (=*Lolium multiflorum, L. perenne)*	Grasslands	Common
Elymus glaucus Buckley ssp. *glaucus* Blue Wildrye	Woodlands	Common
**Holcus lanatus* L. Velvet Grass	Grasslands, Ruderal	Common

VASCULAR PLANTS DIVISION ANTHOPHYTA --ANGIOSPERMS
CLASS--MONOCOTYLEDONAE-SEDGES AND RUSHES

CYPERACEAE Sedge Family		
Caryx bolanderi Olney Bolander's Sedge	Woodlands	Common
Caryx obnupta Bailey Sedge	Palustrine, Damp Swales	Occasional

VASCULAR PLANTS DIVISION ANTHOPHYTA --ANGIOSPERMS
CLASS--MONOCOTYLEDONAE-HERBS

ASPARAGACEAE Asparagus Family		
Chlorophytum camosum Spider Plant	Ruderal, House Plant	Occasioanl
ALLIACEAE Onion or Garlic Family		
**Allium neopolitanum* Cirillo Onion	Ruderal	Common

MAJOR PLANT GROUP Family Genus Common Name	Habitat Type	Abundance

NCN = No Common

IRIDACEAE Iris Family		
Iris douglasiana Herb. Iris	Open Grassland, Meadows	Common

Fauna Species Observed in the Vicinity of the Project Site

The nomenclature for the animals found on the project site and in the immediate vicinity follows: Jameson and Peeters -l988 for the mammals.

AVES ORDER Common Name	Genus	Observed
AVES		
Common Raven	*Corrus corax*	
Turkey Vulture	*Cathartes aura*	

MAMMALS ORDER Common Name	Genus	Observed
CERVIDAE		
Black-tailed Deer	*Odocoileus hemionus*	Sight

APPENDIX B

CNPS Special Status-species Listed for the Project Quadrangle and Surrounding Quadrangles

U.S. Fish and Wildlife Service Listed Species for the Quadrangle

California Department of Fish and Wildlife Rare Find 5 Species list for the Quadrangle and Surrounding Quadrangles for Habitat found on the project site

CNPS California Native Plant Rare and Endangered Plant Inventory

Plant List

24 matches found. *Click on scientific name for details*

Search Criteria

Found in 9 Quads around 39123C7, Community = North Coast coniferous forest

Scientific Name	Common Name	Family	Lifeform	Rare Plant Rank	State Rank	Global Rank
Astragalus agnicidus	Humboldt County milk-vetch	Fabaceae	perennial herb	1B.1	S3	G3
Calamagrostis bolanderi	Bolander's reed grass	Poaceae	perennial rhizomatous herb	4.2	S4	G4
Calystegia purpurata ssp. saxicola	coastal bluff morning-glory	Convolvulaceae	perennial herb	1B.2	S2S3	G4T2T3
Campanula californica	swamp harebell	Campanulaceae	perennial rhizomatous herb	1B.2	S3	G3
Carex lenticularis var. limnophila	lagoon sedge	Cyperaceae	perennial herb	2B.2	S1	G5T5
Chrysosplenium glechomifolium	Pacific golden saxifrage	Saxifragaceae	perennial herb	4.3	S3	G5
Coptis laciniata	Oregon goldthread	Ranunculaceae	perennial rhizomatous herb	4.2	S3	G4
Cornus canadensis	bunchberry	Cornaceae	perennial rhizomatous herb	2B.2	S2	G5
Hosackia gracilis	harlequin lotus	Fabaceae	perennial rhizomatous herb	4.2	S3	G4
Kopsiopsis hookeri	small groundcone	Orobanchaceae	perennial rhizomatous herb (parasitic)	2B.3	S1S2	G4?
Lilium maritimum	coast lily	Liliaceae	perennial bulbiferous herb	1B.1	S2	G2
Lilium rubescens	redwood lily	Liliaceae	perennial bulbiferous herb	4.2	S3	G3
Lycopodium clavatum	running-pine	Lycopodiaceae	perennial rhizomatous herb	4.1	S3	G5
Mitellastra caulescens	leafy-stemmed mitrewort	Saxifragaceae	perennial rhizomatous herb	4.2	S4	G5
Packera bolanderi var. bolanderi	seacoast ragwort	Asteraceae	perennial rhizomatous herb	2B.2	S2S3	G4T4
Pityopus californicus	California pinefoot	Ericaceae	perennial herb (achlorophyllous)	4.2	S4	G4G5
Pleuropogon refractus	nodding semaphore grass	Poaceae	perennial rhizomatous herb	4.2	S4	G4
Ramalina thrausta	angel's hair lichen	Ramalinaceae	fruticose lichen (epiphytic)	2B.1	S2?	G5
Sanguisorba officinalis	great burnet	Rosaceae	perennial rhizomatous herb	2B.2	S2	G5?

