BIOLOGICAL RESOURCES ASSESSMENT REPORT

for Federal and State-Listed Wildlife and Plant Species and Environmentally Sensitive Habitat Areas

Single Family Residence Development

Assessor's Parcel Number (APN): 506 – 071 – 020

92 Young Lane

Manila (Arcata), Humboldt County, California 95521

Prepared For:

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Date Prepared:

September 22nd, 2025

Certification: I hereby certify that the statements furnished in this report present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

X _____.

Mason London, MSc Biology
Naiad Biological Consulting; Principal Biologist

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List of Acronyms and Abbreviations

AMM	Avoidance and Minimization Measure(s)
APT	Antecedent Precipitation Tool
BRA	Biological Resources Assessment
BMP	Best Management Practice(s)
CCC	California Coastal Commission
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
ESA	Endangered Species Act (federal)
FGC	California Fish and Game Code
FP	Fully Protected (CDFW status)
Ft	feet
GIS	Geographic Information System
GPS	Global Positioning System
IPaC	Information for Planning and Conservation (USFWS)
LCP	Local Coastal Program
LOD	Limit(s) of Disturbance
MBTA	Migratory Bird Treaty Act
MCV	Manual of California Vegetation
NEPA	National Environmental Policy Act
NOAA	National Oceanic and Atmospheric Administration
NRCS	Natural Resources Conservation Service
NSO	Northern Spotted Owl
NWI	National Wetlands Inventory
RWQCB	Regional Water Quality Control Board
SSC	Species of Special Concern (CDFW status)
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WL	Watch List (CDFW status)

Section 1 Executive Summary

Naiad Biological Consulting (NBC) prepared this Biological Resources Assessment (BRA) and Aquatic Resources Delineation (ARD) in support of a proposed Coastal Development Permit (CDP) for Assessor's Parcel Number (APN) 506-071-020, located at 92 Young Lane in the unincorporated community of Manila, Humboldt County, California. This report documents existing biological resources, evaluates the potential for sensitive species and habitats to occur, and provides avoidance and minimization measures to ensure consistency with the California Environmental Quality Act (CEQA), the California Coastal Act, and Humboldt County's certified Local Coastal Program (LCP). The project proposes construction of a single-family residence and associated infrastructure within the ~0.35-acre parcel.

The Study Area is a vacant residential parcel dominated by ruderal non-native annual grasses and forbs, with scattered native shrubs and small patches of California blackberry (*Rubus ursinus*), Hooker's willow (*Salix hookeriana*), and coyote brush (*Baccharis pilularis*) along the eastern fence line. Adjacent habitats to the west and north support designated Environmentally Sensitive Habitat Areas (ESHAs), including Sitka spruce forest, shore pine forest, and coastal scrub; however, these communities do not extend into the parcel boundary. Soils are mapped as the Samoa–Clambeach complex, with the excessively drained, non-hydric Samoa component confirmed during field surveys. These conditions support disturbance-adapted vegetation and are consistent with the absence of wetlands onsite.

Protocol-level botanical surveys (April, June, and August 2025) and an ARD (April and June 2025) confirmed that no wetlands, riparian areas, vernal pools, or jurisdictional aquatic features occur onsite under either U.S. Army Corps of Engineers three-parameter criteria or the California Coastal Commission's one-parameter Coastal Zone definition. No special-status plant species or sensitive natural communities were documented within the parcel. A records review and field evaluation determined that nearly all special-status wildlife taxa have no potential to occur due to the lack of suitable habitat. A narrow subset of disturbance-tolerant species, including some raptors, passerines, and bats, have Low potential for transient foraging or nesting at site margins. No resident or breeding special-status species were detected.

To avoid or minimize potential impacts during construction and occupancy, this BRA recommends implementation of Avoidance and Minimization Measures (AMMs BIO-1 through BIO-16). These include protections for nesting birds and raptors (BIO-1), small vertebrates and burrowing mammals (BIO-2, BIO-3), bats (BIO-4), and pollinators (BIO-5); construction-phase controls such as fencing limits of disturbance (BIO-6), worker environmental awareness training (BIO-7), erosion/spill BMPs (BIO-8), and dark-sky lighting (BIO-9); and plant-focused measures to prevent invasive species introduction and manage weed risk (BIO-10 through BIO-16). Together, these measures address both on-parcel resources and the protection of adjacent ESHA communities.

With development confined to a small, previously disturbed residential parcel, the absence of wetlands and special-status plant populations onsite, and the application of AMMs to address wildlife, invasive species, and ESHA adjacency, the proposed project is expected to result in no significant impacts to biological resources. The project will remain consistent with the requirements of CEQA, the California Coastal Act, and Humboldt County's LCP.

Section 2 Introduction, Background, and Project Understanding

2.1 Purpose and Need

This Biological Resources Assessment (BRA) was prepared by Mason London of Naiad Biological Consulting at the request of the project applicant in support of a Coastal Development Permit (CDP) application for proposed residential development on Assessor's Parcel Number (APN 506-071-020), located at 92 Young Lane in Manila, Humboldt County, California.

The purpose of this assessment is to document existing biological resources within the parcel and evaluate potential biological constraints associated with the proposed development. Specifically, this report addresses the presence or potential for special-status plant and wildlife species, sensitive natural communities, and jurisdictional aquatic features. The BRA evaluates potential project-related impacts and provides recommendations for avoidance, minimization, or mitigation measures consistent with applicable environmental regulations.

This assessment is supported by a Botanical Survey Report (NBC 2025) (Appendix A) and an Aquatic Resources Delineation Report (NBC 2025) (Appendix B), both prepared for the 92 Young Lane parcel. These technical studies are summarized herein and included in full as appendices to this BRA.

The assessment is intended to support compliance with the California Environmental Quality Act (CEQA), the California Coastal Act, and Humboldt County (County) Planning & Building Department submittal standards. It also provides baseline information suitable for coordination with resource agencies such as the California Department of Fish and Wildlife (CDFW), U.S. Army Corps of Engineers (USACE), and the U.S. Fish and Wildlife Service (USFWS), should consultation become necessary.

The findings of this assessment will inform the County's environmental review process by identifying biological resources present on the site and evaluating whether the proposed development has potential to affect them. This information provides a foundation for the County, Coastal Commission staff, and other regulatory agencies to ensure sensitive resources are appropriately considered during project approval.

2.2 Biologist's Qualifications

Mason London, Principal Biologist, Naiad Biological Consulting

Mr. London is the Principal Biologist and owner of Naiad Biological Consulting, with more than 18 years of professional experience in wildlife biology, botany, and wetland science throughout California. His expertise includes biological resource assessments, protocol-level botanical surveys, and jurisdictional wetland and aquatic resource delineations. He has prepared numerous technical documents in compliance with the California Environmental Quality Act (CEQA), National Environmental Policy Act (NEPA), and state and federal endangered species acts, as well as agency permitting requirements.

Mr. London has managed environmental review and permitting support for a wide range of projects across Northern and Southern California, including residential subdivisions, utility infrastructure, habitat restoration, and roadway improvements. His work emphasizes defensible technical analysis, sensitive species and habitat evaluations, and coordination with regulatory agencies such as the California

Department of Fish and Wildlife (CDFW), U.S. Army Corps of Engineers (USACE), and U.S. Fish and Wildlife Service (USFWS).

For the 92 Young Lane project, Mr. London conducted site surveys, prepared the Botanical Survey Report and the Aquatic Resources Delineation Report, documented existing biological resources, evaluated potential for special-status species and sensitive habitats, and prepared this Biological Resources Assessment to inform Humboldt County's and the California Coastal Commission's environmental review process.

2.3 Study Area Description and Geographic Setting

The Study Area is located at 92 Young Lane in the unincorporated community of Manila, Humboldt County, California (APN 506-071-020) (Map 1). The parcel is approximately 0.35 acres in size (0.29 acres GIS-derived), relatively flat, and situated within a low-density residential setting on the Samoa Peninsula between Humboldt Bay to the east and the Pacific Ocean to the west. The center location of the Study Area is 40°53'12.3"N, 124°08'47.5"W. The property is bordered by residential parcels to the north and south, Young Lane to the east, and undeveloped dune and conifer forest habitat to the west. Elevations within the site range from approximately 19 to 23 feet above mean sea level (Google Earth Pro 2025). The Study Area occurs within the USGS Eureka 7.5-minute quadrangle.

The property is zoned Residential Single-Family (RS-X) under the Humboldt County Zoning Ordinance and lies within the California Coastal Zone, subject to the California Coastal Act and Humboldt County's certified Local Coastal Program. The parcel is currently undeveloped and dominated by ruderal, non-native grasses and forbs, with scattered native shrubs and trees occurring along parcel margins.

Soils mapped for the parcel consist of the Samoa–Clambeach complex, 0 to 50 percent slopes (NRCS 2024). Field verification confirmed the excessively drained Samoa component, which is sandy, non-hydric, and low in organic matter. These soils support disturbance-adapted grasses and forbs but do not exhibit characteristics of wetland soils. The site is not located within a designated Alquist-Priolo Fault Hazard Zone but is mapped within the 100-year coastal flood hazard zone.

The area experiences a cool-summer Mediterranean climate (Köppen Csb), characterized by mild, wet winters and cool, fog-influenced summers. Average annual precipitation in the Manila area is approximately 40–45 inches, primarily falling between October and April. Persistent summer fog provides additional atmospheric moisture that shapes local dune and forest vegetation.

Hydrologically, the Study Area lies within the Humboldt Bay watershed (HUC 8: 18010102). No wetlands, streams, or other aquatic features were identified within the parcel during field surveys conducted in April and June 2025, as documented in the Aquatic Resources Delineation Report (NBC 2025). Although the parcel itself is hydrologically isolated, willow thickets and intact dune habitats occur immediately adjacent to the site, reflecting the broader groundwater-dependent mosaic of the Samoa Peninsula.

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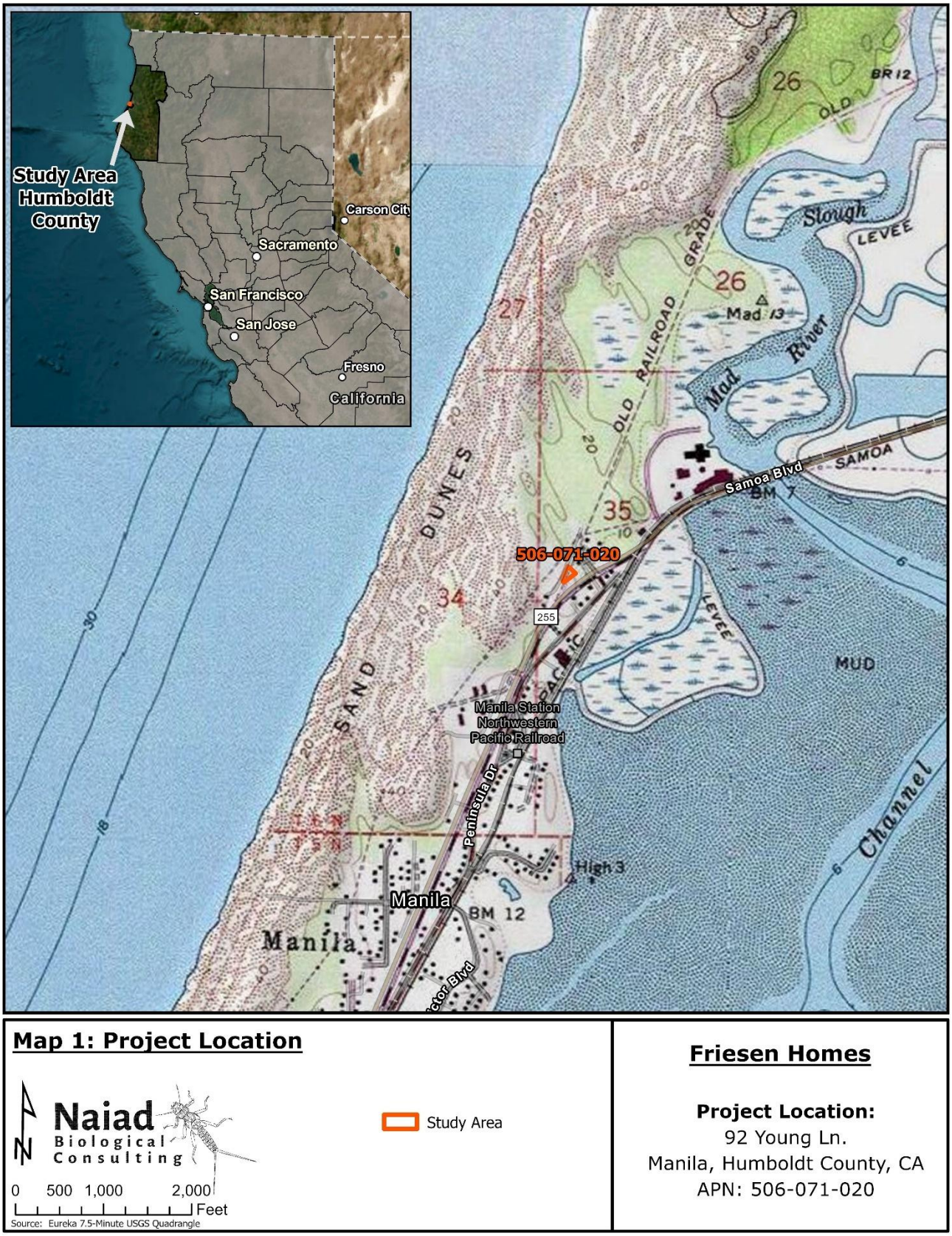


Map 1. This map provides an overview of the project location within Humboldt County, indicating the geographic area of interest and its surrounding context.

2.4 Project Description

The project applicant is proposing residential development on an existing ~0.35-acre parcel (APN 506-071-020) located at 92 Young Lane in the unincorporated community of Manila, Humboldt County, California. The parcel is currently vacant and undeveloped, with vegetation dominated by non-native grasses and forbs. No structures or utilities are present on site.

The proposed project involves the construction of a single-family residence and associated infrastructure (e.g., driveway access, utility connections, etc.). All development would occur within the parcel boundary and would be subject to County and Coastal Commission review under a Coastal Development Permit (CDP). No off-site improvements are proposed as part of this application.

Access to the parcel would be provided from Young Lane, which connects directly to Highway 255. Utility service (water, electricity, and communications) is available in the immediate vicinity along Young Lane and could be extended to the parcel as part of project implementation.

The project boundary (Study Area) is illustrated in Map 2 and provides the basis for evaluating potential environmental impacts associated with the proposed residence. Construction of the residence and related infrastructure will result in new ground disturbance within the lot; however, no wetlands, special-status plant populations, or sensitive natural communities have been documented within the parcel.

To address potential constraints, this Biological Resources Assessment has been prepared to document baseline site conditions, evaluate the presence or potential for sensitive species and habitats, and provide recommendations to avoid, minimize, or mitigate potential impacts. The findings of this assessment will support Humboldt County's planning and environmental review process and demonstrate consistency with the California Coastal Act and Local Coastal Program.

Map 2. The parcel boundary denotes the limits of the Study Area. The base layer aerial imagery (2019) shows a large tree in the center of the parcel that was removed sometime after 2022, as confirmed by more recent aerial photographs.

Section 3 Methods

3.1 Overview

The methods described below outline the approach used to evaluate biological resources within the Study Area. Work was conducted in accordance with standard agency guidance (e.g., CDFW 2018 botanical survey protocols, USACE 1987 Wetlands Delineation Manual and 2010 Regional Supplement, CCC Coastal Zone criteria), Humboldt County Planning & Building requirements, and professional best practices.

For this project, both a protocol-level botanical survey and a formal Aquatic Resources Delineation (ARD) were conducted in spring and summer 2025. These technical studies provide the basis for evaluating the presence or absence of special-status species, sensitive natural communities, and jurisdictional aquatic resources within the parcel. Methods for these studies are summarized below, with complete reports included as appendices to this BRA (Appendix A & B)

3.2 Pre-Field Data Review and Preparation

3.2.1 Special-Status Species and Habitat Desktop Review

Prior to field surveys, a desktop review was conducted to identify special-status plant and wildlife species with potential to occur in the Study Area. Data sources included:

- CalVeg Vegetation Mapping (USFS 2025) (Map 3)
- California Natural Diversity Database (CNDDB) – Biogeographic Information and Observation System (BIOS) (CDFW 2025) (Map 4)
- U.S. Fish and Wildlife Service (USFWS) – Information for Planning and Conservation (IPaC) (USFWS 2025)
- Calflora Plant Database (Calflora 2025)
- California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS 2025)
- USDA Web Soil Survey for soil mapping and hydric soil potential (NRCS 2025)
- U.S. Fish and Wildlife Service National Wetlands Inventory (NWI) (USFWS 2025)
- USGS Eureka 7.5-minute quadrangle and recent aerial imagery

The review identified multiple special-status dune plant species (e.g., *Layia carnosa*, *Erysimum menziesii*, *Oenothera wolfii*) and sensitive natural communities in the broader Samoa Peninsula landscape, which informed survey timing and field effort.

3.2.2 Occurrence of Special-Status Species

Each species identified during database review was evaluated for potential occurrence within the Project Area and broader Study Area according to the following criteria:

1. **None** – No suitable habitat present.
2. **Low** – Limited or marginal suitable habitat; no known occurrences in the area.

3. **Moderate** – Suitable habitat present and/or known occurrences in the vicinity.
4. **High** – Highly suitable habitat present and/or known occurrences within or near the site.
5. **Present** – Species observed during field surveys.

Species ranked “low” were not further investigated for likelihood of occurrence, as their presence was considered highly improbable, though not impossible.

3.2.3 Rationale/Impact Considerations

Special-status species were further evaluated for potential project-related impacts using the following categories:

1. **No Effect** – No discernible impacts on listed or proposed resources.
2. **May Affect, But Not Likely to Adversely Affect** – Effects are beneficial, insignificant, or discountable.
3. **May Affect, and Likely to Adversely Affect** – Resources expected to be negatively impacted by project actions, requiring mitigation.

These determinations informed the development of avoidance and minimization measures presented later in this report.

3.2.4 Climate and Precipitation Context

Antecedent precipitation conditions were evaluated using the Antecedent Precipitation Tool (APT v2.0.0), incorporating data from the nearest weather stations. A Wetland Ecosystem Technical Standard (WETS) table was generated to compare actual precipitation against long-term monthly normals. Conditions in 2025 were within the normal range, ensuring that site hydrology observed during field visits was representative of typical conditions.

3.2.5 Wetlands, Soils, and Aquatic Resource Evaluation

Prior to fieldwork, potential wetland and aquatic resources were evaluated using National Wetlands Inventory (NWI) mapping, NRCS soils data, USGS topographic quadrangles, and high-resolution aerial imagery. The parcel is mapped as the Samoa–Clambeach complex, 0–50% slopes. Field investigation confirmed only the excessively drained, non-hydric Samoa component was present, with no hydric soils observed.

Aquatic resources were formally evaluated during the Aquatic Resources Delineation (NBC 2025), which applied the 1987 U.S. Army Corps of Engineers Wetland Delineation Manual, the 2010 Regional Supplement (Western Mountains, Valleys, and Coast Region), and the California Coastal Commission’s one-parameter wetland definition. No wetlands or jurisdictional aquatic features were identified within the parcel.

More information on the pre-site visit Wetlands, Soils, and Aquatic Resource Evaluation methodology is presented in Appendix B: Aquatic Resources Delineation Report.

3.3 Field Assessment

3.3.1 Site Visit Summary

Multiple site visits were conducted by Mason London, Principal Biologist, during the 2025 survey season. A protocol-level botanical survey was performed on April 18, June 20, and August 12, 2025, and an Aquatic Resources Delineation was conducted on April 18 and June 20, 2025. Weather conditions during surveys were generally cool, overcast to partly cloudy, and influenced by coastal fog, with mild temperatures between from 52–58 °F and light to calm winds.

Fieldwork focused on:

- Conducting floristic botanical surveys of the entire parcel (Appendix A).
- Identifying plant and wildlife species observed.
- Establishing delineation plots to evaluate hydrology, soils, and vegetation for wetland indicators (Appendix B).
- Assessing overall suitability of habitats to support special-status species.

3.3.2 Habitat and Botanical Assessment

A **protocol-level botanical survey** was conducted following CDFW (2018) guidelines. Surveys were floristic in scope, with all vascular plant taxa recorded and identified using *The Jepson Manual* (Baldwin et al. 2012), Calflora, and other standard references. Surveys were scheduled to coincide with the blooming periods of special-status plant species known from the surrounding Samoa Peninsula to ensure detectability.

No special-status plant species or sensitive natural communities were documented within the parcel, which is dominated by ruderal, non-native annual grasses and forbs. A complete account of botanical survey methods and results is provided in Appendix A: Botanical Survey Report.

3.3.3 Wetland and Aquatic Resources Visual Assessment

A formal Aquatic Resources Delineation was conducted in accordance with USACE and CCC criteria. Three delineation plots (P1–P3) were established across the parcel to characterize soils, vegetation, and hydrology. Data sheets and prevalence index calculations confirmed that wetland criteria were not met at any plot.

No wetlands, streams, or other aquatic features were identified within the Study Area. The delineation concluded that the parcel is hydrologically isolated and supports only upland habitat. Complete methods and data forms are provided in Appendix B: Aquatic Resources Delineation Report.

3.4 Data Management and Mapping

Field observations and delineation data points were georeferenced using handheld GPS and cross-checked against aerial imagery, soils data, and topographic maps. Data were compiled in ArcGIS Pro for figure preparation and integrated into the assessment of potential biological resources relative to the Study Area footprint (Map 2).

Section 4 Results and Discussion

4.1 Study Area Regional Alliances

According to CALVEG mapping, vegetation within the Study Area is classified primarily as Sitka Spruce Alliance in the southwestern portion and Urban/Developed in the remainder. These designations are remotely generated, and field-based surveys conducted by NBC confirmed that Sitka spruce forest does not occur within the parcel (Photo 3). Instead, the Study Area is dominated almost entirely by non-native annual grasses and weedy forbs well-adapted to sandy, disturbed conditions.

In the surrounding landscape, CALVEG mapping identifies Sitka Spruce Alliance, Annual Grasses and Forbs, North Coastal Scrub, Urban-Related Bare Soil, Beach Pine, Pickleweed–Cordgrass, Red Alder, Willow (Shrub), Beach Sand, and Grain and Crop Agriculture alliances. These mapped types reflect the diverse habitat mosaic of the Samoa Peninsula and Mad River corridor. Field verification confirmed that Sitka spruce forest occurs to the north of the parcel, while annual grass/forb assemblages dominate to the west, consistent with mapping.

None of these sensitive vegetation alliances extend into the Study Area, and no direct impacts to mapped vegetation communities outside the parcel are anticipated. Adjacent alliances were reviewed in the context of habitat connectivity and potential wildlife movement. However, the high degree of disturbance within the parcel and surrounding residential development substantially limits the ecological value of the site for species dependent on intact riparian, dune, or forest habitats.

For the purposes of this assessment, the Annual Grasses and Forbs Alliance was used as the most accurate representation of on-site conditions when evaluating potential direct impacts to plant and wildlife species. While CALVEG classifications are not a substitute for site-specific surveys, they provide a useful regional framework for understanding vegetation distribution and evaluating habitat suitability for special-status species (see Map 3).