Sidalcea malachroides	maple-leaved checkerbloom	Malvaceae	perennial herb	4.2	S3	G3
Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	Malvaceae	perennial rhizomatous herb	1B.2	S2	G5T2
Tiarella trifoliata var. trifoliata	trifoliate laceflower	Saxifragaceae	perennial rhizomatous herb	3.2	S2S3	G5T5
Usnea longissima	Methuselah's beard lichen	Parmeliaceae	fruticose lichen (epiphytic)	4.2	S4	G4
Veratrum fimbriatum	fringed false-hellebore	Melanthiaceae	perennial herb	4.3	S3	G3

Suggested Citation

CNPS, Rare Plant Program. 2016. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, CA. Website http://www.rareplants.cnps.org [accessed 12 July 2016].

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Caspar Seadrift

IPaC Trust Resource Report

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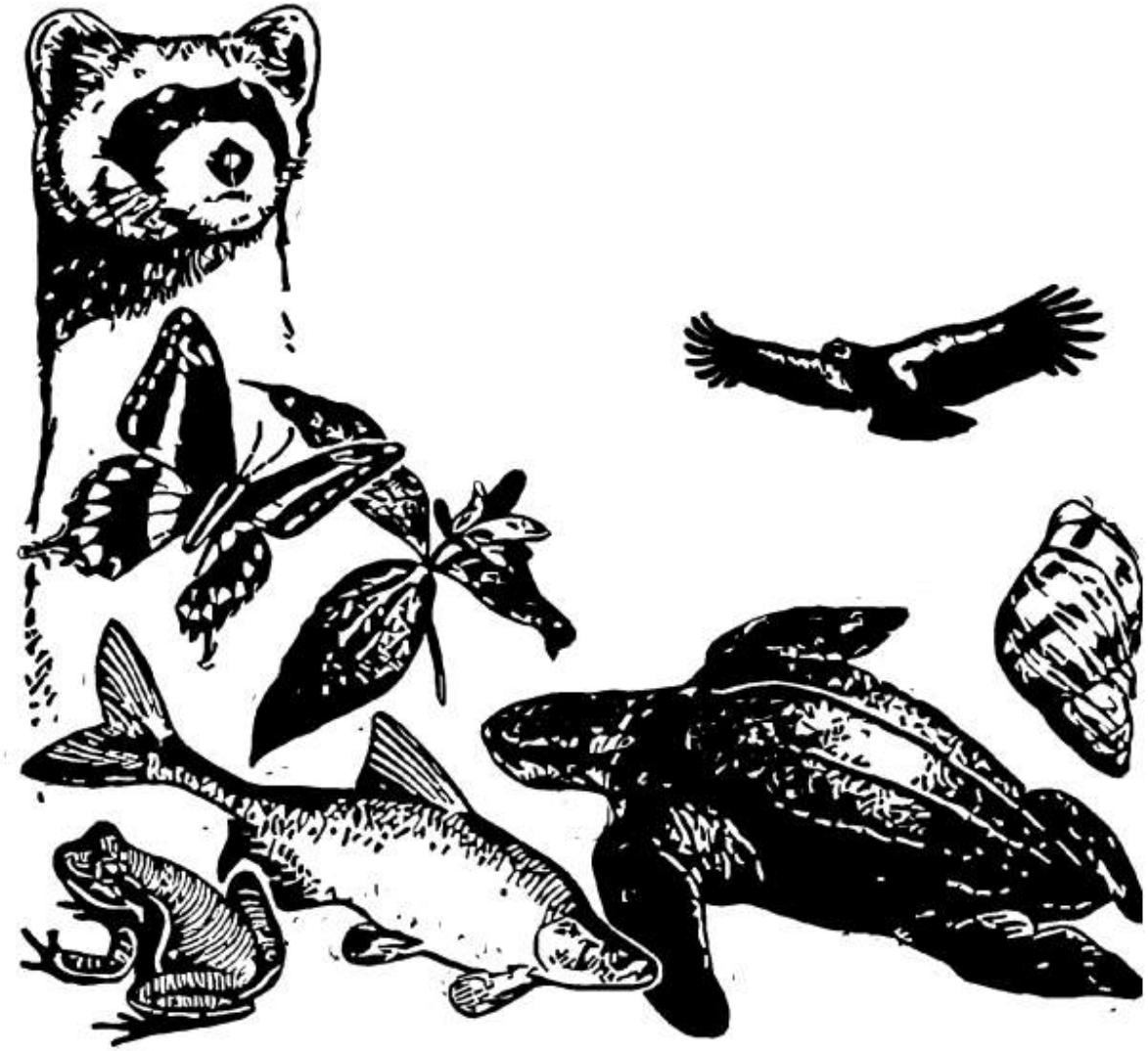
This report is for informational purposes only and should not be used for planning or analyzing project level impacts. For project reviews that require U.S. Fish & Wildlife Service review or concurrence, please return to the IPaC website and request an official species list from the Regulatory Documents page.



IPaC - Information for Planning and Conservation (http://ecos.fws.gov/ipac/): A project planning tool to help streamline the U.S. Fish & Wildlife Service environmental review process.

US Fish & Wildlife Service

IPaC Trust Resource Report

NAME

Caspar Seadrift

LOCATION

Mendocino County, California

DESCRIPTION

Proposed Single Family Residance

IPAC LINK

http://ecos.fws.gov/ipac/project/KIZ5F-RSYMV-DE5AD-JI736-BRNUYQ

U.S. Fish & Wildlife Contact Information

Trust resources in this location are managed by:

Arcata Fish And Wildlife Office
1655 Heindon Road
Arcata, CA 95521-4573
(707) 822-7201

Endangered Species

Proposed, candidate, threatened, and endangered species are managed by the Endangered Species Program of the U.S. Fish & Wildlife Service.

This USFWS trust resource report is for informational purposes only and should not be used for planning or analyzing project level impacts.

For project evaluations that require FWS concurrence/review, please return to the IPaC website and request an official species list from the Regulatory Documents section.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency.

A letter from the local office and a species list which fulfills this requirement can only be obtained by requesting an official species list from the Regulatory Documents section in IPaC.

The list of species below are those that may occur or could potentially be affected by activities in this location:

Amphibians

California Red-legged Frog Rana draytonii — Threatened

CRITICAL HABITAT

There is **final** critical habitat designated for this species.

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=D02D

Birds

Marbled Murrelet Brachyramphus marmoratus — Threatened

CRITICAL HABITAT

There is **final** critical habitat designated for this species.

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B08C

Northern Spotted Owl Strix occidentalis caurina — Threatened

CRITICAL HABITAT

There is **final** critical habitat designated for this species.

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B08B

Short-tailed Albatross Phoebastria (=Diomedea) albatrus — Endangered

CRITICAL HABITAT

No critical habitat has been designated for this species.

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B00Y

Western Snowy Plover Charadrius alexandrinus nivosus — Threatened

CRITICAL HABITAT

There is **final** critical habitat designated for this species.

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B07C

Yellow-billed Cuckoo Coccyzus americanus — Threatened

CRITICAL HABITAT

There is **proposed** critical habitat designated for this species.

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B06R

Fishes

Tidewater Goby Eucyclogobius newberryi — Endangered

CRITICAL HABITAT

There is **final** critical habitat designated for this species.

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=E071

Flowering Plants

Burke's Goldfields Lasthenia burkei — Endangered

CRITICAL HABITAT
No critical habitat has been designated for this species.

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=Q1XU

Contra Costa Goldfields Lasthenia conjugens — Endangered

CRITICAL HABITAT
There is **final** critical habitat designated for this species.

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=Q122

Monterey Clover Trifolium trichocalyx — Endangered

CRITICAL HABITAT
No critical habitat has been designated for this species.

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=Q23C

Showy Indian Clover Trifolium amoenum — Endangered

CRITICAL HABITAT
No critical habitat has been designated for this species.

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=Q238

Insects

Behren's Silverspot Butterfly Speyeria zerene behrensii — Endangered

CRITICAL HABITAT
No critical habitat has been designated for this species.

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=I031

Lotis Blue Butterfly Lycaeides argyrognomon lotis — Endangered

CRITICAL HABITAT
No critical habitat has been designated for this species.

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=I00I

Mammals

Fisher Martes pennanti — Proposed Threatened

CRITICAL HABITAT
No critical habitat has been designated for this species.

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=A0HS

Point Arena Mountain Beaver Aplodontia rufa nigra — Endangered

CRITICAL HABITAT
No critical habitat has been designated for this species.