4.1.1 Annual Grasses and Forbs Alliance

Small patches of dry grassland occur at moderately low elevations within the western Klamath Mountains, most commonly on privately owned lands and in portions of the western Trinity Alps. Within the Ranges and Coast sections, these grasslands become more extensive on private holdings, often intermixed with actively managed agricultural lands. Vegetation is dominated by a mix of nonnative and native annual grasses such as brome (*Bromus* spp.), bluegrass (*Poa* spp.), wild oats (*Avena* spp.), fescue (*Vulpia* spp.), dogtail (*Cynosurus* spp.), barley (*Hordeum murinum*), needlegrass (*Nassella* spp.), and oatgrass (*Danthonia* spp.). These grasses are accompanied by a variety of annual and perennial forbs, including checker mallow (*Sidalcea* spp.), brodiaea (*Brodiaea* spp.), wild hyacinth (*Dichelostemma* spp.), yampah (*Perideridia* spp.), and mariposa lily (*Calochortus* spp.). In some areas, upland annual grasslands are bordered by stands of Oregon white oak (*Quercus garryana*), creating ecotones between open grassland and oak woodland habitats.

4.1.2 Sitka Spruce Alliance

Sitka spruce (*Picea sitchensis*) forms a distinctive conifer-dominated alliance along fog-influenced stretches of the Humboldt and Del Norte County coasts, occurring within six subsections of the Coast Section. This narrow distribution is typically associated with alluvial flats or sandy stream floodplain

deposits, where high soil moisture supports a rich understory of wetland plants such as red alder (*Alnus rubra*), yellow skunk cabbage (*Lysichiton americanus*), and various sedges (*Carex* spp.).

Sitka spruce often intermixes with coast redwood (*Sequoia sempervirens*) further inland or on slightly elevated terrain, but where spruce achieves dominance, it is generally mapped at elevations below ~1,200 feet (366 m). In Mendocino County, Sitka spruce is known to co-occur with beach pine (*Pinus contorta* ssp. *contorta*) on coastal sand dunes of the Fort Bragg Terraces Subsection. In Humboldt County, grand fir (*Abies grandis*) may also be present within Sitka spruce stands on the Humboldt Bay Flats and Terraces Subsection.

The understory of Sitka spruce forests is often diverse, with common associates including salmonberry (*Rubus spectabilis*), thimbleberry (*Rubus parviflorus*), huckleberry (*Vaccinium* spp.), salal (*Gaultheria shallon*), vine maple (*Acer circinatum*), and hardwoods such as bigleaf maple (*Acer macrophyllum*). Herbaceous species frequently include western sword fern (*Polystichum munitum*) and other mesic forest forbs.

4.1.3 Urban or Developed Alliance

The Urban or Developed category applies to landscapes that are dominated by human-made structures and infrastructure, including residential units, commercial buildings, roads, utilities, city parks, and cemeteries. These areas are characterized primarily by land use rather than natural vegetation. In cases where managed landscapes support a substantial vegetation component—such as ornamental conifer and hardwood plantings within city parks or landscaped residential areas—other land use or vegetation categories may be more appropriate.

4.1.4 North Coastal Scrub Alliance

The North Coastal Scrub Alliance encompasses shrubby coastal areas of northern California that lack a single dominant shrub species. This alliance typically occurs west of coast redwood (*Sequoia sempervirens*) forests and is distributed across eleven subsections of the Coast Section, with greatest prominence on the Crescent City Plain Subsection. Elevations generally range from sea level to approximately 3,600 feet (1,098 m).

Environmental factors influencing the composition of this alliance include proximity to the coast, exposure to wind and salt spray, soil depth and texture, topographic variation, and the frequency of fire. Subtypes of this vegetation complex have been described by Holland (1986), including northern maritime chaparral, northern coastal scrub, northern coastal bluff scrub, and northern dune scrub. Barbour and Major (1988) further note that these scrub types are often characterized by dominance of coyote brush (*Baccharis pilularis*) or lupine species, particularly yellow bush lupine (*Lupinus arboreus*). Lupine-dominated scrub is most common on level marine terraces adjacent to coastal bluffs from Santa Cruz to Sonoma Counties.

Other common shrubs within the North Coastal Scrub Alliance include blueblossom ceanothus (*Ceanothus thyrsiflorus*), coastal whitethorn (*C. incanus*), hairy manzanita (*Arctostaphylos columbiana*), coffeeberry (*Rhamnus californica*), salal (*Gaultheria shallon*), California huckleberry (*Vaccinium ovatum*), California blackberry (*Rubus ursinus*), poison oak (*Toxicodendron diversilobum*), wax myrtle (*Myrica californica*), and low-growing forms of California bay (*Umbellularia californica*).

Herbaceous and understory species may include western sword fern (*Polystichum munitum*) and, particularly in disturbed or dune-stabilization contexts, European beachgrass (*Ammophila arenaria*).

Toward the northern end of this section, red alder (*Alnus rubra*) and willows (*Salix* spp.) may occur more frequently, reflecting higher soil moisture conditions.

4.1.5 Urban-Related Bare Soil Alliance

The IB Urban-Related Bare Soil category represents areas of non-vegetated barren ground associated with urbanization and mechanical disturbance. This type often occurs where land has been cleared in preparation for construction or paving, leaving exposed soil prior to development. It may also include mechanically disturbed sites such as open quarries, mined areas, or barren ground along highways and utility corridors.

Urban-related bare soil types are typically found adjacent to managed landscapes or developed areas within established urban centers, reflecting the transitional stages of land use prior to permanent urban cover.

4.1.6 Beach Pine Alliance

Beach pine (*Pinus contorta* ssp. *contorta*), also known as shore pine, is the coastal subspecies of lodgepole pine. It occurs primarily on marine terraces and the landward edges of coastal sand dunes from sea level to approximately 492 feet (150 m). In northern California, it is most common within the Humboldt Bay Flats and Terraces Subsection, where it can form nearly pure stands below ~200 feet (61 m).

Beach pine is characterized by its relatively small stature, thick bark, and short lifespan in coastal environments. Cones are open, non-serotinous, and may persist on branches for many years, exhibiting greater cone longevity than those of lodgepole pine (*P. contorta* ssp. *murrayana*). An edaphic variant, Bolander pine (*P. contorta* ssp. *bolanderi*), occurs on highly acidic, nutrient-poor soils of Mendocino's coastal terraces and is considered a specialized form of this coastal pine type.

In addition to monotypic stands, beach pine may be intermixed with other coastal species, including Sitka spruce (*Picea sitchensis*), red alder (*Alnus rubra*), coyote brush (*Baccharis pilularis*), California huckleberry (*Vaccinium ovatum*), salal (*Gaultheria shallon*), and willows (*Salix* spp.). These mixed stands often occur in transitional areas between dunes, coastal scrub, and conifer forest habitats.

4.1.7 Pickleweed–Cordgrass Alliance

The Pickleweed–Cordgrass Alliance represents coastal brackish and salt marsh communities that occur throughout the Coast Section, particularly within the Humboldt Bay Flats and Terraces, Point Reyes, and Coastal Hills–Santa Rosa Plain subsections. These habitats are also prevalent along estuaries of the Smith, Klamath, and Eel Rivers, as well as around San Francisco Bay.

These marshes are typically dominated by common pickleweed (*Salicornia virginica*) and California cordgrass (*Spartina foliosa*). In northern California, invasive cordgrasses such as smooth cordgrass (*Spartina alterniflora*) and dense-flowered cordgrass (*Spartina densiflora*) may also establish in these communities, competing with native vegetation and altering marsh dynamics.

Other common associates include jaumea (*Jaumea carnosa*) and saltgrass (*Distichlis spicata*), which thrive in saline, tidally influenced soils. Collectively, these salt marshes provide important ecological functions, including shoreline stabilization, water filtration, and habitat for a wide variety of fish, invertebrates, and migratory bird species.

4.1.8 Red Alder Alliance

The Red Alder Alliance is associated with seasonally flooded or permanently saturated soils in both alluvial and upland positions. In Humboldt and Del Norte Counties, red alder (*Alnus rubra*) frequently forms dense stands on mesic slopes and riparian corridors, extending southward into nine subsections of the Coast Section. This community is most commonly found along the Smith, Trinity, and Klamath River watersheds, typically at elevations up to ~3,000 feet (915 m).

Pure or near-pure stands of red alder are often interspersed with conifers, including coast redwood (*Sequoia sempervirens*), Douglas-fir (*Pseudotsuga menziesii*), Sitka spruce (*Picea sitchensis*), and grand fir (*Abies grandis*). Short-lived red alder stands may also establish following low-elevation logging, sometimes with minor representation of other hardwoods such as bigleaf maple (*Acer macrophyllum*) and Oregon ash (*Fraxinus latifolia*).

The understory may include ferns, shrubs, and forbs such as chain fern (*Woodwardia fimbriata*), spikenard (*Aralia californica*), western burning bush (*Euonymus occidentalis*), American dogwood (*Cornus sericea*), Sitka alder (*Alnus viridis*), and vine maple (*Acer circinatum*). White alder (*Alnus rhombifolia*) may replace or mix with red alder on inland sites.

4.1.9 Willow (Shrub) Alliance

Shrub-dominated willow (*Salix* spp.) stands are classified as the Willow (Shrub) Alliance where willows form the dominant shrub layer in riparian corridors, seeps, meadows, or other well-watered habitats. This alliance is widespread in California, mapped across twelve subsections of the Coast Section, seventeen subsections of the Mountains Section, and three subsections of the Ranges Section. It occurs at elevations generally below ~6,800 feet (2,074 m).

The Willow (Shrub) Alliance is diverse, encompassing stands dominated by various native willow species, including gray willow (*S. bebbiana*), Booth's willow (*S. boothii*), Del Norte willow (*S. delnortensis*), Sierra willow (*S. eastwoodiae*), narrow-leaved willow (*S. exigua*), Hooker's willow (*S. hookeriana*), Brewer's willow (*S. breweri*), arroyo willow (*S. lasiolepis*), Lemmon's willow (*S. lemmonii*), dusky willow (*S. melanopsis*), Mackenzie's willow (*S. prolixa*), Scouler's willow (*S. scouleriana*), sandbar willow (*S. sessilifolia*), Sitka willow (*S. sitchensis*), and others depending on site conditions.

Associated tree and shrub species often intermixed with willow stands include coastal conifers such as Douglas-fir (*Pseudotsuga menziesii*), grand fir (*Abies grandis*), and Sitka spruce (*Picea sitchensis*), as well as hardwoods like red alder (*Alnus rubra*) and California bay (*Umbellularia californica*). Common shrub associates include coyote brush (*Baccharis pilularis*), salal (*Gaultheria shallon*), and California huckleberry (*Vaccinium ovatum*).

4.1.10 Beach Sand Alliance

The Beach Sand category represents unvegetated littoral zones along the California coast that are maintained primarily as open sandy beaches. These areas are typically non-vegetated due to regular tidal influence, storm disturbance, and ongoing recreational use. In some locations, particularly landward edges of managed beaches, non-native shrub and herbaceous plantings may be introduced to stabilize blowing sands and provide visual or recreational value.

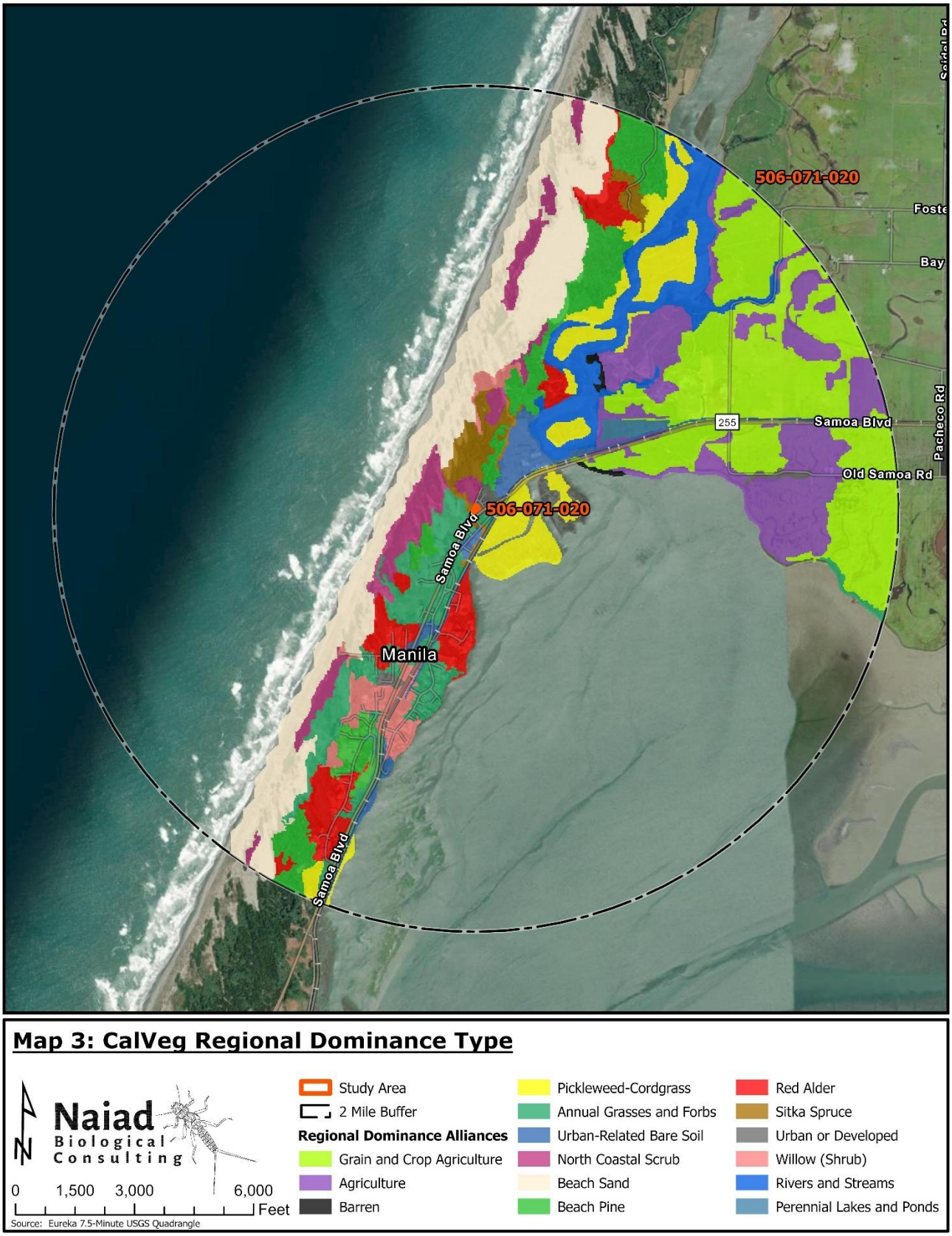
The width of beach sand zones fluctuates seasonally and annually, influenced by storm erosion, sediment supply, and human management activities. Factors such as jetty placement, sediment transport disruption, and artificial sand replenishment by coastal managers can significantly alter the distribution and persistence of beach sand habitat.

Although this mapping type has been documented in Ventura, Los Angeles, and Orange Counties, older mapping in San Diego County identified similar features as “Barren” strips. Comparable unmanaged or semi-managed sandy beaches occur along much of California’s coastline, including the North Coast, where they may grade into foredune or dune scrub habitats.

4.1.11 Grain and Crop Agriculture Alliance

The Grain and Crop Agriculture category encompasses irrigated or dryland fields cultivated for edible herbaceous crops grown in rows, including cereals such as wheat, sorghum, oats, millet, corn, and rye, as well as vegetables such as squash, celery, beans, and peas. These crops are managed for both human consumption and livestock forage.

In addition to food production, certain fields are planted with legumes such as alfalfa and sweet clover to provide animal forage and to enhance soil nitrogen levels. Other crops, including flax and cotton, may be cultivated for multiple uses, including oils (linseed and cottonseed), fiber production, and, in some cases, medicinal applications.



Map 3. This map presents vegetation classifications based on CALVEG data, providing insights into plant communities and habitat types present within and surrounding the Study Area.

4.2 Observed Study Area Habitat and Existing Site Conditions

Biological surveys of the Study Area were conducted by Naiad Biological Consulting in spring and summer 2025, including a protocol-level botanical survey (April 18, June 20, and August 12, 2025) and a formal Aquatic Resources Delineation (April 18 and June 20, 2025). A reconnaissance-level biological assessment was also completed to document general habitat conditions, vegetation assemblages, wildlife use, and the presence or absence of aquatic resources. Weather during field visits was typical of the coastal zone, with cool, overcast, and fog-influenced conditions.

Antecedent precipitation analysis (APT v2.0.0, Eureka WFO Woodley Island station) indicated near-normal to wetter-than-normal rainfall conditions prior to the April and June surveys, ensuring that hydrologic conditions observed on-site were representative and conservative for wetland evaluation.

Overall, the parcel reflects a long history of disturbance associated with rural residential activity and vegetation clearing. The site is currently undeveloped and dominated by ruderal, non-native grasses and forbs adapted to sandy, well-drained soils. Scattered native species such as coyote brush (*Baccharis pilularis*), Hooker's willow (*Salix hookeriana*), and beach lupine (*Lupinus arboreus*) were noted along parcel margins, but no special-status plants or sensitive natural communities were documented. A complete account of botanical survey results is provided in Appendix A: Botanical Survey Report.

Wildlife observations were limited to common, disturbance-tolerant species typical of developed coastal fringe habitats. The site provides low habitat value overall, with marginal cover for nesting passerines along fence lines and shrub patches. No special-status wildlife species were observed, and no high-quality habitat for such species is present within the parcel.

4.2.1 General Study Area Habitat

The ~0.35-acre parcel is nearly flat, with elevations between 19 to 23 feet above mean sea level. Vegetation consists primarily of ruderal non-native grasses and forbs, including *Bromus diandrus* (ripgut brome), *Avena barbata* (slender wild oat), *Hypochaeris radicata* (hairy cat's ear), and *Plantago lanceolata* (narrowleaf plantain). Along the eastern fence line, shrubby vegetation including California blackberry (*Rubus ursinus*), Hooker's willow (*Salix hookeriana*), and scattered coyote brush provides the greatest structural complexity, supporting limited nesting habitat potential for birds. (Photo 1 & Photo 2).

No intact native vegetation alliances were observed within the parcel. Adjacent lands to the west and north support environmentally sensitive habitat areas (ESHAs), including Sitka spruce forest, shore pine forest, and coastal scrub, but these communities do not extend into the parcel boundary.

4.2.2 Wetlands and Aquatic Resources

Desktop review of NWI and NRCS soils mapping did not identify wetlands or aquatic features within the parcel. Field verification during the Aquatic Resources Delineation confirmed the absence of wetlands under both USACE three-parameter criteria and the Coastal Commission's one-parameter Coastal Zone definition. No evidence of hydrophytic vegetation, hydric soils, or wetland hydrology was observed at any of the delineation plots. A detailed description of methods and data forms is provided in Appendix B: Aquatic Resources Delineation Report.

4.2.3 Study Area Soils

The NRCS Web Soil Survey maps the parcel as Samoa–Clambeach complex, 0 to 50 percent slopes. Field verification confirmed the presence of the excessively drained, non-hydric Samoa component, characterized by sandy textures and rapid permeability. No hydric soil indicators were present. These soil conditions are consistent with the absence of wetlands and support the ruderal plant assemblages documented during botanical surveys.

4.2.4 Environmentally Sensitive Habitat Areas (ESHAs)

Under the California Coastal Act (§30107.5), certain habitats are designated as Environmentally Sensitive Habitat Areas (ESHAs) due to their rarity, ecological importance, or role in supporting special-status species. Within the Samoa Peninsula and Manila area, recognized ESHAs include Sitka spruce forest, shore pine forest, coastal dune scrub, wetlands, and other dune-associated vegetation communities.

No ESHAs were observed within the 92 Young Lane parcel. The site is highly disturbed, dominated by ruderal non-native grasses and forbs, with scattered non-sensitive shrubs and trees. However, intact ESHA habitats occur immediately adjacent to the parcel, particularly to the west and north, where coastal coniferous forest and scrub communities persist. These adjacent areas provide important ecological functions at the landscape scale, including habitat for special-status species and stabilization of dune systems.

Although the project parcel does not contain ESHA, its proximity to sensitive habitats underscores the need for protective measures during construction. Best management practices (e.g., erosion and sediment control, invasive species prevention, lighting minimization, and maintaining property-line buffers) should be implemented to avoid indirect impacts to adjacent ESHA communities.

4.3 Special-Status Species

Using CNDDB, USFWS IPaC, and the CNPS Rare Plant Inventory, the records review for the Eureka 9-quad and adjacent quadrangles identified 77 special-status animal taxa—4 amphibians, 33 birds, 16 fishes, 5 insects, 11 mammals, 3 mollusks, and 1 reptile—summarized in Table 1. Map 4 depicts CNDDB-mapped occurrences within and around the Study Area.

The records review also identified 36 special-status plant species in the scoping list for the quadrangle search area. These taxa were evaluated during the protocol-level botanical survey completed for the project (Naiad Biological Consulting, 2025). No special-status plants were observed within the Study Area, and therefore a separate plant species table is not included in this report; please refer to the botanical survey report for detailed findings and supporting rationale (Appendix A).

Potential of Occurrence rankings in Table 1were assigned using regional records and the following site-specific filters (a) elevation ~19–23 ft; (b) setting—small, vacant lot in a low-density residential block; (c) Samoa–Clambeach sandy, excessively drained, non-hydric soils; (d) no wetlands, streams, vernal pools, riparian woodland, intact dune/strand or late-seral conifer within the parcel; (e) vegetation—ruderal non-natives with a fence-line shrub strip of California blackberry (*Rubus ursinus*), Hooker's willow, and scattered coyote brush; and (f) immediately adjacent but off-parcel ESHAs (Sitka spruce forest, shore pine forest, coastal scrub).

Given these constraints, taxa dependent on aquatic/riparian habitats, vernal-pool hydrology, coastal strand, montane forests, or special substrates (serpentine, alkaline, gabbroic, or sandy alluvium) are ranked None / No Effect. A limited subset of upland grassland and edge-adapted generalists (certain raptors, grassland birds, bats, small mammals, and disturbance-tolerant plants assessed in the botanical report) have Low potential, for which the project would be considered “May Affect, But Not Likely to Adversely Affect” with pre-construction nesting bird surveys, bat/roost checks, and standard avoidance BMPs if future development is proposed. Because the project is confined to upland, disturbed surfaces with no in-channel work, pathways for effects to riverine fishes, aquatic invertebrates, and other strictly aquatic species are absent. Detailed species-specific findings are provided in Table 1.

Table 1. Special-Status Animal Species generated from the Eureka 9 quad search and their Potential of Occurrence within the within the Study Area, as well as the Rationale / Impact Considerations for each species. State, federal, and CDFW status definitions provided below the table.

Scientific Name	Common Name	Federal Status	State Status	CDFW Status	Habitat Requirements	Potential of Occurrence (Study Area)	Rationale / Impact Considerations
Amphibians							
Ascaphus truei	Pacific tailed frog	None	None	SSC	Cold, fast-flowing mountain streams and rivers with rocky substrates provide essential habitat. Shaded conditions from dense forest canopy help maintain the low water temperatures this species requires. Riparian vegetation along stream margins offers additional cover and foraging opportunities. Eggs are deposited under stones in swift currents, and larvae develop attached to rocks in high-gradient channels.	None	No Effect - No perennial streams or suitable cold, rocky channels on-site; parcel is a small, disturbed upland lot.
Rana aurora	Northern red-legged frog	None	None	SSC	Freshwater ponds, marshes, lakes, and slow-moving streams are the primary breeding and foraging habitats. Aquatic vegetation, downed logs, and overhanging banks provide critical cover from predators. Forested uplands adjacent to aquatic sites support non-breeding dispersal and foraging activity. Seasonal wetlands and floodplains may also serve as important temporary habitats.	None	No Effect - No ponds, marshes, or riparian habitat within parcel; no aquatic features documented in ARD.
Rana boylii pop. 1	Foothill yellow-legged frog - North Coast DPS	None	None	SSC	Shallow, rocky streams and rivers with clear, cool water provide breeding and rearing habitat. Exposed cobble and gravel bars are used for basking and egg deposition. Stream reaches with riffles, runs, and stable summer flows are most important for population persistence. Surrounding riparian vegetation provides shelter and foraging habitat, while upland areas are used seasonally for dispersal.	None	No Effect - No streams or riffles within parcel; no surface flow or channel forms observed.