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=A0BJ

Reptiles

Leatherback Sea Turtle Dermochelys coriacea — Endangered

CRITICAL HABITAT

There is **final** critical habitat designated for this species.

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=C00F

Critical Habitats

There are no critical habitats in this location

Migratory Birds

Birds are protected by the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act.

Any activity which results in the take of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service (1). There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures.

Additional information can be found using the following links:

- Birds of Conservation Concern
  http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Conservation measures for birds
  http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Year-round bird occurrence data
  http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/akn-histogram-tools.php

The following species of migratory birds could potentially be affected by activities in this location:

Allen's Hummingbird Selasphorus sasin — Bird of conservation concern
Season: Breeding
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0LI

Ashy Storm-petrel Oceanodroma homochroa — Bird of conservation concern
Season: Breeding
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0AV

Black Oystercatcher Haematopus bachmani — Bird of conservation concern
Year-round
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0KJ

Fox Sparrow Passerella iliaca — Bird of conservation concern
Season: Wintering

Marbled Godwit Limosa fedoa — Bird of conservation concern
Season: Wintering
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0JL

Nuttall's Woodpecker Picoides nuttallii — Bird of conservation concern
Year-round
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0HT

Oak Titmouse Baeolophus inornatus — Bird of conservation concern
Year-round
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0MJ

Olive-sided Flycatcher Contopus cooperi — Bird of conservation concern
Season: Breeding
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0AN

Peregrine Falcon Falco peregrinus — Bird of conservation concern
Year-round
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0FU

Rufous-crowned Sparrow Aimophila ruficeps — Bird of conservation concern
Year-round
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0MX

Short-eared Owl Asio flammeus — Bird of conservation concern
Season: Wintering
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0HD

Western Grebe aechmophorus occidentalis — Bird of conservation concern
Season: Wintering
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0EA

Whimbrel Numenius phaeopus — Bird of conservation concern
Season: Wintering
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0JN

Yellow Warbler dendroica petechia ssp. brewsteri — Bird of conservation concern
Season: Breeding
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0EN

Refuges

Any activity proposed on National Wildlife Refuge lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuges in this location

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal Statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

DATA LIMITATIONS

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

DATA EXCLUSIONS

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

DATA PRECAUTIONS

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

There are no wetlands in this location

RareFind

Query Summary:
Quad IS (Albion (3912327) OR Elk (3912326) OR Fort Bragg (3912347) OR Mathison Peak (3912336) OR Mendocino (3912337) OR Noyo Hill (3912346))
AND Habitat IS (Meadow & seep OR North coast coniferous forest)

Print Close

CNDDB Element Query Results

Scientific Name	Common Name	Taxonomic Group	Element Code	Total Occs	Returned Occs	Federal Status	State Status	Global Rank	State Rank	CA Rare Plant Rank	Other Status	Habitats
Accipiter gentilis	northern goshawk	Birds	ABNKC12060	427	1	None	None	G5	S3	null	BLM_S-Sensitive | CDF_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | USFS_S-Sensitive	North coast coniferous forest | Subalpine coniferous forest | Upper montane coniferous forest
Arborimus pomo	Sonoma tree vole	Mammals	AMAFF23030	214	23	None	None	G3	S3	null	CDFW_SSC-Species of Special Concern | IUCN_NT-Near Threatened	North coast coniferous forest | Oldgrowth | Redwood
Ascaphus truei	Pacific tailed frog	Amphibians	AAABA01010	218	12	None	None	G4	S3S4	null	CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern	Aquatic | Klamath/North coast flowing waters | Lower montane coniferous forest | North coast coniferous forest | Redwood | Riparian forest
Calileptoneta wapiti	Mendocino leptonetid spider	Arachnids	ILARAU6040	2	2	None	None	G1	S1	null	null	North coast coniferous forest
Calystegia purpurata ssp. saxicola	coastal bluff morning-glory	Dicots	PDCON040D2	30	2	None	None	G4T2T3	S2S3	1B.2	null	Coastal bluff scrub | Coastal dunes | Coastal scrub | North coast coniferous forest
Campanula californica	swamp harebell	Dicots	PDCAM02060	132	36	None	None	G3	S3	1B.2	BLM_S-Sensitive	Bog & fen | Closed-cone coniferous forest | Coastal prairie | Marsh & swamp | Meadow & seep | North coast coniferous forest | Wetland
Carex californica	California sedge	Monocots	PMCYP032D0	28	26	None	None	G5	S2	2B.3	null	Bog & fen | Closed-cone coniferous forest | Coastal prairie | Freshwater marsh | Marsh & swamp | Meadow & seep | Wetland
Carex lenticularis var. limnophila	lagoon sedge	Monocots	PMCYP037A7	4	1	None	None	G5T5	S1	2B.2	null	Bog & fen | Marsh & swamp | North coast coniferous forest
Carex saliniformis	deceiving sedge	Monocots	PMCYP03BY0	15	5	None	None	G2	S2	1B.2	null	Coastal prairie | Coastal scrub | Marsh & swamp | Meadow & seep | Wetland
Coptis laciniata	Oregon goldthread	Dicots	PDRAN0A020	122	24	None	None	G4	S3	4.2	null	Meadow & seep | North coast coniferous forest | Wetland
	bunchberry	Dicots	PDCOR01040	11	3	None	None	G5	S2	2B.2	null	