Rhyacotriton variegatus	Southern torrent salamander	None	None	SSC	Cold, spring-fed seeps, headwater trickles, and shaded mountain streams form essential habitat. Moist mossy substrates and coarse woody debris provide shelter and breeding sites. Dense forest canopy maintains the cool, saturated microclimate needed for survival. Populations are strongly associated with old-growth coniferous forests and are highly sensitive to disturbance and drying.	None	No Effect - No seeps/springs or closed canopy conifer forest on-site; soils are excessively drained sands.
Birds							
Accipiter cooperii	Cooper's hawk	None	None	WL	Woodlands, riparian corridors, and mixed forests provide important nesting and foraging areas. Dense mid-story trees are selected for nest placement, while nearby open habitats are used for hunting small birds and mammals. These hawks are adaptable and can occupy suburban and urban landscapes where prey is abundant. Nesting success depends on maintaining stands of mature trees with sufficient cover.	Low (foraging)	May Affect, But Not Likely to Adversely Affect - Sparse shrubs/trees may support transient foraging; nesting unlikely due to small size and disturbance.
Accipiter striatus	Sharp-shinned hawk	None	None	WL	Dense coniferous and mixed forests serve as the primary nesting habitat. Foraging occurs along forest edges, clearings, and urban areas where small birds are concentrated. Breeding pairs prefer secluded stands with heavy canopy cover for nest concealment. Migration corridors include both coastal and inland valleys with diverse woodland habitats.	Low (foraging)	May Affect, But Not Likely to Adversely Affect - May overfly/forage along edges; no suitable interior forest or nest substrate on-site.
Circus hudsonius	Northern harrier	None	None	SSC	Open wetlands, grasslands, and coastal marshes provide foraging and nesting habitat. Ground nests are placed in tall grasses or low shrubs that conceal eggs and chicks. Extensive open areas are required to support hunting, as individuals rely on low, coursing flights to detect small	Low	May Affect, But Not Likely to Adversely Affect - Small parcel with ruderal cover lacks extensive open

					mammals and birds. Seasonal wetlands and fallow fields also provide important resources.		grassland/wet meadow; ground-nesting unlikely.
Elanus leucurus	White-tailed kite	None	None	FP	Grasslands, savannas, agricultural fields, and marshes support nesting and foraging activities. Tall shrubs or isolated trees are used for nest sites, often adjacent to open hunting grounds. Small rodents are the primary prey, captured during hovering flights over open terrain. Coastal valleys and lowland riparian corridors provide key strongholds for this species.	Low (foraging)	May Affect, But Not Likely to Adversely Affect - Occasional overflight possible; parcel lacks suitable secluded nest trees and expansive foraging fields.
Haliaeetus leucocephalus	Bald eagle	Delisted	Endangered	FP	Large rivers, lakes, reservoirs, and coastal estuaries are essential habitats. Nesting typically occurs in tall, mature conifers or hardwoods within close proximity to water. Foraging focuses on fish, though carrion and waterfowl may also be consumed. Roosting sites require large trees with good visibility and minimal disturbance.	None/Low (flyover)	No Effect - No large waterbody or nest trees on-site; coastal flyover possible but no habitat present.
Brachyramphus marmoratus	Marbled murrelet	Threatened	Endangered	-	Old-growth coniferous forests near the coast provide critical nesting habitat. Large moss-covered branches high in mature trees are used for single-egg nests. Foraging occurs exclusively in nearshore marine waters, often within a few miles of nesting areas. Population persistence depends on the availability of intact old-growth forests adjacent to productive coastal waters.	None	No Effect - No old-growth or large-limb nesting platforms; parcel is inland small lot.
Chaetura vauxi	Vaux's swift	None	None	SSC	Coniferous forests with large hollow trees or snags are key nesting and roosting habitats. Chimneys and other tall human structures may also be used in urban environments. Foraging occurs entirely on the wing, as birds capture flying insects above forest clearings, rivers, and open	Low (foraging)	May Affect, But Not Likely to Adversely Affect - May forage aerially; no large snags/chimneys

					areas. Seasonal aggregations may form in large roost sites during migration.		suitable for nesting on-site.
Ardea alba	Great egret	None	None	-	Freshwater and estuarine wetlands, marshes, and lagoons provide foraging habitat. Shallow water with emergent vegetation supports feeding on fish, amphibians, and invertebrates. Nesting colonies are established in tall trees or dense shrubs near water. Roosting often occurs in protected wetland groves.	None	No Effect - No wetlands or open water on-site; foraging/nesting habitat absent.
Ardea herodias	Great blue heron	None	None	-	Freshwater marshes, rivers, lakes, estuaries, and coastal shorelines are used for foraging. Colonies, or rookeries, are built in tall trees near aquatic feeding grounds. Prey includes fish, amphibians, reptiles, and small mammals captured along shallow water edges. Foraging activity is highest during twilight and early morning.	None	No Effect - No aquatic foraging habitat or rookeries within parcel.
Botaurus lentiginosus	American bittern	None	None	-	Freshwater marshes dominated by tall emergent vegetation form essential habitat. Nests are concealed within cattails, bulrush, or sedges in shallow wetlands. Stealth and camouflage allow efficient foraging on fish, amphibians, and insects. Habitat integrity relies on large, undisturbed wetland complexes.	None	No Effect - No emergent marsh present.
Egretta thula	Snowy egret	None	None	-	Coastal estuaries, lagoons, marshes, and shallow wetlands provide foraging grounds. Fish, amphibians, and aquatic invertebrates are captured in shallow water habitats. Nesting colonies occur in trees, shrubs, or emergent vegetation near wetlands. This species often associates with other colonial waterbirds.	None	No Effect - No aquatic habitat on-site.
Nycticorax nycticorax	Black-crowned night-heron	None	None	-	Marshes, wetlands, riparian groves, and estuaries provide key roosting and foraging areas. Colonies are established in trees or shrubs near water. Feeding	None	No Effect - No water features or riparian groves on-site.

					typically occurs during twilight and nighttime hours, focusing on fish, amphibians, and small invertebrates. Dense vegetation is critical for daytime roost concealment.		
Charadrius montanus	Mountain plover	None	None	SSC	Open grasslands, sagebrush plains, and sparsely vegetated fields are essential habitats. Bare or short vegetation is required for nesting, often on flat ground with wide visibility. Foraging focuses on insects and other small invertebrates found on open soils. Wintering occurs in arid valleys and agricultural fields.	None	No Effect - Habitat absent; parcel is small, vegetated ruderal lot.
Charadrius nivosus nivosus	Western snowy plover	Threatened	None	SSC	Sandy beaches, foredunes, salt pans, and alkali flats provide nesting and foraging areas. Nests are simple scrapes placed in open, sparsely vegetated areas close to the shoreline. Small invertebrates are the primary food source, foraged from wet sand and tidal wrack lines. Populations are highly sensitive to human disturbance and coastal development.	None	No Effect - No beach/dune open sand within parcel; occurs on outer coast beaches.
Falco columbarius	Merlin	None	None	WL	Open woodlands, coasts, and grasslands serve as foraging habitat, particularly in winter. Nesting occurs in old crow or hawk nests within trees or on cliff ledges. Prey consists largely of small birds captured in swift aerial pursuits. Coastal areas and wetlands are important stopover sites during migration.	Low (winter flyover)	May Affect, But Not Likely to Adversely Affect - Possible flyover; no nesting habitat or regular prey concentrations on-site.
Falco peregrinus anatum	American peregrine falcon	Delisted	Delisted	FP	Cliffs, tall buildings, bridges, and other elevated structures provide nesting platforms. Foraging occurs over coastal estuaries, wetlands, and urban areas with abundant bird prey. This species hunts using high-speed stoops from perches or soaring flights. Nest site fidelity is strong, with many territories occupied annually.	Low (flyover)	May Affect, But Not Likely to Adversely Affect - No nesting substrates or open coastal foraging within parcel.

Antigone canadensis canadensis	Lesser sandhill crane	None	None	SSC	Breeding occurs in northern wetlands, meadows, and tundra habitats. Migrants stop in large agricultural fields, shallow wetlands, and river valleys during winter and migration. Foraging focuses on grains, tubers, and invertebrates found in wetland and agricultural settings. Roosting sites require shallow water with minimal disturbance.	None	No Effect - Requires extensive wetlands/ag fields; not present on small disturbed parcel.
Antigone canadensis tabida	Greater sandhill crane	None	Threatened	FP	Freshwater marshes, wet meadows, and agricultural fields provide critical habitat. Large, open wetlands with tall emergent vegetation are required for nesting. Foraging includes grains, tubers, and invertebrates obtained in both wetland and upland fields. Wintering areas are concentrated in agricultural valleys and river basins.	None	No Effect - No wetlands or expansive ag fields on-site.
Riparia riparia	Bank swallow	None	Threatened	-	Steep sandy or loamy banks along rivers, lakes, and coastal bluffs provide nesting habitat. Colonies excavate burrows in vertical faces near water. Foraging occurs in open skies above wetlands, rivers, and fields where flying insects are abundant. Large colonies may persist at traditional nesting banks for decades.	None	No Effect - No vertical banks or colonies; no adjacent riverbank within parcel.
Thalasseus elegans	Elegant tern	None	None	WL	Coastal lagoons, estuaries, and offshore waters support foraging on small fish. Nesting colonies form on isolated offshore islands with sandy or gravelly substrates. Colonies require predator-free environments and are highly sensitive to disturbance. Foraging flocks often follow schools of fish along the coast.	None	No Effect - Strictly coastal/marine breeder; no habitat on-site.
Pandion haliaetus	Osprey	None	None	WL	Large rivers, lakes, reservoirs, and coastal areas are essential for foraging on fish. Nests are constructed on tall snags, cliffs, or artificial platforms close to water. Breeding success is linked to availability of abundant fish populations. This species	None/Low (flyover)	No Effect - No water or nesting structures on-site; occasional flyover possible.

					exhibits strong nest site fidelity, often returning to the same structure annually.		
Poecile atricapillus	Black-capped chickadee	None	None	WL	Deciduous and mixed forests, riparian woodlands, and suburban groves provide year-round habitat. Tree cavities and nest boxes are used for breeding. Foraging focuses on insects, seeds, and berries gathered from shrubs and tree bark. Winter flocks often form in mixed-species groups for foraging efficiency.	Low	May Affect, But Not Likely to Adversely Affect - Minor ornamental/shrub cover only; potential transient use but no breeding habitat.
Passerculus sandwichensis alaudinus	Bryant's savannah sparrow	None	None	SSC	Coastal salt marshes, dunes, and low coastal grasslands support nesting and foraging. Nests are concealed within dense low vegetation near the ground. Diet consists of seeds and insects collected from grasses and forbs. Populations are strongly tied to intact coastal habitats and vulnerable to disturbance.	None	No Effect - No salt marsh/dune grassland within parcel.
Pelecanus occidentalis californicus	California brown pelican	Delisted	Delisted	FP	Nearshore coastal waters, estuaries, and lagoons provide essential foraging areas. Fish are captured through plunge-diving, often in cooperative flocks. Nesting occurs on isolated offshore islands and rocky outcrops with minimal human presence. Roosting takes place on sand spits, jetties, and coastal structures.	None	No Effect - Marine species; no habitat on-site.
Nannopterum auritum	Double-crested cormorant	None	None	WL	Freshwater lakes, rivers, estuaries, and coastal shorelines support foraging and nesting. Fish are captured during underwater dives in shallow waters. Colonies nest in trees, on rocky islands, or on coastal structures near food sources. Roosting occurs communally on snags or pilings near water.	None	No Effect - No water or roost structures on-site.

Coturnicops noveboracensis	Yellow rail	None	None	SSC	Freshwater marshes with dense sedge, cattail, and rush cover provide nesting and foraging sites. Nests are placed on the ground within dense vegetation, often hidden from view. Foraging includes insects, snails, and seeds collected in wet meadows and marsh edges. Populations are localized and depend on intact marsh ecosystems.	None	No Effect - No marsh habitat on-site.
Rallus obsoletus obsoletus	California Ridgway's rail	Endangered	Endangered	FP	Coastal tidal salt marshes dominated by pickleweed and cordgrass are essential habitat. Nests are built on platforms above the high tide line within dense vegetation. Foraging focuses on invertebrates, mollusks, and small crustaceans in mudflats and tidal channels. Habitat loss from coastal development remains the primary threat.	None	No Effect - No tidal marsh on-site.
Numenius americanus	Long-billed curlew	None	None	WL	Wide expanses of grasslands, prairies, and coastal estuaries provide breeding and foraging grounds. Ground nests are shallow scrapes placed in open areas with short vegetation. Foraging occurs in moist grasslands and tidal flats, targeting insects, crustaceans, and worms. Large tracts of undisturbed open land are required to support populations.	None/Low (flyover)	No Effect - Small lot lacks extensive foraging/nesting habitat; rare flyover possible.
Asio flammeus	Short-eared owl	None	None	SSC	Open grasslands, marshes, and prairies provide essential nesting and hunting habitat. Ground nests are built in tall grasses or low vegetation. Hunting occurs in low flights over open terrain, targeting small mammals and birds. Populations fluctuate with prey abundance and availability of intact grassland habitat.	Low	May Affect, But Not Likely to Adversely Affect - Small disturbed lot; limited open habitat extent; nesting unlikely.
Athene cunicularia	Burrowing owl	None	Candidate Endangered	SSC	Open grasslands, agricultural fields, and deserts with existing burrow systems provide habitat. Burrows are often dug by ground squirrels or other mammals and reused for nesting. Foraging occurs in open fields on insects, small mammals,	None	No Effect - No burrow systems or extensive open grassland; high human use.

					and reptiles. This species is adapted to low vegetation cover and expansive open landscapes.		
Strix nebulosa	Great gray owl	None	Endangered	-	High-elevation meadows, montane forests, and riparian corridors provide nesting and foraging areas. Nests are placed in broken-topped snags, old raptor nests, or artificial platforms. Foraging focuses on voles and other small mammals captured in open meadow habitats. Extensive forest cover adjacent to open meadows is critical for population persistence.	None	No Effect - Outside typical elevational/forest context; habitat absent.
Strix occidentalis caurina	Northern spotted owl	Threatened	Threatened	-	Late-successional coniferous forests with closed canopy and complex structure provide nesting and roosting habitat. Large tree cavities, snags, and broken-topped conifers are used for nesting. Foraging focuses on small mammals, particularly northern flying squirrels and woodrats. Habitat integrity depends on large, contiguous tracts of old-growth forest.	None	No Effect - No late-seral forest; parcel is disturbed ruderal lot.
Contopus cooperi	Olive-sided flycatcher	None	None	SSC	Coniferous forest edges, burns, and clearings provide foraging habitat. Tall snags and exposed perches are used for hunting aerial insects. Nests are built in conifer trees at mid-canopy height. Open landscapes adjacent to forest edges are essential for foraging success.	Low (foraging)	May Affect, But Not Likely to Adversely Affect - May forage overhead/along edges; no nesting habitat on parcel.
Empidonax traillii	Willow flycatcher	None	Endangered	-	Dense riparian thickets dominated by willow and alder provide nesting habitat. Nests are built in shrubs adjacent to perennial water sources. Foraging focuses on flying insects captured from perches within shrubby vegetation. This species is highly dependent on intact riparian corridors with consistent water flow.	Low	May Affect, But Not Likely to Adversely Affect - Dense willow occurs adjacent off-site; marginal shrub line on parcel offers limited transient

							use; no breeding habitat confirmed.
Fishes							
Acipenser medirostris pop. 1	Green sturgeon - southern DPS	Threatened	None	-	Large coastal rivers, estuaries, and nearshore marine waters provide essential habitat. Adults migrate into rivers with deep, swift channels to spawn on cobble and gravel substrates. Juveniles rear in freshwater for several years before migrating to estuaries and coastal waters. This species depends on clean, well-oxygenated water and intact migratory corridors.	None	No Effect - Marine/estuarine species; no aquatic habitat within parcel.
Acipenser medirostris pop. 2	Green sturgeon - northern DPS	None	None	SSC	Coastal rivers, bays, and estuaries form the primary habitat. Spawning occurs in deep river channels with rocky or coarse substrates, often in the mainstem of large rivers. Juveniles rely on estuarine habitats for growth before moving offshore. The species requires unobstructed passage between freshwater spawning grounds and marine foraging areas.	None	No Effect - No aquatic habitat on-site.
Acipenser transmontanus	White sturgeon	None	None	SSC	Large rivers, estuaries, and coastal waters support this long-lived species. Spawning occurs in deep, turbulent channels with rocky substrates. Juveniles rear in freshwater before dispersing into estuarine and nearshore habitats. Access to expansive aquatic systems with high water quality is essential to support populations.	None	No Effect - No aquatic habitat on-site.
Eucyclogobius newberryi	Tidewater goby	Endangered	None	-	Shallow coastal lagoons, estuaries, and brackish marshes provide critical habitat. This species favors calm waters with sandy or muddy bottoms and abundant submerged vegetation. Reproduction occurs in burrows excavated in sandy substrates. Stable water levels and intact	None	No Effect - No lagoon/estuary habitat on-site.

					estuarine conditions are vital for persistence.		
Spirinchus thaleichthys	Longfin smelt	Candidate	Threatened	-	Estuaries, bays, and nearshore marine habitats are key environments. Spawning occurs in freshwater tributaries, where eggs are deposited on sand or gravel substrates. Larvae drift downstream into estuaries and rear in brackish waters before returning offshore. Populations are sensitive to changes in freshwater inflow and estuarine salinity.	None	No Effect - No aquatic habitat on-site.
Thaleichthys pacificus	Eulachon	Threatened	None	-	Coastal marine waters and estuarine systems provide habitat outside the breeding season. Adults migrate into large, cold rivers during winter and spring to spawn on sandy or gravelly substrates. Eggs adhere to the river bottom until hatching, with larvae drifting downstream to estuaries. Strong flows and clean substrates are essential for spawning success.	None	No Effect - No aquatic habitat on-site.
Entosphenus tridentatus	Pacific lamprey	None	None	SSC	Rivers, streams, and estuaries are required for spawning and rearing. Adults migrate upstream to spawn in gravel nests constructed in riffle areas. Larvae (ammocoetes) burrow into fine sediments in low-gradient stream margins where they remain for years. This species depends on clean, well-oxygenated waters with suitable spawning and rearing habitats.	None	No Effect - No streams present on-site.
Lampetra richardsoni	Western brook lamprey	None	None	SSC	Cool streams with clean gravel and fine sediments form suitable habitat. Adults spawn in shallow riffles, creating nests in gravel substrates. Larvae occupy silty margins or backwaters, filter-feeding on detritus and microorganisms. Populations are tied to intact, sediment-free stream systems.	None	No Effect - No streams on-site.

Oncorhynchus clarkii clarkii	Coast cutthroat trout	None	None	SSC	Small coastal rivers, streams, and estuaries provide essential spawning and rearing habitats. Spawning occurs in gravel-bottomed tributaries with clean, cold water. Juveniles may remain in freshwater or migrate into estuarine systems depending on life history strategy. Abundant riparian cover and intact stream hydrology are important for survival.	None	No Effect - No aquatic habitat on-site.
Oncorhynchus gorbuscha	Pink salmon	None	None	-	Marine waters near the coast provide primary habitat outside of spawning. Adults migrate into rivers and streams with gravel substrates to spawn in shallow redds. Eggs incubate in freshwater before fry quickly migrate downstream to the ocean. Short freshwater residency makes them dependent on accessible river corridors.	None	No Effect - No aquatic habitat on-site.
Oncorhynchus keta	Chum salmon	None	None	-	Coastal marine waters, estuaries, and large rivers support this anadromous species. Spawning occurs in low-gradient reaches with clean gravel and high groundwater upwelling. Fry migrate quickly downstream to estuarine environments where they rear before dispersing to the ocean. Population health depends on intact estuarine habitats and unimpeded migration.	None	No Effect - No aquatic habitat on-site.
Oncorhynchus kisutch pop. 2	Coho salmon - SONCC ESU	Threatened	Threatened	-	Spawning occurs in small coastal streams with cool, clean, well-oxygenated water. Juveniles rear for a full year in stream habitats before migrating to estuaries and marine waters. Complex habitat with pools, woody debris, and shaded riparian corridors is essential. Estuarine transition zones are critical for survival during outmigration.	None	No Effect - No aquatic habitat on-site.

Oncorhynchus mykiss irideus pop. 48	Steelhead - N. California DPS (summer-run)	Threatened	Endangered	-	Large rivers and cool tributaries provide spawning and rearing habitat. Summer-run populations hold in deep pools during warm months before spawning in gravel-bottomed streams. Juveniles may remain in freshwater for one to three years before migrating to the ocean. Successful reproduction requires cool flows and unblocked migratory routes.	None	No Effect - No aquatic habitat on-site.
Oncorhynchus mykiss irideus pop. 49	Steelhead - N. California DPS (winter-run)	Threatened	None	-	Spawning occurs in cool, well-oxygenated streams with clean gravel substrates. Adults migrate during winter high flows to access upstream habitats. Juveniles rear in streams for several years before smolting and migrating to the ocean. Riparian cover and instream complexity support rearing and survival.	None	No Effect - No aquatic habitat on-site.
Oncorhynchus tshawytscha pop. 17	Chinook salmon - California Coastal ESU	Threatened	None	-	Marine waters, estuaries, and large coastal rivers are essential habitats. Adults spawn in gravel-bottomed river reaches with adequate flows and cool temperatures. Juveniles rear in rivers or estuaries before migrating to the ocean. Life history diversity depends on maintaining both freshwater and estuarine habitat quality.	None	No Effect - No aquatic habitat on-site.
Insects							
Bombus caliginosus	Obscure bumble bee	None	None	-	Coastal prairies, meadows, and forest edges provide essential foraging habitat. Flowering plants with extended bloom periods are required to support colonies throughout the active season. Nests are typically placed underground in abandoned rodent burrows or dense grass clumps. Proximity to diverse floral resources and intact meadow systems is critical for population persistence.	Low (foraging)	May Affect, But Not Likely to Adversely Affect - Ruderal forbs may provide nectar; small, disturbed lot unlikely to support colonies.
Bombus crotchii	Crotch bumble bee	None	Candidate Endangered	-	Open shrublands, grasslands, and chaparral habitats with spring wildflower blooms are preferred environments.	None/Low	No Effect - Outside core range/habitat;

					Colonies establish in abandoned burrows or beneath bunchgrasses where cover is sufficient. Nectar and pollen from a variety of native flowering plants support reproduction and foraging. Populations are most abundant in xeric, undisturbed landscapes with high floral diversity.		disturbed lot with limited floral diversity.
Bombus occidentalis	Western bumble bee	None	Candidate Endangered	-	Meadows, grasslands, and open woodlands form important foraging habitat. Nests are established underground or in cavities such as hollow logs. Seasonal availability of diverse flowering plants is critical to colony success. Populations are most stable in areas with intact native vegetation and low pesticide exposure.	Low (foraging)	May Affect, But Not Likely to Adversely Affect - Possible transient foraging; nesting unlikely due to disturbance and small size.
Cicindela hirticollis gravida	Sandy beach tiger beetle	None	None	-	Wide, open sandy beaches near the wrack line provide breeding and foraging habitat. Larvae construct vertical burrows in bare sand where they ambush small invertebrate prey. Adults are active hunters, running swiftly across open sand to capture insects. Populations are restricted to dynamic shoreline environments with minimal disturbance.	None	No Effect - No beach habitat within parcel.
Scaphinotus behrensi	Behrens snail-eating beetle	None	None	-	Moist coniferous forests with abundant downed wood and leaf litter provide essential habitat. This ground-dwelling beetle is specialized to feed on snails and other invertebrates found in damp litter layers. Cool, shaded microhabitats beneath logs, rocks, and moss are required for survival. Populations depend on intact forest floor conditions with high humidity.	None	No Effect - No closed-canopy forest or moist litter layer on-site.
Mammals							
Aplodontia rufa humboldtiana	Humboldt mountain beaver	None	None	-	Moist, densely vegetated slopes and streamside thickets provide essential habitat. Deep, friable soils are required for burrow construction and thermoregulation.	None	No Effect - No perennial water, deep colluvial soils, or dense

					Populations are most often found near perennial water sources where lush vegetation is available year-round. Cover from shrubs and ferns provides protection from predators and supports feeding activity.		moist thickets present.
Arborimus albipes	White-footed vole	None	None	SSC	Riparian alder and willow thickets with dense herbaceous understory form primary habitat. Moist soils and proximity to streams or wetlands are important for cover and foraging. Nests are constructed in dense vegetation or within root systems. Populations are tied to intact riparian corridors that maintain permanent water sources.	None	No Effect - No riparian thicket or perennial water on-site.
Arborimus pomo	Sonoma tree vole	None	None	SSC	Coniferous forests dominated by Douglas-fir provide critical habitat. This arboreal species constructs nests high in trees and feeds almost exclusively on conifer needles. Dense canopy cover provides protection from predators and maintains the humid microclimate required for survival. Populations are dependent on intact late-seral conifer forests.	None	No Effect - No conifer forest present.
Erethizon dorsatum	North American porcupine	None	None	-	Mixed forests, woodlands, and riparian areas are primary habitat. Trees and rocky outcrops provide denning sites and protection from predators. Diet consists of bark, leaves, and herbaceous vegetation gathered seasonally. Populations rely on access to forest cover and diverse forage throughout the year.	Low	May Affect, But Not Likely to Adversely Affect - Occasional regional occurrence; minimal on-site cover/denning structures.
Enhydra lutris nereis	Southern sea otter	Threatened	None	FP	Kelp forests, rocky shorelines, and sheltered estuaries along the coast provide essential habitat. Dense kelp beds offer resting areas and protection from predators. Foraging occurs on sea urchins, crabs, and mollusks found in shallow subtidal zones. Populations are	None	No Effect - Marine species; no habitat on-site.

					restricted to nearshore marine ecosystems with intact prey resources.		
Martes caurina humboldtensis	Humboldt marten	Threatened	Endangered	SSC	Late-successional coastal coniferous forests with dense shrub layers are essential habitat. Complex understory vegetation provides cover for resting and hunting. Prey includes small mammals, birds, and insects found in forest floor habitats. Populations require large tracts of intact forest with minimal fragmentation.	None	No Effect - No late-seral forest; parcel is disturbed ruderal lot.
Pekania pennanti	Fisher	None	None	SSC	Coniferous and mixed hardwood forests with abundant snags and downed wood form core habitat. Large hollow trees and logs provide denning and resting sites. Foraging includes small mammals, birds, reptiles, and carrion. Population stability is tied to continuous forest cover and structural complexity.	None	No Effect - Forest habitat absent.
Taxidea taxus	American badger	None	None	SSC	Open grasslands, meadows, and shrublands with friable soils provide suitable habitat. Extensive burrow systems are excavated for shelter, reproduction, and hunting. Primary prey includes ground squirrels, gophers, and other burrowing mammals. Populations depend on large, undisturbed tracts of open land.	None	No Effect - Small parcel; no colony burrows or large open habitat blocks.
Bassariscus astutus	Ringtail	None	None	FP	Rocky canyons, riparian corridors, and mixed woodlands provide denning and foraging habitat. Hollow trees, rock crevices, and abandoned structures are commonly used for shelter. Diet is omnivorous, consisting of insects, small vertebrates, fruits, and berries. Populations are associated with rugged terrain and diverse forest-shrub mosaics.	None/Low	No Effect - Riparian woodland absent; occasional regional movement possible but unlikely use of parcel.
Corynorhinus townsendii	Townsend's big-eared bat	None	None	SSC	Caves, abandoned mines, and large hollow trees provide essential roosting sites. Foraging occurs over riparian	Low (foraging)	May Affect, But Not Likely to Adversely Affect

					zones, meadows, and forest openings where insects are abundant. Populations are highly sensitive to roost disturbance and habitat loss. Protection of undisturbed roost structures is critical for persistence.		- Potential aerial foraging over parcel; no roost structures present.
Lasionycteris noctivagans	Silver-haired bat	None	None	-	Forested areas, riparian corridors, and wooded wetlands provide key roosting and foraging habitats. Roosts are typically located beneath loose bark, in tree cavities, or occasionally in buildings. Foraging occurs over water bodies and forest clearings, where insects are abundant. This species is migratory and relies on intact forested stopover sites.	Low (foraging)	May Affect, But Not Likely to Adversely Affect - May forage overhead; limited roosting habitat on-site.
Lasiurus cinereus	Hoary bat	None	None	-	Forests, woodlands, and open landscapes provide roosting and foraging habitat. Roosts are usually solitary, located in foliage of trees. Foraging occurs in open airspace over meadows, streams, and forest edges where moths and beetles are abundant. Migratory movements connect breeding and wintering ranges across large regions.	Low (foraging)	May Affect, But Not Likely to Adversely Affect - Scattered trees/shrubs only; potential flyover/foraging, low likelihood of roosting.
Myotis evotis	Long-eared myotis	None	None	-	Coniferous and mixed forests, riparian zones, and woodland edges form key habitat. Roosts are located in tree cavities, rock crevices, and occasionally buildings. Foraging occurs over open water and forest clearings, targeting moths, beetles, and other insects. Habitat quality depends on maintaining roost availability and insect abundance.	Low (foraging)	May Affect, But Not Likely to Adversely Affect - Edge foraging possible; limited roost opportunities on-site.
Myotis yumanensis	Yuma myotis	None	None	-	Riparian areas, wetlands, and open water bodies provide primary foraging habitat. Roosts are located in buildings, caves, bridges, and hollow trees near aquatic areas. Foraging occurs over calm water surfaces where insects are concentrated. Populations are closely tied to availability of surface water and suitable roost structures.	None/Low	No Effect - No open water; occasional flyover possible but low habitat value.

Mollusks							
Littorina subrotundata	Newcomb's littorine snail	None	None	-	Rocky intertidal shorelines provide essential habitat. This species grazes on algae and detritus attached to rocks in the splash zone. Populations tolerate periodic exposure to air during low tides but require moist, shaded crevices to avoid desiccation. Distribution is tied to intact rocky coastlines with regular tidal flushing.	None	No Effect - Marine intertidal habitat absent on-site.
Margaritifera falcata	Western pearlshell	None	None	-	Cold, clean rivers and streams with gravel or cobble substrates provide habitat. Filter-feeding requires well-oxygenated, unpolluted waters with steady flow. Reproduction depends on host fish, typically salmonids, to disperse larvae to new habitats. Populations are indicators of long-term water quality and stream health.	None	No Effect - No streams present on-site.
Anodonta californiensis	California floater	None	None	-	Freshwater lakes, ponds, and slow-moving rivers with sandy or muddy bottoms provide habitat. Filter-feeding occurs within the benthic substrate, extracting plankton and detritus from the water column. Shallow, low-velocity areas are most important for survival. Persistence is linked to intact aquatic systems with stable hydrology.	None	No Effect - No standing/open water on-site.
Reptiles							
Actinemys marmorata	Northwestern pond turtle	Proposed Threatened	None	SSC	Ponds, lakes, marshes, and slow-moving streams provide aquatic habitat. Basking sites such as logs, rocks, and open banks are essential for thermoregulation. Nesting occurs in nearby uplands with friable soils and low vegetation cover. Populations rely on a mosaic of aquatic and terrestrial habitats within proximity.	None	No Effect - No aquatic habitat or basking water features on-site.

Definitions of Federal Statuses (Federal Endangered Species Act):

- **Endangered species:** As defined in the U.S. Government Code and California Fish and Game Code (16 U.S. Government Code 1532[6] and California Fish and Game Code Section 2062), a native species, subspecies, variety of organism, or distinct population segment that is in serious danger of becoming extinct throughout all or a significant portion of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease.
- **Threatened species:** Native species, subspecies, variety, or distinct population segment of an organism that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future throughout all of a significant portion of its range.
- **Candidate Species:** Not defined or addressed in statute or regulations. Candidate species are those which USFWS has sufficient information on their biological status and threats to propose listing, but for which the development of a proposed listing regulation is precluded by other higher priority listing activities. Candidates receive no protection under the ESA.

Definitions of State Statuses (California Endangered Species Act):

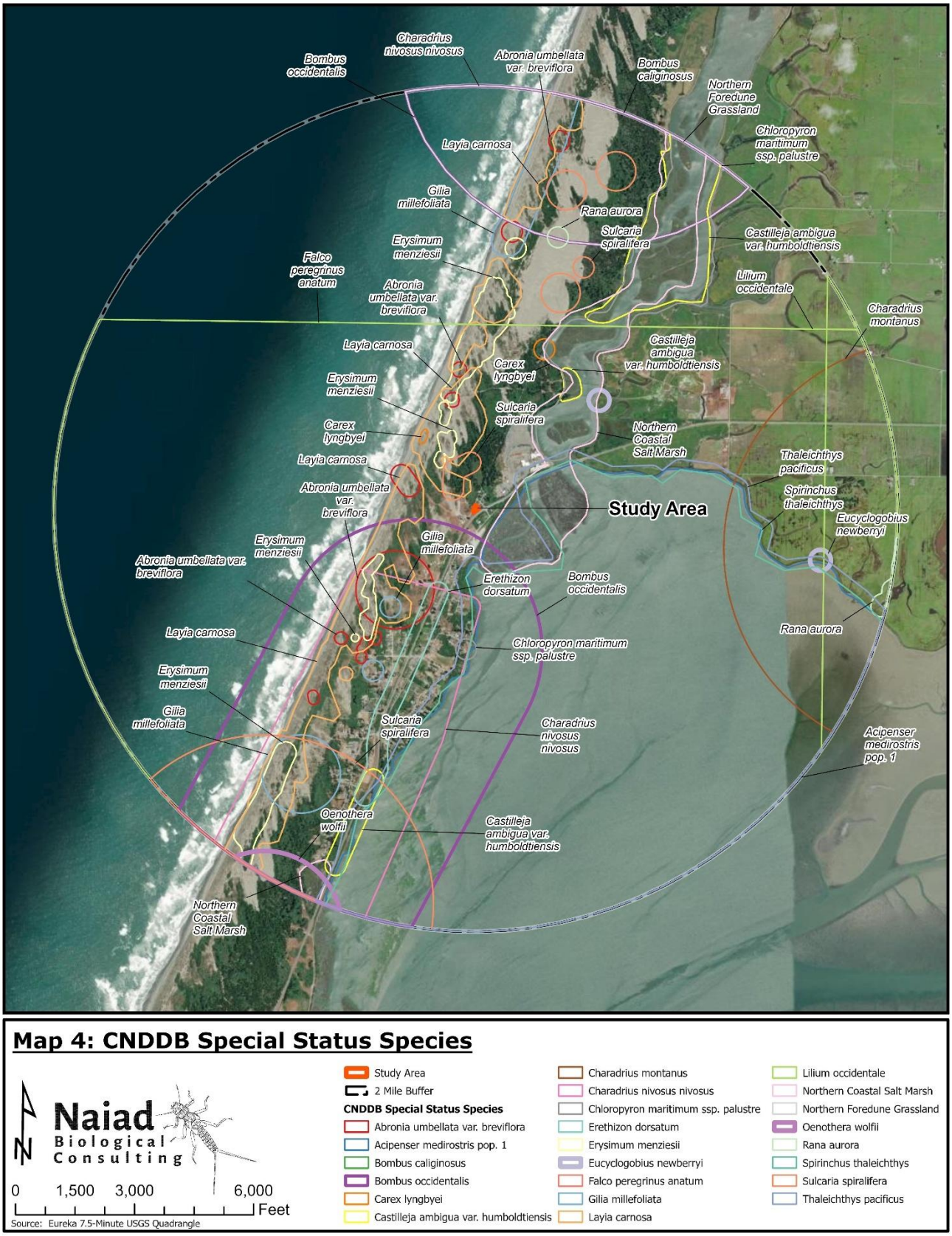
- **Endangered species:** A native species or subspecies of bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease. Fish & G. Code, §2062
- **Threatened species:** A native species or subspecies of bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Fish & G. Code, §2067
- **Candidate Species:** A native species or subspecies of bird, mammal, fish, amphibian, reptile, or plant that the commission has formally noticed as being under review by the Department for listing. Candidates are given full CESA protection. Fish & G. Code, §2068

Definitions of CDFW statuses:

- **FP (Fully Protected):** This classification was the State of California's initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, amphibians and reptiles, birds and mammals. Most of the species on these lists have subsequently been listed under the state and/or federal endangered species acts.
- **SSC (Species of Special Concern):** It is the goal and responsibility of the Department of Fish and Wildlife to maintain viable populations of all native species. To this end, the Department has designated certain vertebrate species as "Species of Special Concern" because declining

population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction. The goal of designating species as "Species of Special Concern" is to halt or reverse their decline by calling attention to their plight and addressing the issues of concern early enough to secure their long-term viability.

- **WL (Watch List):** The Department of Fish and Wildlife maintains a list consisting of taxa that were previously designated as "Species of Special Concern" but no longer merit that status, or which do not yet meet SSC criteria, but for which there is concern and a need for additional information to clarify status.



Map 4. This map displays California Natural Diversity Database (CNDDB) records, showing known occurrences of special-status species within a 2-mile radius of the Study Area.

4.3.1 Special-Status Animal Species

This section synthesizes the records review and evaluates the potential for special-status wildlife to occur within the ~0.35-acre Study Area, as well as the avoidance/minimization measures (AMMs) that would apply to the proposed single-family residence

4.3.1.1 Records Review (CNDDB / Regional Context)

A CNDDB query returned three mapped occurrences that appear to overlap the Study Area: two American peregrine falcon (*Falco peregrinus anatum*) and one western lily (*Lilium occidentale*). These polygons are coarsely mapped and their apparent overlap results from vague/low-accuracy locations, not verified on-site occupancy (Appendix C: Occurrences Report 1 – 3). The parcel contains no cliffs, bridges, or tall nest structures needed by peregrine falcon; botanical surveys and site conditions confirm no suitable habitat for western lily within the parcel.

For Northern Spotted Owl (NSO, *Strix occidentalis caurina*), the nearest documented Activity Centers (Map 5) are HUM0446 ~6.00 miles southeast and HUM0228 ~6.05 miles east-northeast (Appendix C: Occurrences Report 4. The Study Area lacks late-seral conifer structure and interior forest conditions used by NSO for nesting/roosting/foraging. No project activities are expected to affect NSO.

Other regional CNDDB records (amphibians, shorebirds, bats, invertebrates, anadromous fishes, mollusks, reptiles) are tied to perennial surface water, riparian woodland, wetlands, intact coastal strand/dunes, or mature conifer forest—habitats absent from the parcel.

4.3.1.2 Potential for Occurrence and Rationale / Impact Considerations

Amphibians:

- **All amphibians presented in Table 1**: Pacific tailed frog (*Ascaphus truei*), northern red-legged frog (*Rana aurora*), foothill yellow-legged frog – North Coast DPS (*Rana boylii* pop. 1), and southern torrent salamander (*Rhyacotriton variegatus*)—are associated with perennial aquatic habitats such as cold mountain streams, shaded seeps, ponds, or riffle-dominated creeks. The Study Area contains no ponds, streams, wetlands, or shaded headwaters, and uplands are open, sandy, well-drained, and highly disturbed. These conditions provide no aquatic refugia or microhabitats necessary to support breeding, foraging, or dispersal.
    - **Potential:** None.
    - **Determination:** No Effect.

Birds:

- **Edge/foraging raptors and open-country species:** Raptors and open-country birds such as Cooper's hawk, sharp-shinned hawk, northern harrier, white-tailed kite, merlin, American peregrine falcon, and long-billed curlew may occasionally fly over or briefly forage above ruderal groundcover. The only vertical vegetation onsite is a narrow fence-line strip of California blackberry (Rubus ursinus) and willow that may support limited passerine nesting. These edge conditions do not provide the cover or nest substrates required by raptors, and use would be transient at best.
    - **Potential:** Low (transient overflight/foraging; marginal passerine nesting).

  - **Determination:** May Affect, But Not Likely to Adversely Affect only if vegetation removal occurs during the nesting season; otherwise No Effect.

- **Habitat-specialist and colonial birds:** Wading birds, waterbirds, and beach specialists (e.g., great egret, great blue heron, American bittern, snowy egret, black-crowned night-heron, bank swallow, elegant tern, California brown pelican, double-crested cormorant, western snowy plover, Bryant's savannah sparrow) require emergent wetlands, vertical banks, shorelines, estuarine environments, or intact coastal strand/dune habitats. None of these conditions occur within the parcel.
  - **Potential:** None.
  - **Determination:** No Effect.
- **Burrowing owl:** Although regionally flagged as possible, the Study Area is very small, with compacted sandy soils and no ground squirrel colonies or burrow systems. These limitations make the species effectively absent.
  - **Potential:** Low (functionally nil).
  - **Determination:** No Effect.
- **Northern Spotted Owl:** The nearest documented activity centers are >6 miles away, and the parcel lacks late-seral conifer forest structure or interior canopy conditions required for nesting, roosting, or foraging.
  - **Potential:** None.
  - **Determination:** No Effect.

Fishes:

- **All special-status fishes in Table 1:** (coho and Chinook salmon, steelhead, green sturgeon, longfin smelt, tidewater goby, Pacific lamprey, eulachon, coastal cutthroat trout, white sturgeon, pink and chum salmon) are dependent on perennial streams, estuaries, or nearshore marine habitats. The site is a small, upland, hydrologically isolated parcel with no surface waters.
  - **Potential:** None.
  - **Determination:** No Effect.

Insects:

- **Bumble bees:** Obscure bumble bee (*Bombus caliginosus*), Crotch's bumble bee (*B. crotchii*), and western bumble bee (*B. occidentalis*) could opportunistically forage on ruderal forbs or ornamental plantings. However, the lot is small, dominated by non-native grasses, and lacks continuous or diverse native floral resources. Compacted soils and disturbance further limit nesting potential.
  - **Potential:** Low (foraging only; nesting unlikely).
  - **Determination:** No Effect for the proposed residence; BIO-5 (pollinator BMPs) appropriate if vegetation removal or herbicide use occurs.

- **Habitat specialists:** Sandy beach tiger beetle requires wide, open sandy beach habitats, and Behrens snail-eating beetle is associated with moist, closed-canopy conifer forests with abundant leaf litter. Both habitat types are absent.
    - **Potential: None.**
    - **Determination: No Effect.**

Mammals:

- **Forest and open-country specialists:** Humboldt marten, fisher, and Humboldt mountain beaver require late-seral conifer forest, dense understory, or friable moist soils; American badger requires extensive open grasslands with friable soils; ringtail depends on riparian canyons or rocky cover. None of these conditions occur within the parcel.
    - **Potential: None.**
    - **Determination: No Effect.**
- **Generalist upland mammal:** North American porcupine occurs regionally but relies on forest cover and denning cavities that are absent onsite.
    - **Potential:** Low (transient only).
    - **Determination:** No Effect.
- **Bats:** Townsend's big-eared bat, hoary bat, long-eared myotis, silver-haired bat, and Yuma myotis may forage aerially along site edges, but the parcel lacks suitable roost structures (caves, mines, large snags, cavities). Yuma myotis in particular is closely tied to open water, which is absent**.**
    - **Potential:** Low (foraging); roosting unlikely.
    - **Determination:** No Effect for the residence; if tree or structure removal occurs, implement BIO-4 (pre-disturbance roost checks).

Mollusks:

- **Special-status mollusks:** The marine Newcomb's littorine snail (*Littorina subrotundata*) and freshwater mussels such as western pearlshell (*Margaritifera falcata*) and California floater (*Anodonta californiensis*). The parcel is inland and upland, with no shoreline, riverine, or pond habitat.
    - **Potential:** None.
    - **Determination**: No Effect.

Reptiles:

- **Northwestern pond turtle: R**equires perennial ponds or slow-moving streams with basking and upland nesting sites; coast horned lizard requires intact, open scrub with sandy substrates. Both habitat types are absent.
    - **Potential:** None.

- **Determination:** No Effect.

Nearly all special-status animals were assigned No Potential / No Effect because the Study Area lacks aquatic, riparian, coastal strand/dune, or late-seral forest habitats. A narrow subset of upland or edge-adapted species (certain raptors and flycatchers, several bat species) were assigned Low potential, limited to transient overflight or foraging. No resident, breeding, or nesting special-status wildlife are expected to occur. With standard construction practices for a single-family residence and seasonal protections for nesting birds where applicable, the project is not expected to result in significant impacts to special-status animal species.

4.3.1.3 Wildlife Movement and Connectivity

Given the parcel's small size, residential context, and lack of corridor features (no streams/ravines/riparian strips), the site provides only local-scale functions (occasional foraging; limited passerine nesting in the fence-line shrub strip). It does not function as a regional movement corridor, pinch point, or step-stone for special-status wildlife.

4.3.1.4 Critical Habitat Context

No USFWS-designated critical habitat occurs within or immediately adjacent to the 92 Young Lane parcel. The nearest designated unit is for tidewater goby, located approximately 0.5 miles northeast of the Study Area (Map 5). Additional units for species such as northern spotted owl and anadromous fishes are associated with distant forested habitats and riverine corridors, well outside the project boundary.

The Study Area itself is a small, vacant residential parcel dominated by ruderal grasses, forbs, and scattered shrubs on excessively drained sandy soils. It lacks aquatic features, riparian corridors, late-seral conifer forest, or other habitat elements necessary to support listed species or their designated critical habitats.

Accordingly, the proposed residential development will have No Effect on federally designated critical habitat. To maintain compliance with the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (FGC), pre-construction nesting bird surveys and avoidance buffers (BIO-1) should be implemented if vegetation removal or ground disturbance occurs during the February–August nesting season.

4.3.1.5 Avoidance and Minimization Measures (AMMs)

The project proposes new residential construction on a small, previously undeveloped parcel. Nearly all special-status wildlife have no potential to occur; a limited subset of upland/edge generalists (some raptors/passerines and bats) have Low potential for transient use (overflight, occasional foraging) and common birds may nest in the fence-line shrub strip (e.g., *Rubus ursinus* [California blackberry] and willow). To avoid and minimize effects on wildlife and on adjacent off-parcel ESHAs (Sitka spruce forest, shore pine forest, coastal scrub to the west and north), implement the following measures during project design and construction:

- **BIO-1 — Nesting Birds & Raptors (MBTA/FGC compliance).**

  Avoid vegetation removal February 1–August 31. If work within this window is unavoidable, have a qualified biologist conduct pre-construction nesting surveys within and adjacent to the work area (typically a 50–300 ft buffer depending on species/behavior). Establish and maintain no-work buffers until young have fledged or the nest is inactive.