Cornus canadensis												Bog & fen | Meadow & seep | North coast coniferous forest
Corynorhinus townsendii	Townsend's big-eared bat	Mammals	AMACC08010	619	2	None	Candidate Threatened	G3G4	S2	null	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | USFS_S-Sensitive | WBWG_H-High Priority	Broadleaved upland forest | Chaparral | Chenopod scrub | Great Basin grassland | Great Basin scrub | Joshua tree woodland | Lower montane coniferous forest | Meadow & seep | Mojavean desert scrub | Riparian forest | Riparian woodland | Sonoran desert scrub | Sonoran thorn woodland | Upper montane coniferous forest | Valley & foothill grassland
Helminthoglypta arrosa pomoensis	Pomo bronze shoulderband	Mollusks	IMGASC2033	3	1	None	None	G2G3T1	S1	null	IUCN_DD-Data Deficient	North coast coniferous forest | Redwood
Kopsiopsis hookeri	small groundcone	Dicots	PDORO01010	21	1	None	None	G4G5	S1S2	2B.3	null	North coast coniferous forest
Lasthenia californica ssp. bakeri	Baker's goldfields	Dicots	PDAST5L0C4	14	4	None	None	G3TH	SH	1B.2	null	Closed-cone coniferous forest | Coastal scrub | Marsh & swamp | Meadow & seep
Lilium maritimum	coast lily	Monocots	PMLIL1A0C0	76	29	None	None	G2	S2	1B.1	null	Broadleaved upland forest | Closed-cone coniferous forest | Coastal prairie | Coastal scrub | Marsh & swamp | North coast coniferous forest
Lycopodium clavatum	running-pine	Ferns	PPLYC01080	120	4	None	None	G5	S3	4.1	null	Lower montane coniferous forest | Marsh & swamp | North coast coniferous forest | Wetland
Microseris borealis	northern microseris	Dicots	PDAST6E030	2	1	None	None	G5	S1	2B.1	null	Bog & fen | Lower montane coniferous forest | Meadow & seep | Wetland
Mitellastra caulescens	leafy-stemmed mitrewort	Dicots	PDSAX0N020	21	3	None	None	G5	S4	4.2	null	Broadleaved upland forest | Lower montane coniferous forest | Meadow & seep | North coast coniferous forest
Packera bolanderi var. bolanderi	seacoast ragwort	Dicots	PDAST8H0H1	65	5	None	None	G4T4	S2S3	2B.2	null	Coastal scrub | North coast coniferous forest
Plebejus idas lotis	lotis blue butterfly	Insects	IILEPG5013	1	1	Endangered	None	G5TH	SH	null	XERCES_CI-Critically Imperiled	Bog & fen | Meadow & seep | Wetland
Puccinellia pumila	dwarf alkali grass	Monocots	PMPOA531L0	2	1	None	None	G4?	SH	2B.2	null	Marsh & swamp | Meadow & seep | Wetland
Ramalina thrausta	angel's hair lichen	Lichens	NLLEC3S340	14	2	None	None	G5	S2?	2B.1	null	North coast coniferous forest
Rana boylii	foothill yellow-legged frog	Amphibians	AAABH01050	810	2	None	None	G3	S3	null	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_NT-Near	Aquatic | Chaparral | Cismontane woodland | Coastal scrub |