- **BIO-2 — Small Vertebrate Protection.**

  Conduct a pre-construction clearance sweep of the work limits the morning of initial ground disturbance; inspect open trenches/excavations daily and provide wildlife escape ramps if any trench is left open overnight.

- **BIO-3 — Burrowing Mammals (contingent).**

  Although badger/ground-squirrel colonies are not expected, if new burrow activity is observed during site preparation, pause ground disturbance and have a qualified biologist complete an avoidance survey and implement buffers or passive relocation consistent with agency guidance.

- **BIO-4 — Bat Roost Protection (contingent).**

  If any tree trimming/removal or structure removal is proposed, perform pre-disturbance bat roost checks. If an occupied maternity roost is found, schedule work outside the maternity period (generally May–August) or implement a biologist-supervised plan consistent with CDFW guidance.

- **BIO-5 — Pollinator Protection.**

  Where feasible, retain/replace flowering resources; avoid broadcast herbicides; and reseed disturbed edges with a non-invasive, pollinator-supportive mix. Time any unavoidable shrub removal outside peak bloom where practicable.

- **BIO-6 — Limits of Disturbance / ESHA Setbacks.**

  Fence and stake the construction limits prior to work, with highly visible fencing along the west and north property lines to prevent encroachment toward adjacent ESHA. Stockpiles, laydown, and concrete washout areas must be kept inside the fenced limits.

- **BIO-7 — Worker Environmental Awareness Program (WEAP).**

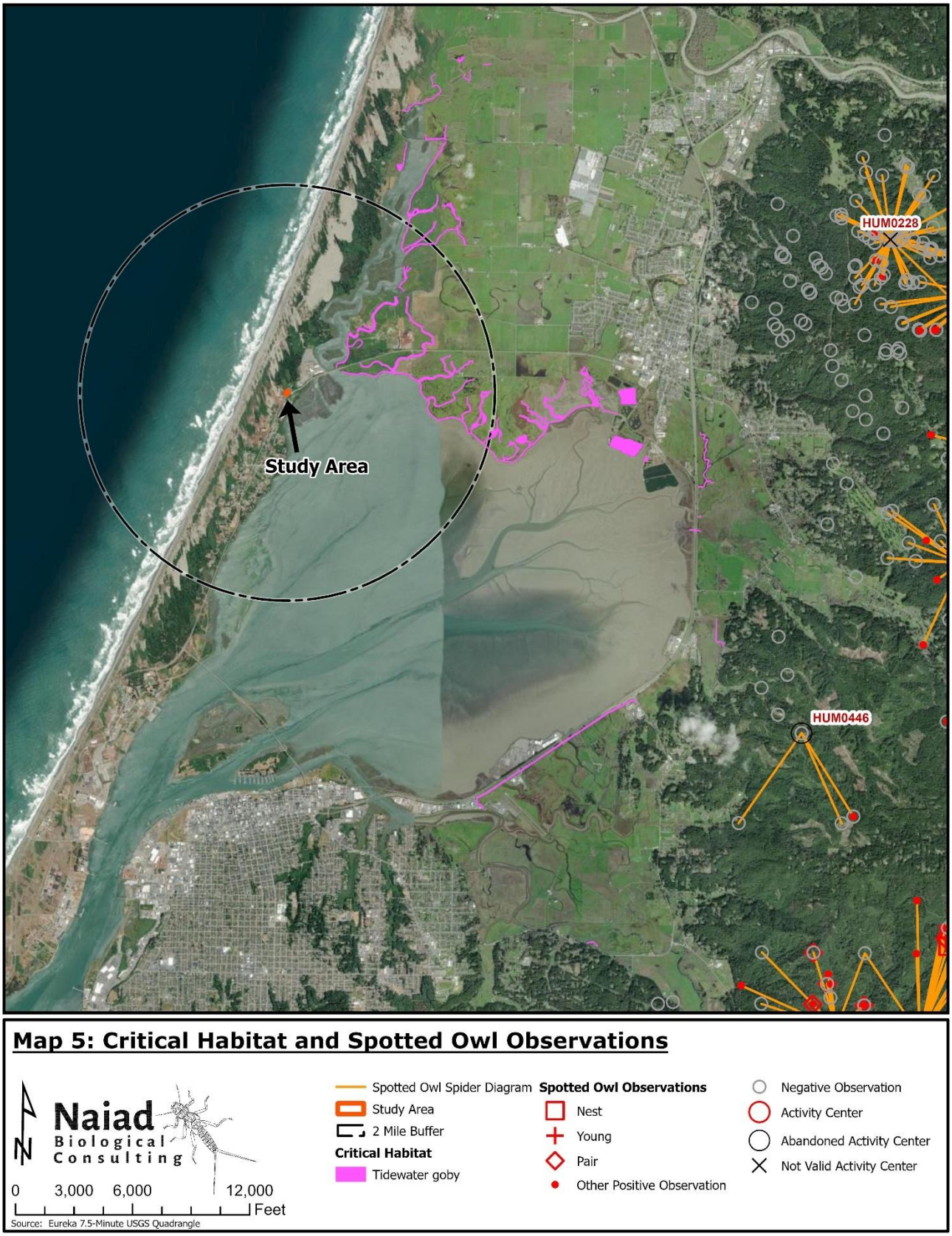
  Provide a brief tailgate training covering: special-status wildlife in the region; nesting-bird restrictions and buffers; ESHA adjacency; spill/encounter protocols; and the prohibition on feeding or harassing wildlife.

- **BIO-8 — Erosion, Sediment, and Spill BMPs (right-sized for a small residential site).**

  Even though no wetlands or streams occur onsite, implement standard BMPs to avoid off-site sediment or pollutant transport toward adjacent habitats: stabilized construction entrance, perimeter controls at the property line, covered stockpiles, dust control, secondary containment for fuels/fluids, and immediate spill cleanup. Schedule grading in the dry season when feasible.

- **BIO-9 — Construction Lighting.**

  Use fully shielded, downward-directed, motion-activated lighting during construction and for permanent fixtures to minimize light spill toward adjacent ESHA and reduce attraction/disorientation of birds and bats.



Map 5. Nearest occurrences of NSO observations, as well as the nearest occurrences of federally listed species critical habitat.

4.3.2 Special-Status Plant Species and Natural Communities

4.3.2.1 Approach and Limitations

A protocol-level floristic survey was not conducted for this project. Instead, a records-based screening was completed using the California Natural Diversity Database (CNDDB), USFWS IPaC system, and the CNPS Rare Plant Inventory for the Korbel 9-quad and surrounding quadrangles. In addition, a single reconnaissance-level survey of the Study Area was conducted on April 24, 2025, concurrent with wildlife habitat assessments. Because the survey occurred outside the full spring bloom window and portions of Parcel B have been subject to grazing and periodic brush clearing, the plant list is not exhaustive or floristic (Table 4). Evaluations therefore rely on mapped records, site-specific habitat conditions (soils, hydrology, vegetation), species' ecological requirements, and Table 3 determinations.

4.3.2.2 Existing Site Conditions

The ~0.35-acre parcel is vacant, nearly flat (≈19–23 ft amsl), and dominated by ruderal, non-native annual grasses and forbs on excessively drained, non-hydric Samoa–Clambeach sands. Along the eastern property line, a narrow shrub strip of California blackberry (*Rubus ursinus*), Hooker's willow (*Salix hookeriana*), and scattered coyote brush provides the greatest structural complexity. No wetlands, vernal pools, riparian woodland, intact coastal strand/dune vegetation, or serpentine/alkaline substrates occur within the parcel. ESHA communities (e.g., Sitka spruce forest, shore pine forest, coastal scrub) occur adjacent but off-parcel to the west/north and do not extend into the project boundary (see §4.2).

4.3.2.3 Special-Status Plants—Results and Potential to Occur

Records review and survey outcome. As detailed in Appendix A, no special-status plant populations were detected within the parcel during surveys, and habitat quality onsite is poor for most regionally listed taxa due to disturbance, soil conditions, and absence of wetland/riparian or intact dune/coastal vegetation. The CNDDB query includes one coarsely mapped occurrence of western lily (*Lilium occidentale*) that appears to overlap the Study Area; per Appendix C: Occurrences Report 3 and site conditions, this is a mapping imprecision only—no suitable western lily habitat occurs on the parcel, and the species was not observed.

Habitat filtering. Most CNPS-ranked taxa evaluated in Appendix A are tied to habitats not present onsite—e.g., coastal dunes/salt marsh, bogs/fens/meadows/seeps, tidal or freshwater wetlands, and serpentine or other special substrates, or they occur at elevations or forest conditions (late-seral conifer) that are outside the parcel's range. Consequently, the potential to occur is "None" for the vast majority of screened taxa.

Low-potential edge taxa. Appendix A notes that a very limited subset of disturbance-tolerant "edge" species could have Low potential at ruderal margins under optimal phenology; however, onsite disturbance, small parcel size, and lack of hydrology make meaningful occurrence unlikely. No special-status plants were detected.

Conclusion. Based on the findings detailed in Appendix A and the site filters above, special-status plants are not expected onsite and none were observed; western lily is absent and unsuitable habitat is present.

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4.3.2.4 Sensitive Natural Communities

No S-ranked sensitive natural communities (CDFW/MCV) occur within the parcel. Vegetation is best described as Ruderal Annual Grassland with a localized California blackberry fence-line edge. Sensitive alliances such as riparian scrub, willow thickets, alkali seep, fen/bog, vernal pool, and dune/coastal strand are absent within the Study Area. Adjacent ESHAs occur off-parcel and will be protected through construction limits and BMPs (see §5.1.3 AMMs).

4.3.2.5 Avoidance and Minimization Measures (AMMs)

A botanical survey has already been completed for this project (Appendix BOT), which found no special-status plant populations within the parcel and documented the onsite species list. The plant-focused measures below are tailored to those findings and to the site's ruderal conditions.

- **BIO-10 — Invasive Species Prevention & Equipment Hygiene.**

  Implement clean-in/clean-out for all equipment entering/leaving the site; remove adhered soil/vegetation before arrival and prior to demobilization. Use only weed-free erosion control products (e.g., certified weed-free straw/wattles) and dispose of green waste offsite at an approved facility.

- **BIO-11 — Soil & Material Import Controls.**

  Avoid importing topsoil or fill where feasible. If import is necessary, require documentation that material is free of invasive propagules (seed, rhizomes, root fragments). Keep import/export stockpiles covered and contained to prevent wind-blown spread of weeds.

- **BIO-12 — Staging & Stockpile Weed Containment.**

  Confine all staging, stockpiles, and spoils to previously disturbed ground **inside** the marked work limits; line or place on geotextile to prevent seedbank transfer to subgrade, and promptly stabilize/cover when inactive >14 days.

- **BIO-13 — Nursery Stock Sourcing Standards.**

  If any landscape planting is proposed, specify locally appropriate, non-invasive species from reputable nurseries with documentation of pest/weed cleanliness (e.g., Phytophthora-free certification where applicable). Prohibit planting of species listed by Cal-IPC as Moderate or High risk.

- **BIO-14 — Targeted Weed Management Protocol.**

  Use integrated weed management focused on manual/mechanical control first. If herbicides are required, limit to spot applications by a licensed applicator under calm conditions; establish no-spray buffers at the west/north property edges to avoid drift into adjacent ESHA. Maintain application logs.

- **BIO-15 — Post-Construction Weed Monitoring & Rapid Response.**

  Conduct two focused weed checks in the first growing season after construction (early spring and late summer). Remove new invasive occurrences while populations are small; re-treat as needed to prevent seed set.

- **BIO-16 — Optional Phenology Verification – If Requested by Agencies.**

If agencies request confirmation prior to ground disturbance in peak bloom, perform a brief phenology-timed walkthrough of ruderal margins consistent with Appendix BOT methods. If any unexpected special-status taxon is encountered, flag and buffer the micro-site and consult with the County prior to ground disturbance.

Notes on integration:

- BIO-10 through BIO-16 are plant-focused and complement, but do not duplicate, wildlife and construction AMMs (BIO-1 through BIO-9).
- Seeding/revegetation specifications (if used) should follow the sourcing standards in BIO-13 and be coordinated with project landscape plans; this is separate from the pollinator and erosion/spill measures already addressed in §4.3.1.5.

Section 5 Conclusion

5.1 Potential Impacts and Recommended Mitigation

5.1.1 Potential Direct Impacts

The project proposes construction of a single-family residence and associated utilities on a ~0.35-acre vacant parcel at 92 Young Lane. Ground disturbance will be limited to the lot and will occur entirely within ruderal, non-native annual grass/forb cover on excessively drained Samoa–Clambeach sands. No wetlands, riparian corridors, intact dune/strand vegetation, or other sensitive natural communities were mapped within the parcel, and no special-status plants were detected in the botanical survey (Appendix BOT). Consistent with Table 1, nearly all special-status wildlife have no potential to occur onsite; a narrow subset of upland/edge generalists (some raptors/passerines and bats) have Low potential for transient use.

Potential direct effects during construction and how they are addressed:

- **Nesting birds/raptors.** Trimming or removal of the fence-line shrub strip (e.g., *Rubus ursinus* [California blackberry], willow) during the Feb–Aug nesting season could affect common passerines or, rarely, raptors using nearby trees.

  — Address with BIO-1 (seasonal avoidance and/or pre-construction nesting surveys and buffers).

- **Small vertebrates.** Initial grading/trenching could incidentally affect common small mammals/reptiles.
  — Address with BIO-2 (clearance sweeps, wildlife-safe trenching) and BIO-3 (burrowing mammal checks if burrow activity is observed).

- **Bats.** If any tree trimming/removal is required, there is a low potential to encounter day roosts (roosting habitat is limited and no caves/mines occur onsite).

  — Address with BIO-4 (pre-disturbance roost checks; timing outside maternity season if needed).

- **Plants.** Special-status plants are not expected and were not observed (Appendix BOT). Construction could nonetheless facilitate weed introductions if unmanaged.

  — Address with BIO-10–BIO-16 (plant-focused invasive prevention, clean stock, targeted weed control, and post-construction monitoring).

With implementation of the AMMs cited above, no significant direct impacts to special-status species or sensitive communities are anticipated.

5.1.2 Potential Indirect Impacts

Because the parcel is upland, hydrologically isolated, and surrounded by low-density residential uses, indirect effects are expected to be limited and can be avoided or minimized with standard practices:

- **Erosion, sediment, and spills.** Short-term soil exposure could generate minor sediment or dust; fuels/fluids pose a low spill risk. There are no onsite aquatic features, but adjacent off-parcel ESHAs (Sitka spruce/shore pine forest and coastal scrub) warrant protection from nuisance discharges.

— Address with BIO-8 (right-sized erosion/sediment/spill BMPs at the property line, covered stockpiles, stabilized access, secondary containment) and dry-season scheduling where feasible.

- **Invasive weed spread.** Disturbed edges can be colonized by invasive species if not stabilized and managed.

  — Address with BIO-10–BIO-16 (equipment hygiene; clean import material; contained staging/stockpiles; non-invasive nursery stock; targeted weed control; post-construction monitoring; optional phenology check if requested).

- **Lighting and noise.** Construction noise and temporary/permanent lighting could affect nesting birds or foraging bats if unmanaged.

  — Address with BIO-1 (nesting season protection) and BIO-9 (fully shielded, downward-directed, motion-activated lighting).

- **Edge effects to adjacent ESHA (off-parcel).** Uncontrolled access, materials staging, or encroachment could affect nearby sensitive habitats west/north of the property line.

  — Address with BIO-6 (fenced/staked limits of disturbance) and BIO-7 (WEAP training and stop-work/encounter protocols).

5.1.3 Recommendations and Proposed Avoidance and Minimization Measures

The trigger-based AMMs below apply to construction and vegetation removal for the single-family residence at 92 Young Lane. They reflect the site's Low potential for transient use by some birds/bats, lack of aquatic features, and proximity to off-parcel ESHA (Sitka spruce/shore pine forest and coastal scrub). IDs continue the BIO series used elsewhere in this report:

Table 2. Proposed Mitigation and Avoidance/Minimization Measures

Avoidance/Minimization Measure (AMM) ID	Applies To (Examples)	Trigger Condition (based on Potential of Occurrence, habitat, and activity)	Measure / Action
BIO-1 — Nesting Birds & Raptors	Passerines, raptors	Vegetation removal/noisy work Feb 1–Aug 31	Pre-construction nest survey ≤14 days prior; establish species-appropriate buffers (≈50–300+ ft); phase/noise-manage work; biological monitoring until fledging or nest inactivity.
BIO-2 — Small Vertebrate Protection	Common small mammals/reptiles	Initial grading, trenching, soil disturbance	Day-of clearance sweep; wildlife-safe trenching (cover, escape ramps, daily checks); relocate common wildlife out of harm's way if encountered.
BIO-3 — Burrowing Mammals	Badger/ground-squirrel colonies	If suitable burrows or fresh	Pre-construction survey by biologist; establish buffers; passive relocation where allowed; schedule outside sensitive periods.

		sign are detected during prep	
BIO-4 — Bat Roost Protection	Tree/structure-roosting bats	Tree trimming/removal; structure modification	Pre-disturbance bat roost checks (visual/dusk); phased limb removal; avoid May–Aug maternity period where feasible; implement CDFW-consistent exclusion if needed.
BIO-5 — Pollinator Protection	Bumble bees & native pollinators	Removal of flowering patches or herbicide use	Retain/replace nectar sources where practicable; avoid drift; reseed disturbed edges with non-invasive, pollinator-supportive mix.
BIO-6 — Limits of Disturbance (LOD) / ESHA Setbacks	All resources; adjacent off-parcel ESHA	Before mobilization	Fence/flag LOD; keep staging, stockpiles, and washout inside fencing; maintain high-visibility fencing along west/north property lines to prevent encroachment toward ESHA.
BIO-7 — Worker Environmental Awareness (WEAP)	All crews	Prior to site work	Tailgate training on nesting-bird windows, ESHA adjacency, buffers, encounter/stop-work, and spill response.
BIO-8 — Erosion/Sediment/Spill BMPs	General site work	Ground disturbance, fueling, staging	Stabilized entrance, perimeter controls at property line, covered stockpiles, dust control, spill kits and secondary containment; daily BMP inspection; schedule grading in dry season when feasible.
BIO-9 — Construction & Permanent Lighting	Birds, bats	Night work or permanent lighting	Use fully shielded, downward-directed, motion-activated fixtures; ≤3000 K CCT; minimize light spill toward adjacent ESHA.
BIO-10 — Invasive Prevention & Equipment Hygiene	Plants/seedbanks	Equipment/site entry & demob	Clean-in/clean-out; use weed-free erosion control products; dispose of green waste offsite.
BIO-11 — Soil & Material Import Controls	Plants/seedbanks	Import of soil/aggregate	Require documentation that imports are free of invasive propagules; cover/contain stockpiles.
BIO-12 — Staging & Stockpile Weed Containment	Plants/seedbanks	Staging/stockpiling	Confine to disturbed ground inside LOD; place on geotextile or pave; cover if inactive >14 days.
BIO-13 — Nursery Stock Sourcing Standards	Landscaping	Plant procurement	Specify locally appropriate, non-invasive species; prohibit Cal-IPC Moderate/High-risk taxa; request pest/pathogen-clean stock.

BIO-14 — Targeted Weed Management	Invasive plants	If control is needed	Prioritize manual/mechanical methods; if herbicides used, spot-treat by licensed applicator; no-spray buffers along west/north edges to protect ESHA.
BIO-15 — Post-Construction Weed Monitoring	Invasive plants	Year 1 growing season	Two checks (spring & late summer); remove/treat early infestations; prevent seed set.
BIO-16 — Optional Phenology Verification (if requested)	Low-potential taxa	Agency request before peak bloom	Brief, phenology-timed walkthrough of ruderal margins consistent with Appendix BOT; flag/buffer if any unexpected occurrence is detected and coordinate with County.

Finding with AMMs. With implementation of BIO-1 through BIO-16, the 92 Young Lane residence is expected to have no significant direct or indirect impacts to biological resources, consistent with Table 2 (animals: predominantly No Potential/No Effect, with only Low, transient use by a few upland/edge generalists) and Appendix BOT (plants: no special-status occurrences and unsuitable habitat onsite). Measures also prevent indirect effects to adjacent off-parcel ESHA and maintain compliance with MBTA and California Fish and Game Code.

5.2 Summary of Findings/Conclusions

The 92 Young Lane parcel (~0.35 acres) was evaluated through protocol-level botanical surveys (April, June, August 2025), a formal Aquatic Resources Delineation (April and June 2025), and a reconnaissance level biological assessment. These studies confirmed that:

- No wetlands, streams, or riparian features occur within the parcel under either USACE three-parameter criteria or the California Coastal Commission's one-parameter Coastal Zone definition.
- No special-status plant species or sensitive natural communities occur onsite. The parcel is dominated by ruderal, non-native annual grasses and forbs, with limited edge habitat (blackberry, willow, coyote brush) along the fence line.
- Wildlife use is limited to common, disturbance-tolerant species. A small subset of raptors, passerines, and bats may forage or nest opportunistically along site edges, but habitat quality is low and no resident special-status species were detected.
- Adjacent ESHA communities (Sitka spruce forest, shore pine forest, and coastal scrub) occur immediately west and north of the parcel but do not extend into the project boundary.

With implementation of the AMMs in Section 5.1.3, development of a single-family residence on the site is expected to result in no significant impacts to special-status species, sensitive habitats, or jurisdictional aquatic resources.

5.3 Statement of Limitation

This Biological Resources Assessment is based on protocol-level botanical surveys, an Aquatic Resources Delineation, and a reconnaissance level biological assessment conducted during the

appropriate seasonal windows in 2025, supplemented by a comprehensive records review (CNDDB, CNPS, IPaC, Calflora, etc.). Findings reflect actual site conditions observed during multiple surveys and are not limited by detectability constraints typical of reconnaissance-only assessments.

Limitations and Qualifications:

- **Mapped Boundaries & GIS Data.** Parcel boundaries and mapped features were derived from assessor records, aerial imagery, and GPS field points. They are approximate and do not constitute a legal survey.
- **Regulatory Coordination.** No wetlands or waters were identified onsite. However, no formal jurisdictional determination has been issued by USACE, RWQCB, or CDFW. Agencies may request verification at their discretion.
- **Scope of Assessment.** This BRA is intended to inform CEQA review and Coastal Development Permit processing under Humboldt County standards. It is not an exhaustive inventory of every taxon from database queries; rather, it evaluates presence/absence and potential for impact relative to the proposed residence.
- **Implementation of AMMs.** Many protections depend on construction-phase AMMs (e.g., nesting bird surveys, invasive species prevention, ESHA buffers). If these are not implemented, conclusions regarding impact severity and compliance may not hold.
- **Non-Biological Constraints.** Recommendations herein address only biological resources. Other regulatory considerations (cultural, tribal, geotechnical, coastal hazards) may impose additional constraints on project design.

Reliance and Assumptions:

This analysis relies on conditions observed during 2025 field surveys, client-provided project information, and best available datasets at the time of preparation. Naiad Biological Consulting assumes no responsibility for omissions arising from inaccurate third-party data or future changes in site conditions. Agency consultation and implementation of the recommended AMMs will ensure continued consistency with CEQA, the California Coastal Act, and Humboldt County's Local Coastal Program.

Section 6 Regulatory Framework

6.1 Regulatory Framework Guidelines

The following summarizes the principal federal, state, and local laws that inform the recommendations and actions in this document. It is provided to justify the measures described herein; additional detail can be supplied upon request.

6.1.1 Federal Endangered Species Act

The U.S. Fish and Wildlife Service (USFWS) administers FESA, which protects federally listed threatened and endangered species. “Take” of listed wildlife is broadly defined to include harm, harassment, pursuit, capture, or killing, and may also include habitat modification resulting in death or injury. Listed plants are protected primarily on federal lands. Projects with a federal nexus (e.g., federal permits, funding, or use of federal lands) require consultation with USFWS (Section 7) or an incidental take permit (Section 10).

Project applicability: No federally listed species or critical habitats occur within the Study Area. The parcel consists of disturbed upland habitat dominated by ruderal grasses and forbs, with no wetlands, riparian features, or suitable habitat for regionally listed species. Should a federal nexus arise during permitting or development (e.g., Section 404 permit), consultation with USFWS may be required. The AMMs identified in this BRA (e.g., BIO-1 through BIO-5) are designed to avoid incidental take.

6.1.2 California Endangered Species Act

The California Department of Fish and Wildlife (CDFW) administers CESA, which prohibits “take” of state-listed threatened and endangered species without an Incidental Take Permit (Fish & Game Code §2081). CDFW also tracks Species of Special Concern (SSC), which are not formally listed but are considered during environmental review.

Project applicability: No state-listed plant or wildlife species are expected within the parcel. A narrow subset of SSCs (e.g., raptors, bats, American badger) have Low potential to occur. Trigger-based AMMs (BIO-1, BIO-2, BIO-3, BIO-4) are included to avoid or minimize effects. If future development design were to affect state-listed species, coordination with CDFW would be required.

6.1.3 California Coastal Act & Coastal Commission

The California Coastal Act of 1976 establishes policies to protect coastal resources, including environmentally sensitive habitat areas (ESHAs), wetlands, and public access. The California Coastal Commission (CCC) has regulatory authority over development in the Coastal Zone, and Humboldt County administers a certified Local Coastal Program (LCP) under CCC oversight.

Project applicability: The 92 Young Lane parcel lies within the Coastal Zone and requires a Coastal Development Permit (CDP). Protocol-level surveys confirmed that no wetlands, riparian corridors, or ESHA occur within the parcel itself; however, intact ESHA habitats (Sitka spruce forest, shore pine forest, and coastal scrub) occur immediately adjacent to the west and north. The AMMs in this report (BIO-1 through BIO-16) include protective buffers, fencing, and BMPs to prevent indirect impacts to adjacent ESHA. Compliance with the Coastal Act and LCP is a condition of County and CCC permit approval.

6.1.4 California Environmental Quality Act

CEQA requires public agencies to evaluate a project's potential effects on biological resources, including species that are rare, threatened, or endangered, whether or not formally listed. CEQA Guidelines §15380 allow consideration of CNPS-ranked plants and CDFW SSCs.

Project applicability: This BRA documents baseline conditions and likelihood of occurrence to support CEQA findings under Humboldt County Planning & Building review standards. With implementation of the AMMs in Section 5, potential impacts would be reduced to less than significant.

6.1.5 Clean Water Act

The U.S. Army Corps of Engineers (USACE) regulates the discharge of dredged or fill material into "Waters of the United States" under CWA §404, while the U.S. Environmental Protection Agency and USACE oversee jurisdiction. Projects affecting wetlands or streams may require a Nationwide or Individual Permit.

Project applicability: The Aquatic Resources Delineation confirmed that no wetlands, streams, or jurisdictional aquatic features occur within the parcel under federal or state definitions. Therefore, no USACE authorization is anticipated. If future development were to extend beyond the parcel into Waters of the U.S., a §404 permit and corresponding §401 certification would be required.

6.1.6 California Water Quality Regulatory Programs

Under CWA §401 and the Porter-Cologne Water Quality Control Act, the North Coast Regional Water Quality Control Board (RWQCB) issues 401 Water Quality Certifications for federal permits and Waste Discharge Requirements (WDRs) for discharges to Waters of the State. CDFW regulates activities affecting streams, rivers, and lakes under Fish and Game Code §§1600–1603 (Lake or Streambed Alteration Agreements, or LSAs).

Project applicability: Field surveys confirmed no wetlands, streams, or riparian features within the parcel. Although the Mad River is located nearby, it is separated from the property by roads and intervening residential development. RWQCB and CDFW authorizations are therefore not anticipated. AMMs such as BIO-6 (limits of disturbance) and BIO-8 (erosion/spill BMPs) are consistent with regulatory expectations to avoid indirect effects to adjacent ESHA.

6.1.7 Humboldt County Policies and Standards

Projects within unincorporated Humboldt County are subject to the County General Plan, Zoning Ordinance, and Local Coastal Program (where applicable), all of which require consideration of sensitive biological resources under CEQA. Protections extend to nesting birds (MBTA and California Fish and Game Code), special-status species, and sensitive natural communities.

Project applicability: The Study Area supports ruderal upland habitat with no sensitive natural communities onsite. However, the parcel lies immediately adjacent to designated ESHA, requiring careful avoidance of off-parcel impacts. The AMMs provided in Section 5 (e.g., BIO-1 through BIO-16) ensure compliance with County and Coastal Commission standards for buffer protection, nesting bird compliance, erosion/spill controls, and invasive species management.

Section 7 References

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Photo Documentation

Photo 1. The Study Area dominated by the ruderal non-native grasses and forbs habitat. Photo taken along the northeastern fence line facing west.

Photo 2. The general ruderal non-native grasses and forbs habitat dominating the Study Area. Photo taken from the northwestern corner of the Study Area facing southeast showing the California blackberry (*Rubus ursinus*) and Hooker's willow (*Salix hookeriana*) along the eastern fence line.

Appendix A

BOTANICAL SURVEY REPORT

BIOLOGICAL RESOURCES ASSESSMENT

Single Family Residence Development

Assessor's Parcel Number (APN): 506 – 071 – 020

92 Young Lane
Manila (Arcata), Humboldt County, California 95521

September 2025

Naiad
Biological
Consulting

BOTANICAL SURVEY REPORT

FOR SPECIAL STATUS NATIVE PLANT POPULATIONS AND SENSITIVE NATURAL COMMUNITIES

92 Young Lane, Manila (Arcata), 95521, Humboldt County, CA

Assessor Parcel Number (APN):

506 – 071 – 020

Prepared For:

Friesen Homes
115 Main Street
Fortuna CA, 95540

Prepared By:

Naiad Biological Consulting
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PO Box 121
Samoa, CA 95564

Date Prepared:

September 16th, 2025

Certification: I hereby certify that the statements furnished in this report present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

X _____.

Mason London, MSc Biology
Naiad Biological Consulting, Principal Biologist

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Section 1 Summary Information

Legal description: Portions of Section 35, T6N, R1W, H.B.&M.

APN: 506-071-020

USGS 7.5' Quad: Eureka (Code: 4012472)

Parcel size: ~0.35 acres (assessed); ~0.29 acres (GIS-derived)

Survey size: Entire parcel boundary

Dates of survey: April 18, 2025 (9:00 am–12:15 pm), June 20, 2025 (1:00 pm–2:45 pm), August 12, 2025 (1:30 pm-2:15 pm)

Surveyed by: Mason London

Field survey effort: ~ 5.75 hours

Results: **No special-status plant species (CRPR 1 or 2) were observed within the Study Area.** Vegetation is dominated by ruderal, non-native grasses and forbs. No sensitive natural communities occur within the parcel boundary. Sensitive habitats and ESHA-designated communities (shore pine forest, Sitka spruce forest, and coastal dunes) occur nearby but will not be impacted.

Section 2 Introduction and Project Description

2.1 Purpose and Need

This botanical survey was conducted to establish baseline botanical conditions and determine the presence or absence of special-status plants and sensitive natural communities at 92 Young Lane. The work was undertaken in support of a Coastal Development Permit (CDP) application for proposed residential development.

Because the parcel lies within the California Coastal Zone, all projects must demonstrate consistency with the California Coastal Act and Humboldt County's certified Local Coastal Program (LCP). Under these frameworks, special-status species and Environmentally Sensitive Habitat Areas (ESHAs) must be avoided and protected. This report therefore provides essential documentation for permit review.

2.2 Surveyor's Qualifications

The botanical survey described in this report was conducted by Mason London.

Mason London, Principal Biologist of Naiad Biological Consulting, conducted the protocol-level botanical surveys for this project. He has over 18 years of professional experience in botany, vegetation ecology, and biological consulting throughout California. Mason meets the qualifications set forth in CDFW's *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2018), and he regularly conducts floristic surveys in support of CEQA and NEPA compliance. He has extensive field experience across a range of habitats—including coastal scrub, redwood forest, riparian corridors, serpentine grasslands, and mixed hardwood-conifer systems—and is highly skilled in identifying rare, threatened, and endangered plant species. Mason is proficient in the use of the CNPS Manual of California Vegetation (MCV) for the classification of sensitive natural communities

and has prepared numerous botanical reports and impact assessments for regulatory permitting. In addition to his botanical expertise, Mason has a strong background in wildlife biology and aquatic ecology, with experience conducting protocol-level surveys for amphibians, nesting birds, and special-status aquatic species. He holds a B.A. in Environmental Studies from UC Santa Cruz and an M.S. in Biology from Cal Poly Humboldt.

2.3 Project and Geographic Setting

The Study Area is a ~0.35-acre parcel located in the unincorporated community of Manila, Humboldt County, California (Map 1). Manila is situated on the Samoa Peninsula, a north–south trending barrier spit that extends approximately 14 miles between the Pacific Ocean to the west and Humboldt Bay to the east. The peninsula is a dynamic coastal landform composed primarily of unconsolidated sandy dune deposits that have accumulated over thousands of years through wind and wave action.

The Samoa Peninsula supports a mosaic of vegetation communities shaped by this dune geomorphology and the influence of fog, shallow groundwater, and salt spray. These include open foredunes, stabilized backdunes, freshwater swales, willow thickets, and coniferous forest stands dominated by shore pine (*Pinus contorta ssp. contorta*) and Sitka spruce (*Picea sitchensis*). Collectively, these habitats are ecologically significant, providing for numerous rare plant species, migratory birds, and unique dune-adapted fauna. Many of these communities are recognized as sensitive natural communities by the California Department of Fish and Wildlife (CDFW) and qualify as Environmentally Sensitive Habitat Areas (ESHAs) under the California Coastal Act and Humboldt County's certified Local Coastal Program (LCP).

The parcel itself has been historically cleared and leveled for residential use and is now dominated by ruderal, non-native herbaceous vegetation. Elevations within the parcel range from approximately 19 to 23 feet above mean sea level (Google Earth Pro 2025). No intact dune ridges or depressions remain within the lot, indicating a loss of natural topography due to grading and disturbance. A Pacific wax myrtle (*Myrica californica*) noted in a 2022 scoping survey was found dead and had been removed by 2025.

To the east of the parcel boundary, a dense willow thicket (*Salix hookeriana*) occurs, likely supported by perched groundwater typical of the Samoa dune system. Across the street to the west, relatively undisturbed habitats remain, including shore pine forest, Sitka spruce forest, and intact dune vegetation. These surrounding communities provide ecological context to the parcel, underscoring its location within a highly sensitive landscape matrix, despite the disturbed condition of the lot itself.

2.3.1 Soil

The NRCS (2024) maps the site as sandy dune deposits, typical of the Samoa Peninsula. These soils are excessively drained, nutrient-poor, and low in organic matter, with low water-holding capacity. In their intact condition, these soils support native dune specialists such as *Elymus mollis* (dune wildrye), *Lupinus arboreus* (yellow bush lupine), and *Armeria maritima* (sea thrift). However, when disturbed, these soils are highly susceptible to colonization by aggressive non-native grasses (*Bromus diandrus*, *Avena barbata*) and broadleaf weeds (*Hypochaeris radicata*, *Plantago lanceolata*).

At 92 Young Lane, past disturbance and clearing have altered soil structure, leading to dominance by invasive species and the absence of dune endemics. The sandy substrate nonetheless indicates that, without disturbance, the site could once have supported more diverse native dune vegetation.

2.3.2 Topography

The parcel is flat and lacks the dune ridges, depressions, and undulating microtopography characteristic of the surrounding undeveloped landscape. Adjacent parcels display rolling dune features, vegetated swales, and subtle elevation gradients that support unique plant assemblages. The flat condition at 92 Young Lane suggests the parcel has been artificially leveled and maintained in its current disturbed state for decades, likely associated with historic residential clearing and grading.

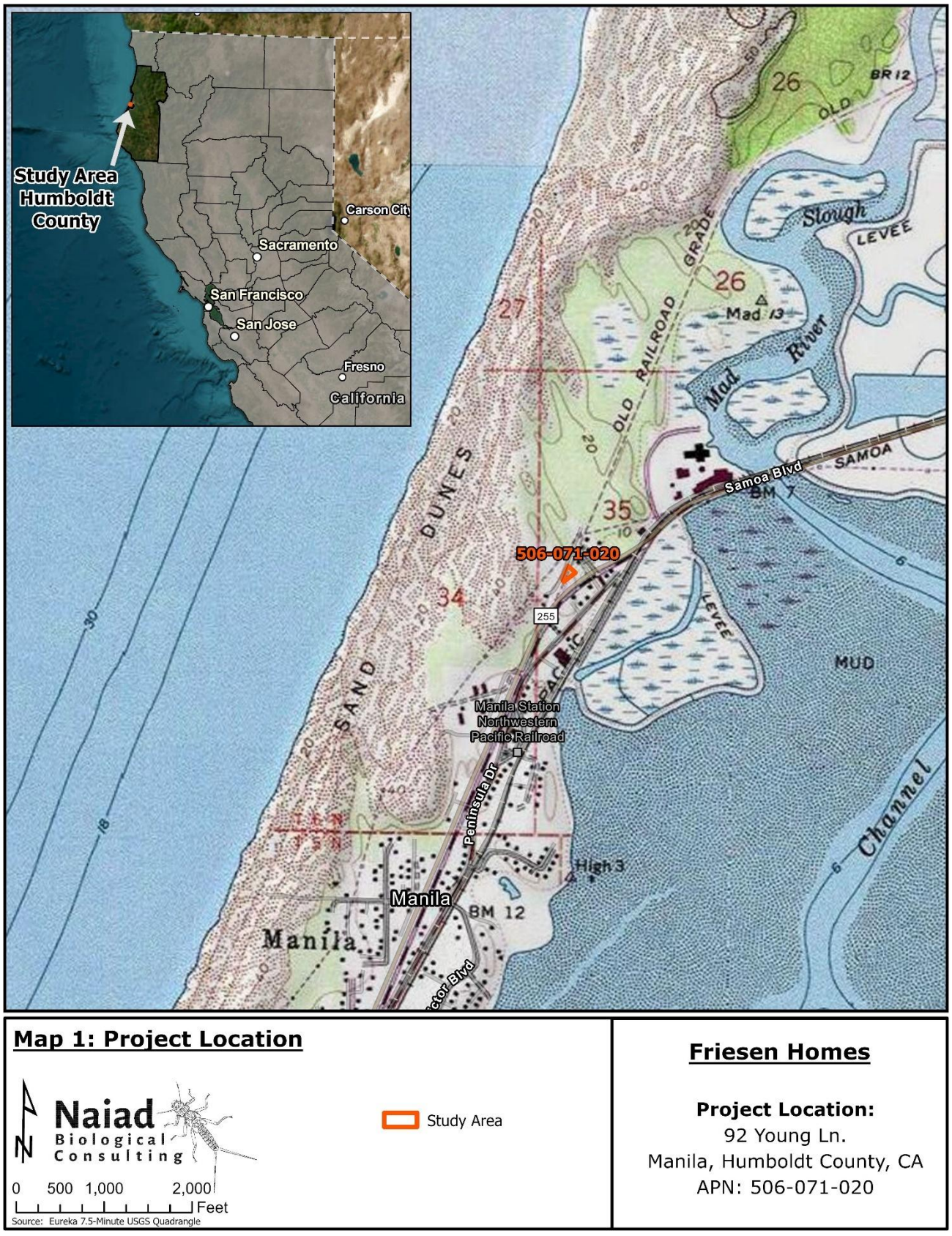
This artificial leveling reduces habitat heterogeneity and diminishes the site's potential to support the ecological functions typical of dune environments.

2.3.3 Hydrology

No wetlands, surface water features, or signs of ponding were observed within the parcel during surveys. The lot appears hydrologically isolated as a result of historic grading and soil compaction.

Although wetlands are absent within the parcel boundary, the site lies within a hydrologically complex dune system characteristic of the Samoa Peninsula. Shallow perched water tables often develop in depressions between dune ridges, supporting swales, willow thickets, and other hydrophytic vegetation. The dense willow patch immediately east of the parcel likely reflects one of these groundwater-dependent features.

While no direct hydrologic features occur on the parcel itself, the presence of nearby willow thickets and other moisture-dependent vegetation highlights the parcel's position within a broader mosaic of groundwater-influenced dune habitats.



Map 1. Locator Map of the parcel where the development project is proposed to occur and where the botanical survey was conducted.

Section 3 Definitions

3.1 Special Status Plants and Plant Communities

Special-status botanical resources include both **plant species** and **vegetation communities** that are protected under federal or state law or warrant consideration under CEQA due to their rarity or ecological importance. These resources encompass taxa formally listed under the **federal Endangered Species Act (ESA)** and the **California Endangered Species Act (CESA)**, as well as plants considered rare or endangered under the **California Environmental Quality Act (CEQA)**.

California Rare Plant Ranks (CRPR)

The California Department of Fish and Wildlife (CDFW) recommends that CEQA review consider all plant taxa assigned California Rare Plant Ranks (CRPR), maintained by the California Native Plant Society (CNPS):

- **List 1A** – Plants presumed extirpated or extinct in California because they have not been observed or collected in the wild for many years.
- **List 1B** – Plants rare, threatened, or endangered throughout their range, with most species endemic to California.
- **List 2A** – Plants presumed extirpated in California but more common elsewhere.
- **List 2B** – Plants rare, threatened, or endangered in California but more common elsewhere; except for their broader distribution, they would qualify as 1B taxa.
- **List 3** – Plants for which there is insufficient information to determine rarity; further data are needed to assign them to another list or reject them from consideration.
- **List 4** – Plants of limited distribution or infrequent occurrence across broader areas of California; their status should be monitored regularly.

In addition, each CRPR rank is supplemented with a threat rank (e.g., CRPR 4.3) that indicates the degree and immediacy of threat:

- **0.1 – Seriously threatened** in California (over 80% of occurrences threatened / high degree and immediacy of threat).
- **0.2 – Moderately threatened** in California (20–80% of occurrences threatened / moderate degree and immediacy of threat).
- **0.3 – Not very threatened** in California (less than 20% of occurrences threatened / low degree and immediacy of threat, or no current threats known).

Although plants on CRPR Lists 3 and 4 are not formally protected, they may still warrant consideration under CEQA if project-level or cumulative impacts could affect their persistence.

Sensitive Natural Communities

In addition to rare plant species, CEQA recognizes Sensitive Natural Communities—vegetation types considered rare, threatened, or declining in California. CDFW uses NatureServe's 2012 Conservation Status Assessment methodology to assign conservation status ranks to vegetation alliances and

associations. Each community receives both a global (G) and state (S) rank, with S1 to S3 indicating increasing levels of rarity within California:

- **S1 – Critically imperiled**
- **S2 – Imperiled**
- **S3 – Vulnerable**

However, not all S1–S3 communities automatically warrant protection. Under CEQA, significance is typically assigned only to high-quality stands, which are evaluated based on site-specific indicators such as:

- Degree of human disturbance
- Extent of invasive species cover
- Evidence of past land uses (e.g., logging, grazing)
- Structural and compositional integrity of the vegetation stand

This framework ensures that environmental review focuses on ecologically intact and representative occurrences of sensitive communities, supporting accurate impact assessment and appropriate mitigation planning.

Section 4 Methods

4.1 Pre-Site Visit Data Compilation and Preparation

Prior to conducting field surveys, NBC compiled and reviewed multiple data sources to identify special-status plant species and sensitive natural communities with potential to occur in the vicinity of the Study Area:

- **California Natural Diversity Database (CNDDB):** A query was conducted for the Eureka 7.5' USGS quadrangle and all surrounding quads. This database provides location-specific records of rare, threatened, and endangered species as well as sensitive natural communities. Results informed the list of target species (Table 1) and helped identify known occurrences of rare dune plants within the Samoa Peninsula.

- **California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (2025):** This online resource was used to refine status, habitat requirements, bloom periods, and conservation rankings (CRPR) for each target species.

- **Calflora, Jepson eFlora, and Consortium of California Herbaria (CCH2):** These databases were consulted for species distribution maps, verified herbarium records, and updated taxonomic treatment. These resources provided finer-scale data on known occurrences of dune-associated species (e.g., *Layia carnosa*, *Erysimum menziesii*).

- **NRCS Web Soil Survey (2024):** Soils were evaluated for their correspondence to known habitat requirements of special-status plants. For example, sandy dune soils on the Samoa Peninsula can support federally listed dune endemics, while clayey or saline substrates are associated with salt marsh specialists.

- **CalVeg Vegetation Mapping:** CalVeg layers were reviewed to assess mapped natural communities and vegetation alliances in and around the Study Area, including nearby shore pine and Sitka spruce forests (Map 2).