											Threatened | USFS_S-Sensitive	Klamath/North coast flowing waters | Lower montane coniferous forest | Meadow & seep | Riparian forest | Riparian woodland | Sacramento/San Joaquin flowing waters
Rhynchospora alba	white beaked-rush	Monocots	PMCYP0N010	11	2	None	None	G5	S2	2B.2	null	Bog & fen | Marsh & swamp | Meadow & seep | Wetland
Sanguisorba officinalis	great burnet	Dicots	PDROS1L060	22	3	None	None	G5?	S2	2B.2	null	Bog & fen | Broadleaved upland forest | Marsh & swamp | Meadow & seep | North coast coniferous forest | Riparian forest | Ultramafic | Wetland
Sidalcea malachroides	maple-leaved checkerbloom	Dicots	PDMAL110E0	136	4	None	None	G3	S3	4.2	null	Broadleaved upland forest | Coastal prairie | Coastal scrub | North coast coniferous forest | Riparian forest
Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	Dicots	PDMAL110F9	47	1	None	None	G5T2	S2	1B.2	BLM_S-Sensitive	Coastal bluff scrub | Coastal prairie | North coast coniferous forest
Usnea longissima	Methuselah's beard lichen	Lichens	NLLEC5P420	206	8	None	None	G4	S4	4.2	BLM_S-Sensitive	Broadleaved upland forest | North coast coniferous forest | Oldgrowth | Redwood

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad is (Albion (3912327) or Elk (3912326) or Fort Bragg (3912347) or Mathison Peak (3912336) or Mendocino (3912337) or Noyo Hill (3912346)) and Habitat is (Meadow & seep or North coast coniferous forest)

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Accipiter gentilis northern goshawk	ABNKC12060	None	None	G5	S3	SSC
Arborimus pomo Sonoma tree vole	AMAFF23030	None	None	G3	S3	SSC
Ascaphus truei Pacific tailed frog	AAABA01010	None	None	G4	S3S4	SSC
Calileptoneta wapiti Mendocino leptonetid spider	ILARAU6040	None	None	G1	S1	
Calystegia purpurata ssp. saxicola coastal bluff morning-glory	PDCON040D2	None	None	G4T2T3	S2S3	1B.2
Campanula californica swamp harebell	PDCAM02060	None	None	G3	S3	1B.2
Carex californica California sedge	PMCYP032D0	None	None	G5	S2	2B.3
Carex lenticularis var. limnophila lagoon sedge	PMCYP037A7	None	None	G5T5	S1	2B.2
Carex saliniformis deceiving sedge	PMCYP03BY0	None	None	G2	S2	1B.2
Coptis laciniata Oregon goldthread	PDRAN0A020	None	None	G4	S3	4.2
Cornus canadensis bunchberry	PDCOR01040	None	None	G5	S2	2B.2
Corynorhinus townsendii Townsend's big-eared bat	AMACC08010	None	Candidate Threatened	G3G4	S2	SSC
Helminthoglypta arrosa pomoensis Pomo bronze shoulderband	IMGASC2033	None	None	G2G3T1	S1	
Kopsiopsis hookeri small groundcone	PDORO01010	None	None	G4G5	S1S2	2B.3
Lasthenia californica ssp. bakeri Baker's goldfields	PDAST5L0C4	None	None	G3TH	SH	1B.2
Lilium maritimum coast lily	PMLIL1A0C0	None	None	G2	S2	1B.1
Lycopodium clavatum running-pine	PPLYC01080	None	None	G5	S3	4.1
Microseris borealis northern microseris	PDAST6E030	None	None	G5	S1	2B.1
Mitellastra caulescens leafy-stemmed mitrewort	PDSAX0N020	None	None	G5	S4	4.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Packera bolanderi var. bolanderi seacoast ragwort	PDAST8H0H1	None	None	G4T4	S2S3	2B.2
Plebejus idas lotis lotis blue butterfly	IILEPG5013	Endangered	None	G5TH	SH	
Puccinellia pumila dwarf alkali grass	PMPOA531L0	None	None	G4?	SH	2B.2
Ramalina thrausta angel's hair lichen	NLLEC3S340	None	None	G5	S2?	2B.1
Rana boylii foothill yellow-legged frog	AAABH01050	None	None	G3	S3	SSC
Rhynchospora alba white beaked-rush	PMCYP0N010	None	None	G5	S2	2B.2
Sanguisorba officinalis great burnet	PDROS1L060	None	None	G5?	S2	2B.2
Sidalcea malachroides maple-leaved checkerbloom	PDMAL110E0	None	None	G3	S3	4.2
Sidalcea malviflora ssp. patula Siskiyou checkerbloom	PDMAL110F9	None	None	G5T2	S2	1B.2
Usnea longissima Methuselah's beard lichen	NLLEC5P420	None	None	G4	S4	4.2

Record Count: 29