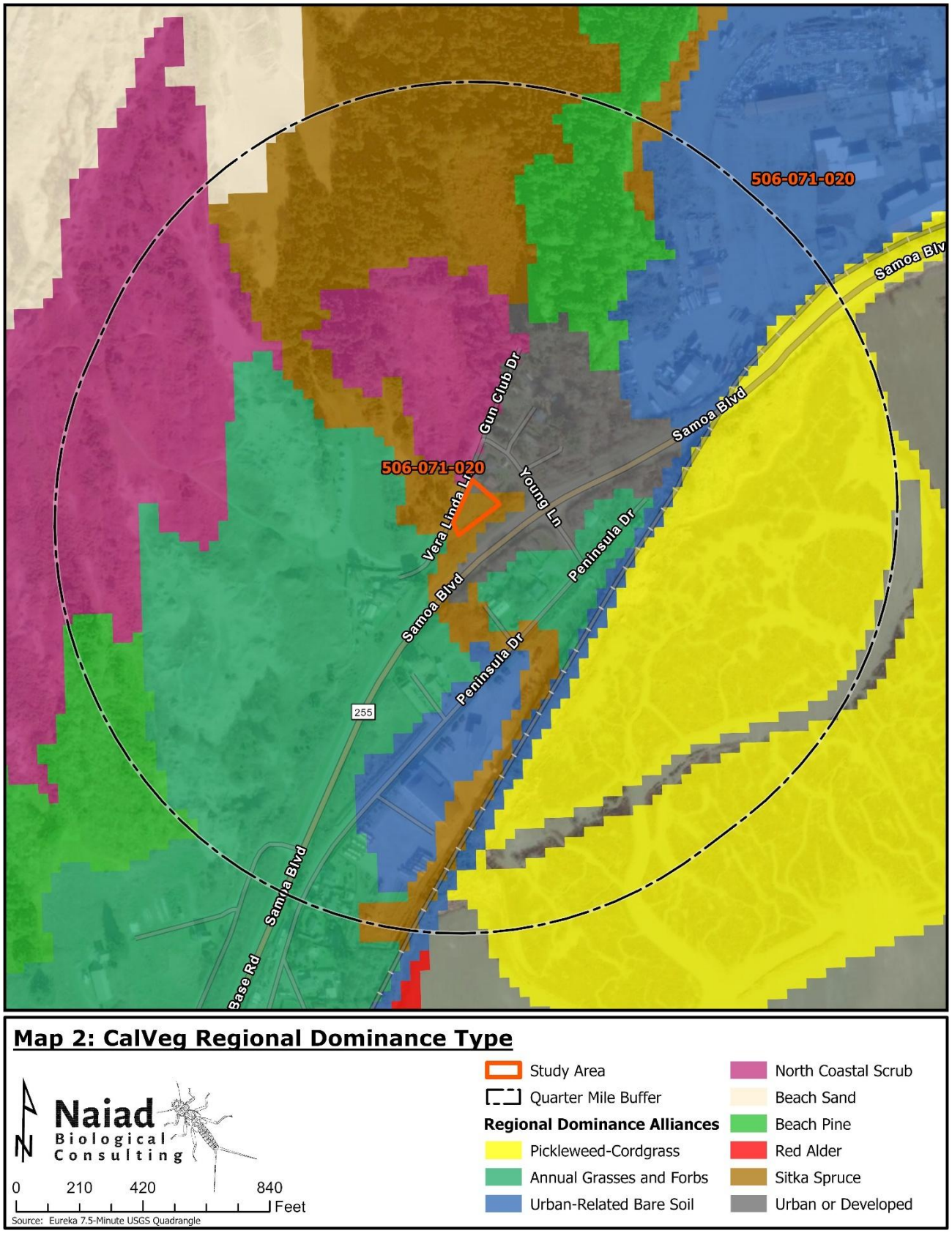
The records review was used to develop a target species list (Table 1) that included each species' status, habitat preferences, bloom timing, and known regional occurrences. This informed survey timing, allowed calibration of search effort, and guided field identification (Figure 1).

Table 1. Special-status plant species evaluated for potential to occur in the Study Area. This assessment was conducted prior to field surveys based on known habitat preferences, elevation ranges, and environmental conditions identified through desktop analysis.

Scientific Name	Common Name	CRPR	S Rank	CESA	FESA	Blooming Period	Habitat	Elevation (meters)	Potential to Occur
Abronia umbellata var. breviflora	pink sand-verbena	1B.1	S2	None	None	Jun-Oct	Coastal dunes	0-35	Low
Angelica lucida	sea-watch	4.2	S3	None	None	Apr-Sep	Coastal bluff scrub, Coastal dunes, Coastal	0-490	Moderate

							scrub, Marshes and swamps (coastal salt)		
Astragalus pycnostachyus var. pycnostachyus	coastal marsh milk-vetch	1B.2	S2	None	None	(Apr-May)Jun-Oct	Coastal dunes (mesic), Coastal scrub, Marshes and swamps (coastal salt, streamsides)	0-180	Low
Carex arcta	northern clustered sedge	2B.2	S1	None	None	Jun-Sep	Bogs and fens, North Coast coniferous forest (mesic)	195-4595	None
Carex lyngbyei	Lyngbye's sedge	2B.2	S3	None	None	Apr-Aug	Marshes and swamps (brackish, freshwater)	0-35	None
Carex praticola	northern meadow sedge	2B.2	S2	None	None	May-Jul	Meadows and seeps (mesic)	0-10500	None
Castilleja ambigua var. humboldtiensis	Humboldt Bay owl's-clover	1B.2	S2	None	None	Apr-Aug	Marshes and swamps (coastal salt)	0-10	None
Castilleja litoralis	Oregon coast paintbrush	2B.2	S3	None	None	Jun	Coastal bluff scrub, Coastal dunes, Coastal scrub	50-330	None
Chloropyron maritimum ssp. palustre	Point Reyes salty bird's-beak	1B.2	S2	None	None	Jun-Oct	Marshes and swamps (coastal salt)	0-35	None
Chrysosplenium glechomifolium	Pacific golden saxifrage	4.3	S3	None	None	Feb-Jun	North Coast coniferous forest, Riparian forest	35-1770	None
Collinsia corymbosa	round-headed collinsia	1B.2	S1	None	None	Apr-Jun	Coastal dunes	0-65	Low
Erysimum menziesii	Menzies' wallflower	1B.1	S1	CE	FE	Mar-Sep	Coastal dunes	0-115	Moderate
Erythronium revolutum	coast fawn lily	2B.2	S3	None	None	Mar-Jul(Aug)	Bogs and fens, Broadleafed upland forest, North Coast coniferous forest	0-5250	None
Gilia capitata ssp. pacifica	Pacific gilia	1B.2	S3	None	None	Apr-Aug	Chaparral (openings), Coastal bluff scrub, Coastal prairie, Valley and foothill grassland	15-5465	Moderate
Gilia millefoliata	dark-eyed gilia	1B.2	S2	None	None	Apr-Jul	Coastal dunes	5-100	Low
Glehnia littoralis ssp. leiocarpa	American glehnia	4.2	S2S3	None	None	May-Aug	Coastal dunes	0-65	Low
Hesperevax sparsiflora var. brevifolia	short-leaved evax	1B.2	S3	None	None	Mar-Jun	Coastal bluff scrub (sandy), Coastal dunes, Coastal prairie	0-705	Moderate
Hosackia gracilis	harlequin lotus	4.2	S3	None	None	Mar-Jul	Broadleafed upland forest, Cismontane woodland, Closed-cone coniferous forest, Coastal bluff scrub, Coastal prairie, Coastal scrub, Marshes and swamps, Meadows and seeps, North Coast coniferous forest, Valley and foothill grassland	0-2295	Moderate
Lasthenia californica ssp. macrantha	perennial goldfields	1B.2	S2	None	None	Jan-Nov	Coastal bluff scrub, Coastal dunes, Coastal scrub	15-1705	Moderate
Lathyrus japonicus	seaside pea	2B.1	S2	None	None	May-Aug	Coastal dunes	5-100	Moderate
Lathyrus palustris	marsh pea	2B.2	S2	None	None	Mar-Aug	Bogs and fens, Coastal prairie, Coastal scrub, Lower montane	5-330	Low

							coniferous forest, Marshes and swamps, North Coast coniferous forest		
Layia carnosa	beach layia	1B.1	S2	CE	FT	Mar-Jul	Coastal dunes, Coastal scrub (sandy)	0-195	Moderate
Lilium occidentale	western lily	1B.1	S1	CE	FE	Jun-Jul	Bogs and fens, Coastal bluff scrub, Coastal prairie, Coastal scrub, Marshes and swamps (freshwater), North Coast coniferous forest (openings)	5-605	None
Lycopodium clavatum	running-pine	4.1	S3	None	None	Jun-Aug(Sep)	Lower montane coniferous forest (mesic), Marshes and swamps, North Coast coniferous forest (mesic)	150-4020	None
Monotropa uniflora	ghost-pipe	2B.2	S2	None	None	Jun-Aug(Sep)	Broadleafed upland forest, North Coast coniferous forest	35-1805	None
Montia howellii	Howell's montia	2B.2	S2	None	None	(Feb)Mar-May	Meadows and seeps, North Coast coniferous forest, Vernal pools	0-2740	Low
Oenothera wolfii	Wolf's evening-primrose	1B.1	S1	None	None	May-Oct	Coastal bluff scrub, Coastal dunes, Coastal prairie, Lower montane coniferous forest	10 -2625	Moderate
Pleuropogon refractus	nodding semaphore grass	4.2	S4	None	None	(Feb-Mar)Apr-Aug	Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest, Riparian forest	0-5250	Low
Ribes laxiflorum	trailing black currant	4.3	S3	None	None	Mar-Jul(Aug)	North Coast coniferous forest	15-4575	None
Sidalcea malachroides	maple-leaved checkerbloom	4.2	S3	None	None	(Mar)Apr-Aug	Broadleafed upland forest, Coastal prairie, Coastal scrub, North Coast coniferous forest, Riparian woodland	0-2395	Low
Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	1B.2	S2	None	None	(Mar-Apr)May-Aug	Coastal bluff scrub, Coastal prairie, North Coast coniferous forest	50-4035	None
Sidalcea oregana ssp. eximia	coast checkerbloom	1B.2	S1	None	None	Jun-Aug	Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest	15-4395	Low
Silene scouleri ssp. scouleri	Scouler's catchfly	2B.2	S2S3	None	None	(Mar-May)Jun-Aug(Sep)	Coastal bluff scrub, Coastal prairie, Valley and foothill grassland	0-1970	Low
Spergularia canadensis var. occidentalis	western sand-spurrey	2B.1	S1	None	None	Jun-Aug	Marshes and swamps (coastal salt)	0-10	None
Sulcaria spiralifera	twisted horsehair lichen	1B.2	S2	None	None		Coastal dunes (SLO Co.), North Coast coniferous forest (immediate coast)	0-295	None
Viola palustris	alpine marsh violet	2B.2	S1S2	None	None	Mar-Aug	Bogs and fens (coastal), Coastal scrub (mesic)	0-490	None



Map 2. The CalVeg Regional Dominance Types mapped within and surrounding the Study Area.

4.2 Botanical Field Survey and Habitat Investigation

Botanical field surveys were conducted by Mason London, Principal Biologist of NBC, on April 18, 2025 (9:00 am–12:15 pm), June 20, 2025 (1:00 pm–2:45 pm), and during a late-season follow-up visit on August 12, 2025 (1:00 pm–2:15 pm). These visits were timed to capture the full range of seasonal bloom periods for special-status species identified during the records review (Table 1), including early-spring, mid-summer, and late-summer taxa (Figure 1).

Surveys followed the methodology outlined in the California Department of Fish and Wildlife (CDFW 2018) *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities*. The approach was floristic in scope, meaning that all vascular plant taxa encountered within the parcel were identified to the lowest feasible taxonomic level, not just target special-status species. This ensured a complete species list (Table 2) and allowed for vegetation community assessment using the *Manual of California Vegetation, Second Edition* (Sawyer et al. 2009).

A meandering transect approach was used to provide thorough coverage of the ~0.35-acre parcel (Map 3). Transects were spaced to ensure full visual access across all microhabitats, including:

- the central graded flat dominated by ruderal vegetation,
- parcel edges with lower elevation areas, and
- the interface with the willow thicket east of the boundary.

Special attention was given to disturbed areas, shallow depressions, and edges that could provide refugia for cryptic or late-blooming species.

Species Identification: All vascular plant species encountered were identified in the field using *The Jepson Manual: Vascular Plants of California, Second Edition* (Baldwin et al. 2012). Verification and taxonomic updates were cross-checked against the Jepson eFlora, Calflora, and the Consortium of California Herbaria (CCH2). Non-native species were documented, with Cal-IPC invasion status noted where relevant.

Habitat Quality Assessment: Vegetation composition, dominance, and community integrity were recorded, with particular attention to indicator species for sensitive natural communities (e.g., dune endemics such as *Layia carnosa* and *Erysimum menziesii*). No such indicators were observed within the parcel.

Photo Documentation: Representative photographs were taken during each survey to document vegetation conditions, disturbance history, and adjacent sensitive habitats (Photos 1–2).

Survey Conditions: Weather conditions were favorable during all visits.

- April 18: ~52 °F, clear skies/sunny, calm winds (<1 mph).
- June 20: ~56 °F, light cloud cover, mild winds (~2 mph).
- August 12: ~58 °F, light cloud cover, light breeze (~2–3 mph).

These mild, fog-influenced conditions provided excellent visibility and detection for both early- and late-season taxa.

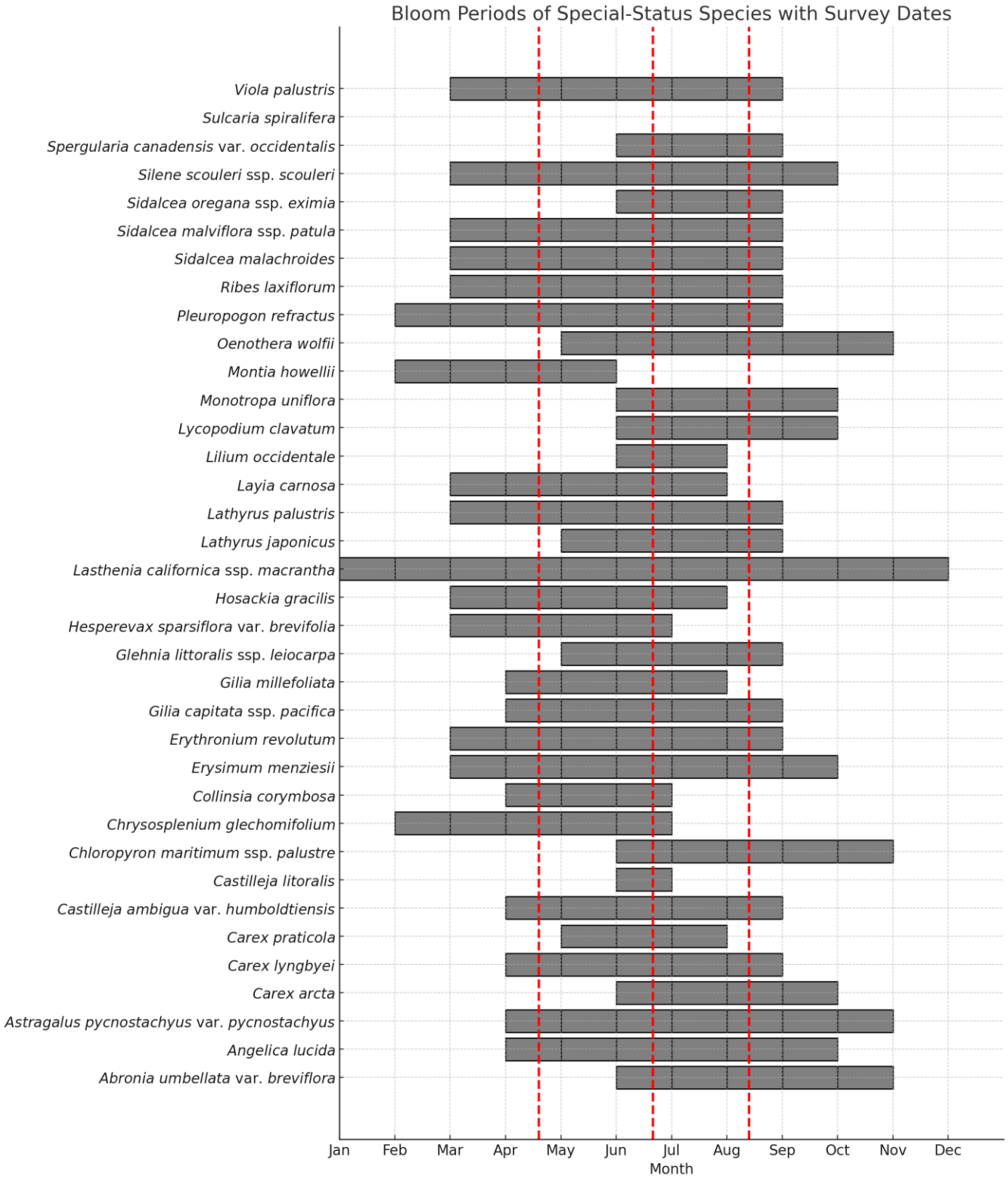
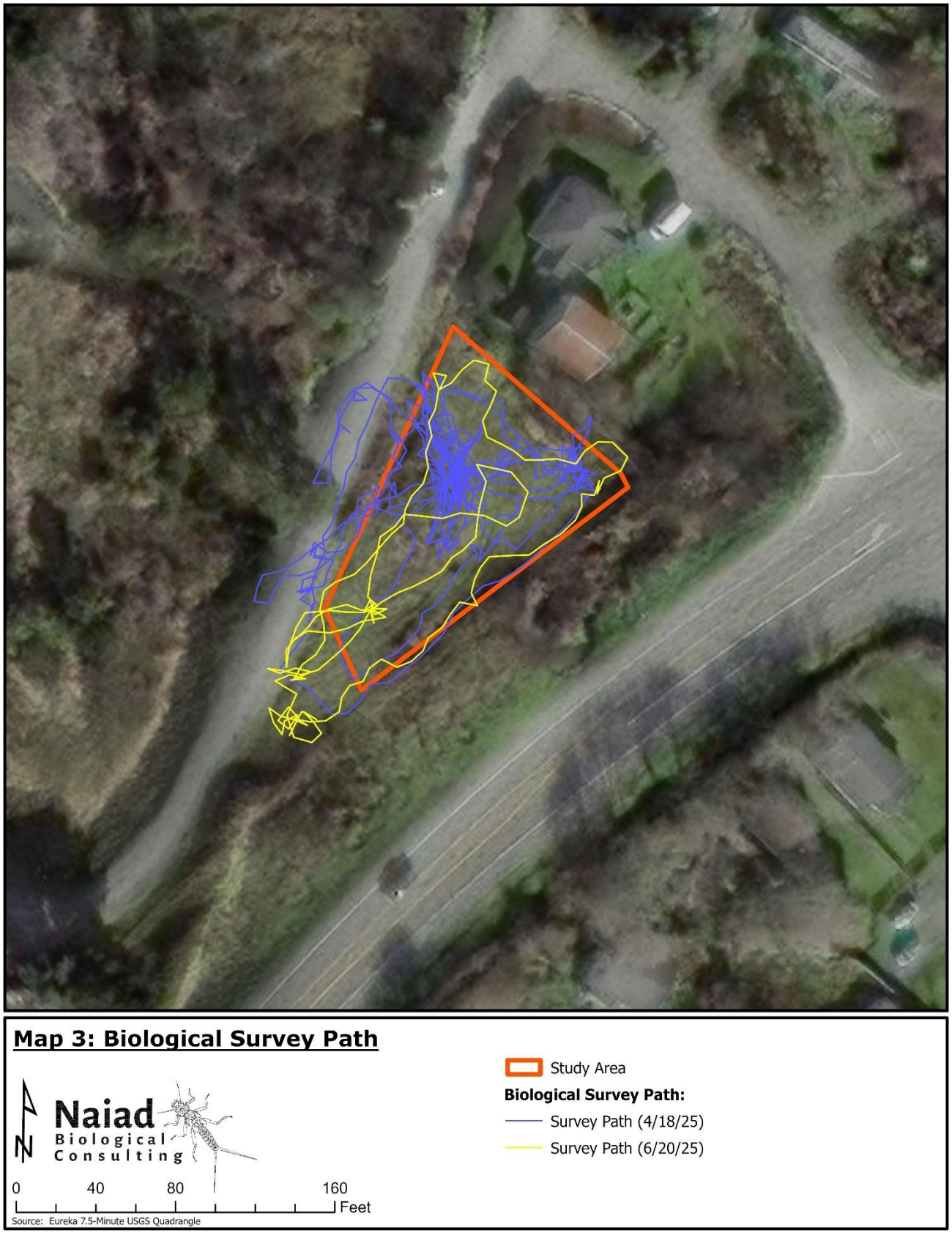


Figure 1. Gantt chart showing the blooming periods of special-status plant species with potential to occur in the Study Area. Red dashed lines indicate the dates on which botanical surveys were conducted. Surveys were timed to coincide with the blooming periods of all species with potential to occur, ensuring optimal detectability.



Map 3. Survey paths taken by Mason London during his April 18th and June 20th 2025 botanical survey. Survey path on August 12th, 2025 was not recorded since this was a quick survey to spot check specific habitat features.

Section 5 Results

5.1 Habitats Observed

The Study Area supports a ruderal grassland/forb assemblage that has developed following repeated disturbance and vegetation clearing. Vegetation cover is dominated by non-native annual grasses and weedy forbs well-adapted to sandy, disturbed conditions.

Dominant taxa include *Bromus diandrus* (ripgut brome), *Avena barbata* (slender wild oat), *Hypochaeris radicata* (hairy cat's ear), *Plantago lanceolata* (narrowleaf plantain), *Geranium dissectum* (cut-leaved geranium), and *Rumex acetosella* (sheep sorrel).

Native species were present but limited in coverage, including *Prunus emarginata* (bitter cherry), *Salix hookeriana* (Hooker's willow), *Baccharis pilularis* (coyote brush), and *Lupinus arboreus* (yellow bush lupine). However, these occurred as scattered individuals or small patches along parcel margins and did not form intact stands representative of dune scrub or forest edge communities.

The dominance of invasive grasses and forbs, combined with the absence of diagnostic dune species such as *Elymus mollis* (dune wildrye) or *Armeria maritima* (sea thrift), indicates the parcel is ecologically degraded and lacks the floristic integrity of adjacent intact dune habitats.

5.1.1 Sensitive Natural Communities and ESHA

No sensitive natural communities, as defined by CDFW VegCAMP, were documented within the Study Area.

However, across the Young Lane, the following sensitive habitats are present within visual proximity to the Study Area:

- **Shore pine forest (*Pinus contorta* ssp. *contorta* Alliance):** a rare dune-associated conifer community restricted to the North Coast.
- **Sitka spruce forest (*Picea sitchensis* Alliance):** A fog-dependent coastal forest type with a limited distribution in California. Although Map 3 (CALVeg Regional Dominance Type) classifies the majority of the parcel as Sitka spruce forest, this mapping is remotely generated. Field-based surveys and ground-truthing conducted by NBC confirmed that this community does not occur within the Study Area (Photo 3).
- **Coastal dune vegetation:** undeveloped parcels nearby support native dune scrub and grassland elements, habitat for several listed species including *Layia carnosa* (beach layia).

These habitats are recognized as Environmentally Sensitive Habitat Areas (ESHAs) under the California Coastal Act and Humboldt County's Local Coastal Program. While ecologically important, they do not extend into the parcel boundary, and the proposed project is not expected to result in direct impacts provided development remains confined to the lot.

5.2 Special-Status Species Evaluation

A review of CNDDB, CNPS, and related resources identified 36 special-status plant taxa with records in the Eureka quadrangle and surrounding areas (Table 1). Most are associated with intact coastal dune systems, tidal salt marshes, or wetland swales—habitats absent from the Study Area.

Botanical surveys on April 18, June 20, and August 12, 2025 documented no special-status species. The parcel is dominated by ruderal, non-native vegetation and lacks the microhabitat features required to support these taxa.

Notable species from the region and surrounding the Study Area include:

- *Erysimum menziesii* (Menzies' wallflower; CE, FE, CRPR 1B.1) – restricted to open dune habitat; potential moderate regionally but absent on site.
- *Layia carnosa* (beach layia; CE, FT, CRPR 1B.1) – requires sandy, open dunes; absent due to disturbance and invasive dominance.
- *Castilleja ambigua var. humboldtiensis* (Humboldt Bay owl's-clover; CRPR 1B.2) – limited to salt marshes; absent from the parcel.
- *Oenothera wolfii* (Wolf's evening-primrose; CE, FE, CRPR 1B.1) – found in dunes and bluffs; absent on site.

Overall, 10 taxa were ranked moderate potential, 10 low potential, and 16 no potential in the broader landscape context. Within the parcel, the potential for special-status species is considered negligible/absent.

5.3 Species Observed

A total of 35 vascular plant taxa were documented during the April 18, June 20, and August 12, 2025 botanical surveys (Table 2). Surveys were floristic in scope and included all vascular species encountered within the parcel boundary.

Of the 35 taxa recorded:

- **13 species (37%) were native**, representing a small fraction of the flora. These included common dune-associated or disturbance-tolerant natives such as *Lupinus arboreus* (yellow bush lupine), *Baccharis pilularis* (coyote brush), and *Salix hookeriana* (Hooker's willow). Native species were primarily restricted to parcel edges and occurred as scattered individuals or small patches rather than cohesive stands.
- **22 species (63%) were non-native**, including several invasive grasses and forbs that are characteristic of disturbed, low-quality habitats on the Samoa Peninsula.

Several California Invasive Plant Council (Cal-IPC) ranked invasive species were present, notably:

- *Bromus diandrus* (ripgut brome; Cal-IPC High)
- *Avena barbata* (slender wild oat; Cal-IPC Moderate)
- *Hypochaeris radicata* (hairy cat's ear; Cal-IPC Limited)
- *Plantago lanceolata* (narrowleaf plantain; Cal-IPC Moderate)
- *Holcus lanatus* (common velvet grass; Cal-IPC Moderate)
- *Hordeum murinum* (foxtail barley; Cal-IPC Moderate)

These invasive taxa dominate the herbaceous layer, creating near-monotypic patches in some areas. Their presence reflects a long history of disturbance and ongoing propagule pressure from surrounding

residential areas and roadways. Collectively, they reduce habitat suitability for native dune specialists by outcompeting them for light, water, and nutrients.

While a few native shrubs and forbs persist along parcel margins, the overall floristic integrity is low. The absence of dune indicator species such as *Elymus mollis* (dune wildrye), *Armeria maritima* (sea thrift), or *Ambrosia chamissonis* (beach bur) further confirms that the parcel no longer supports functional dune vegetation. Instead, it represents a ruderal, invasive-dominated assemblage that provides minimal ecological value relative to the intact dune and forest habitats located immediately across the street.

The high proportion of invasive and disturbance-adapted species within the parcel also suggests a potential risk of invasive spread into adjacent ESHA habitats if soil disturbance associated with construction is not carefully managed.

Table 2. Species observed and identified within the Study Area during the April 18, June 20, and August 12, 2025 protocol-level botanical survey.

Scientific Name	Common Name	Habit	Native Status	CAL-IPC Rank
Prunus emarginata	Bitter cherry	tree	native	-
Salix hookeriana	Hooker's willow	tree	native	-
Baccharis pilularis	Coyote brush	shrub	native	-
Lupinus arboreus	Yellow bush lupine	shrub	native	**Invasive north of Pt. Reyes**
Rosa sp.	Cultivar rose	shrub	non-native	-
Rubus ursinus	California blackberry	shrub	native	-
Calystegia purpurata	Purple western morning glory	forb	native	-
Daucus carota	Queen Anne's lace	forb	non-native	Moderate
Daucus pusillus	American wild carrot	forb	native	-
Eriogonum latifolium	Coast Buckwheat	forb	native	-
Geranium dissectum	Cut-leaved geranium	forb	non-native	Limited
Hypochaeris glabra	Smooth cat's ear	forb	non-native	-
Hypochaeris radicata	Hairy cat's ear	forb	non-native	Limited
Lamium purpureum	Purple deadnettle	forb	non-native	-
Medicago polymorpha	Bur clover	forb	non-native	Moderate
Plantago lanceolata	Narrowleaf plantain	forb	non-native	Moderate
Raphanus raphanistrum	Wild radish	forb	non-native	Limited
Rumex acetosella	Sheep sorrel	forb	non-native	Moderate
Scrophularia californica	California figwort	forb	native	-
Solidago spathulata	Dune Goldenrod	forb	native	-
Sonchus oleraceus	Annual sowthistle	forb	non-native	Moderate
Vicia benghalensis	Purple vetch	forb	non-native	-
Vicia hirsuta	Hairy vetch	forb	non-native	Limited
Vicia sativa	Common vetch	forb	non-native	Limited
Anthoxanthum odoratum	Sweet vernal grass	grass	non-native	Moderate

Avena barbata	Slender wild oat	grass	non-native	Moderate
Briza maxima	big quakinggrass	grass	non-native	Limited
Bromus diandrus	Ripgut brome	grass	non-native	High
Cynosurus echinatus	Rough dogtail	grass	non-native	Limited
Festuca bromoides	Brome fescue	grass	non-native	-
Holcus lanatus	common velvet grass	grass	non-native	Moderate
Hordeum murinum	foxtail	grass	non-native	Moderate
Juncus patens	Spreading rush	other graminoid	native	-
Equisetum telmateia	Giant horsetail	fern	native	-
Pteridium aquilinum	Bracken fern	fern	native	-

Section 6 Conclusion and Discussion

6.1 Conclusion

Floristic botanical surveys conducted on April 18, June 20, and August 12, 2025 confirmed that no special-status plant species or sensitive natural communities occur within the boundaries of the 92 Young Lane parcel. Vegetation on the lot is limited to a disturbed ruderal assemblage of annual grasses and non-native forbs, with only scattered native species along parcel margins. The absence of dune indicator taxa and the dominance of invasive species demonstrate that the parcel is ecologically degraded and lacks the floristic integrity of surrounding natural habitats.

While the Study Area itself does not support sensitive resources, it is situated in a botanically significant landscape. Adjacent and nearby parcels contain shore pine forest, Sitka spruce forest, and coastal dune vegetation—all recognized as Environmentally Sensitive Habitat Areas (ESHAs) under the California Coastal Act and Humboldt County's certified Local Coastal Program. These communities provide habitat for several federally and state-listed plant species, including *Erysimum menziesii* (Menzies' wallflower) and *Layia carnosa* (beach layia). Although these habitats do not extend into the project parcel, their proximity underscores the importance of protective measures during construction.

6.2 Discussion and Recommendations

Although the parcel itself does not support special-status plants or sensitive communities, its location adjacent to ESHAs means that indirect impacts are possible if project activities are not properly contained. In particular, ground disturbance, soil movement, and invasive plant propagules could spread into adjacent intact habitats if not managed carefully.

To minimize risk and ensure compliance with CEQA, the Coastal Act, and Humboldt County's Local Coastal Program, NBC recommends the following measures:

- **Temporary construction fencing:** Install high-visibility fencing (e.g., ESA/ESHA fencing or orange safety fencing) along parcel boundaries prior to construction to clearly demarcate work limits and prevent encroachment into adjacent habitats.
- **Limit disturbance to approved footprint:** Grading, vegetation removal, and equipment operation should remain strictly within the designated development area. No equipment staging or soil stockpiling should occur outside the parcel boundary.
- **Invasive species management BMPs:**
    - Ensure construction equipment and vehicles are free of soil and seed material before entering the site.
    - Properly dispose of removed plant material at an approved offsite location to avoid spread of invasive propagules.
    - Following construction, stabilize exposed soils with native seed mixes or erosion-control materials to reduce colonization by invasive grasses and forbs.
- **Monitoring (if required by agency permits):** Consider a one-time compliance check during ground disturbance to confirm fencing integrity and invasive species containment.

With implementation of these avoidance and minimization measures, the proposed project can proceed without adverse impacts to sensitive botanical resources. No additional botanical surveys are warranted at this time unless the project footprint expands into adjacent parcels or into areas supporting intact dune, wetland, or forest vegetation.

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Photo Documentation

Photo 2. Photo showing general habitat type and condition during the April 18, 2025. Vegetation cover is dominated by non-native annual grasses and weedy forbs well-adapted to sandy, disturbed conditions.

Photo 1. Photo showing general habitat type and condition during the June 20, 2025. Vegetation cover is dominated by non-native annual grasses and weedy forbs well-adapted to sandy, disturbed conditions. Willows in the background are outside of the Study Area.

Photo 3. Photo showing the Sitka spruce forest (*Picea sitchensis* Alliance) which is considered ESHA and occurs outside of the Study Area to the west and north west. Study Area is dominated by non-native annual grasses and weedy forbs well-adapted to sandy, disturbed conditions

Appendix B

AQUATIC RESOURCES DELINEATION REPORT

BIOLOGICAL RESOURCES ASSESSMENT

Single Family Residence Development

Assessor's Parcel Number (APN): 506 – 071 – 020

92 Young Lane
Manila (Arcata), Humboldt County, California 95521

September 2025

Naiad
Biological
Consulting

AQUATIC RESOURCES DELINEATION REPORT

92 Young Lane, Manila (Arcata), 95521, Humboldt County, CA

Assessor Parcel Number (APN):

506 – 071 – 020

Prepared For:

Friesen Homes
115 Main Street
Fortuna CA, 95540

Prepared By:

Naiad Biological Consulting
www.naiadbiological.com
PO Box 121
Samoa, CA 95564

Date Prepared:

August 26th, 2025

Certification I certify that the information and conclusions presented in this wetland delineation and aquatic resources report are based on my direct observations, data collection, and professional analysis, and are true and correct to the best of my knowledge, judgment, and belief.

X _____.

Mason London, MSc Biology

Naiad Biological Consulting Principal Biologist

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Section 1 Executive Summary

Naiad Biological Consulting (NBC) conducted a formal wetland and aquatic resources delineation for the property located at 92 Young Lane, Manila, Humboldt County, California (APN 506-071-020). This assessment was requested by the County of Humboldt Planning and Building Department to support a Coastal Development Permit (CDP) application for proposed residential development within the California Coastal Zone.

The purpose of this delineation was to determine the presence, extent, and regulatory status of any wetland features or other jurisdictional waters subject to the California Coastal Act, the Clean Water Act (Sections 401 and 404), and the Porter-Cologne Water Quality Control Act. Because the parcel lies within the Coastal Zone, delineation was conducted using both the federal three-parameter methodology (hydrophytic vegetation, hydric soils, and wetland hydrology) and the California Coastal Commission's one-parameter definition.

Fieldwork was conducted on April 18 and June 20, 2025, under seasonally appropriate conditions. Three delineation plots (P1–P3) were established across the 0.29-acre study area to capture variations in microtopography and vegetation. The site is situated on stabilized coastal dune flats and is underlain by excessively drained sandy soils associated with the Samoa–Clambeach complex. Vegetation across the parcel consisted primarily of non-native grasses and ruderal species, with only scattered facultative wetland plants observed.

No indicators of hydric soils or wetland hydrology were identified at any of the delineation plots. Vegetation failed both the Dominance Test and the Prevalence Index for hydrophytic criteria. Although the surrounding Samoa–Clambeach soil series contains a mapped hydric component, no evidence of hydric soils was present within the study boundary. No streams, swales, seeps, or other aquatic features were observed.

Based on these results, no wetlands or other jurisdictional aquatic resources were identified within the project boundary under either federal three-parameter criteria or the Coastal Act's one-parameter definition. Accordingly, no portion of the parcel is subject to regulation under Sections 401/404 of the Clean Water Act, the Porter-Cologne Water Quality Control Act, or the wetland policies of the California Coastal Act and Humboldt County's certified Local Coastal Program.

These findings will support the County's review of the CDP application and confirm that no wetland setbacks, mitigation, or additional delineation are required under existing site conditions. This report is intended to inform regulatory evaluation and may require verification by the appropriate agencies.

Section 2 Introduction, Background, and Project Understanding

2.1 Purpose and Need

The purpose of this wetland and aquatic resources assessment is to identify and map any jurisdictional wetland features or other waters of the United States or the State of California that may occur within the boundaries of Assessor's Parcel Number (APN) 506-071-020, located at 92 Young Lane in Manila, Humboldt County, California. This delineation is being prepared in support of a Coastal Development Permit (CDP) application for proposed residential development within the California Coastal Zone.

The delineation is required to determine whether project activities may affect features subject to regulation under the California Coastal Act, the Clean Water Act (Sections 401 and 404), and the Porter-Cologne Water Quality Control Act. Because the parcel lies within the Coastal Zone, the County of Humboldt and the California Coastal Commission require that wetlands be identified using the one-parameter definition for Coastal Zone wetlands, as outlined in the Coastal Act and Humboldt County's certified Local Coastal Program. These criteria differ from the three-parameter methodology applied by the U.S. Army Corps of Engineers (USACE).

The need for this study arises from a biological scoping survey conducted in November 2022 by Jenell Jackson, a botanist and wetland specialist with NRM. During that site visit, Ms. Jackson observed a small willow complex adjacent to the parcel and recommended a formal wetland delineation to determine whether jurisdictional features were present and to establish appropriate regulatory buffers. While that initial survey provided useful background, it did not include a USACE protocol-level delineation or apply the Coastal Zone's one-parameter wetland criteria. A formal delineation is therefore necessary to document the presence, extent, and regulatory status of any wetland or aquatic resources within the parcel, and to guide project design, agency review, and required avoidance or mitigation measures.

2.2 Delineator's Qualifications

The aquatic resource delineation described in this report was conducted by Mason London. Mr. London holds an M.Sc. in Biology with a specialization in aquatic ecology from Cal Poly Humboldt (formerly Humboldt State University) and serves as the Principal Biologist at Naiad Biological Consulting (NBC). He has over 18 years of professional experience spanning wildlife biology, botany, aquatic ecology, and university-level instruction. His prior roles include wildlife biologist with The Nature Conservancy, botanist with the Bureau of Land Management in Medford, Oregon, and aquatic research scientist with the HSU River Institute. Mr. London has worked extensively on CEQA and NEPA projects, conducting protocol-level surveys for special-status species such as willow flycatcher, Swainson's hawk, California red-legged frog, foothill yellow-legged frog, and western pond turtle, as well as botanical surveys across a variety of upland and aquatic habitats. He also has significant experience in pre-construction and compliance monitoring surveys focused on amphibians, reptiles, nesting birds, and mammals throughout California. In addition, Mr. London has over five years of experience conducting wetland delineations and has completed a 40-hour Introduction to Wetland Delineation course taught by Joe Seney, a Certified Professional Soil Scientist (#243) and retired USDA-NRCS and USDI-NPS Soil Scientist. Mr. London is currently an instructor with the Wetland Training Institute and assistants with leading wetland delineations courses in Northern California.

2.3 Study Area Description and Geographic Setting

The Study Area encompasses a single parcel (Assessor's Parcel Number [APN] 506-071-020) located at 92 Young Lane in the unincorporated community of Manila, Humboldt County, California. Manila lies on the Samoa Peninsula, a narrow barrier spit separating Humboldt Bay from the Pacific Ocean, and is characterized by a mix of residential development, dune habitats, and coastal wetlands. The parcel lies within the California Coastal Zone and is subject to regulation under the California Coastal Act and Humboldt County's certified Local Coastal Program (Figure 1).

The parcel is approximately 0.35 acres in assessed lot size, with a GIS-derived area of 0.29 acres, based on Humboldt County Web GIS records. The topography is nearly flat, with elevations ranging from approximately 19 to 23 feet above mean sea level (AMSL), as measured in Google Earth Pro (2025) (Photo 1 & 2). Vegetation consists primarily of non-native grasses and ruderal species, with one dead myrtle tree noted during a 2022 scoping survey, but appeared to have been cleared prior to NBC's 2025 surveys. Immediately east of the parcel boundary is a small willow thicket, which NRM had pointed out may represent a wetland-associated feature. Surrounding land use comprises low-density residential development, undeveloped parcels supporting coastal dune vegetation, and paved roadway infrastructure (Figures 2 & 3).

Regionally, the parcel falls within the U.S. Geological Survey (USGS) Hydrologic Unit Code (HUC-12) 180101020605, known as the Humboldt Bay subwatershed (Figure 1). Hydrology on the Samoa Peninsula is strongly influenced by dune swales, perched groundwater, and seasonal wetlands, with limited perennial drainage features. The Study Area itself does not contain mapped streams or tidal channels, but localized hydrology may connect to nearby wetland complexes and coastal drainages that ultimately discharge to Humboldt Bay.

The Study Area occurs within Major Land Resource Area (MLRA) 4 – Northern California Coastal Forest, part of Land Resource Region A (LRR-A). This MLRA is characterized by a cool, moist maritime climate, frequent coastal fog, sandy soils derived from dune deposits, and a mosaic of forest, scrub, and wetland communities. Geomorphically, the parcel is part of the Samoa Peninsula subunit of the Coast Ranges province, underlain by unconsolidated dune sands and alluvium deposited over Franciscan Complex bedrock. These physical conditions contribute to the ecological sensitivity of the area and underscore the importance of site-specific wetland assessments to ensure compliance with state and federal regulatory frameworks.

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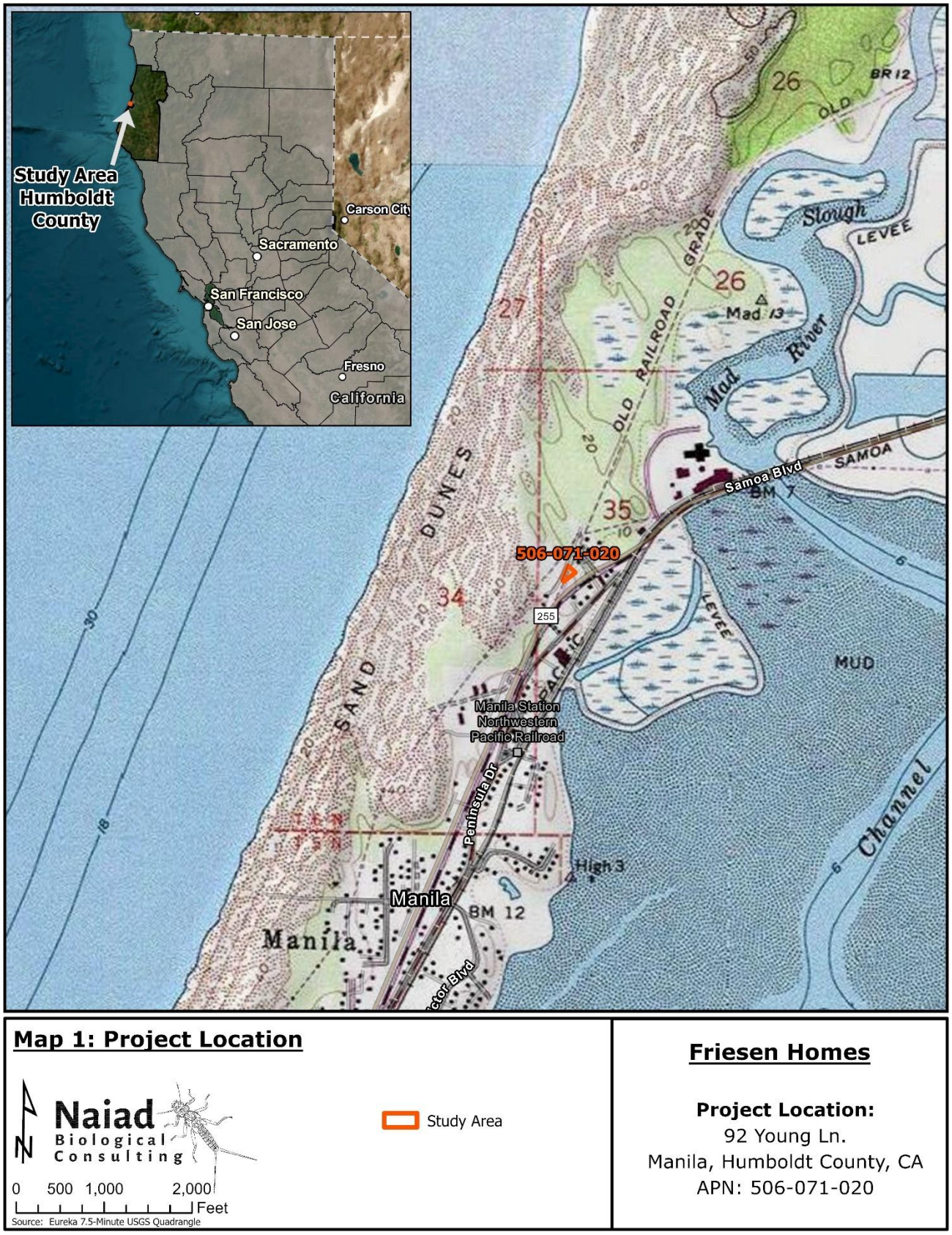

Figure 1. Study Area Locator Map

Section 3 Regulatory Framework

This section provides an overview of the federal, state, and local regulatory context relevant to wetland and aquatic resource delineation at the Study Area located in Manila, Humboldt County, California. Due to the property's location within the California Coastal Zone, it is subject to a combination of federal Clean Water Act provisions, state water quality regulations, and Coastal Act policies.

3.1 Federal Regulatory Framework

At the federal level, the regulation of Waters of the United States (WOTUS) is governed by Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act (RHA). These regulations apply to a variety of aquatic features, including Traditional Navigable Waters (TNWs), their tributaries, lakes, ponds, impoundments, and wetlands that are adjacent to those waters.

The U.S. Army Corps of Engineers (USACE) and the U.S. Environmental Protection Agency (EPA) share authority for enforcing these regulations. The USACE is responsible for issuing permits and conducting jurisdictional determinations (JDs)—formal decisions that identify whether a water feature meets the criteria for federal jurisdiction. The EPA provides oversight and retains the authority to veto permits when necessary.

The current regulatory interpretation is guided by the "Revised Definition of Waters of the United States," which became effective on September 8, 2023. Under this rule, a wetland or other aquatic feature may qualify as jurisdictional if it exhibits a persistent surface hydrologic connection to a TNW or another qualifying waterbody. Wetlands must meet the three-parameter criteria—hydrophytic vegetation, hydric soils, and wetland hydrology—to be considered for jurisdiction, and must also demonstrate an appropriate physical or functional connection to jurisdictional waters. Features such as ephemeral drainages, isolated depressions, or disconnected artificial channels may be excluded from federal jurisdiction under this framework.

Projects proposing the discharge of dredged or fill material into WOTUS—including jurisdictional wetlands, streams, or other surface waters—must obtain approval from the USACE, typically through either a Nationwide Permit (NWP) or an Individual Permit (IP), depending on the scope and potential environmental impacts of the activity. A formal wetland delineation and a jurisdictional determination are generally required to support the permitting process and to define the extent of federally regulated waters at a given site.

3.2 California State and Regional Regulatory Framework

3.2.1 California Department of Fish and Wildlife

The California Department of Fish and Wildlife exercises jurisdiction over stream and lakebeds under Section 1600–1607 of the California Fish and Game Code. Any project that may alter the bed, bank, or channel of a river, stream, or lake—including ephemeral or intermittent watercourses—requires the project proponent to submit a Lake and Streambed Alteration (LSA) Notification. If CDFW determines that the activity may substantially impact fish or wildlife resources, an LSA Agreement with enforceable conditions must be executed prior to construction.

CDFW also implements the California Endangered Species Act (CESA), which prohibits the unauthorized "take" of state-listed threatened or endangered species. If such species are present or potentially impacted by a project, appropriate avoidance, minimization, or incidental take permits must be obtained.

3.2.2 North Coast Regional Water Quality Control Board

The Study Area lies within the jurisdiction of the North Coast Regional Water Quality Control Board (Region 1), which enforces state water quality laws through the Porter-Cologne Water Quality Control Act. This includes regulation of "Waters of the State," which encompasses all surface and groundwater, including wetlands regardless of federal jurisdiction status.

Projects discharging dredged or fill material into wetlands or other waters may require Waste Discharge Requirements (WDRs) or certification under Section 401 of the CWA. The State Water Resources Control Board's (SWRCB) "State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State" (Dredge and Fill Procedures), effective May 28, 2020, establishes consistent requirements for wetland delineation and impact analysis. These procedures define wetlands using the federal three-parameter method, while also allowing the State to assert jurisdiction over features excluded from federal regulation.

3.2.3 California Coastal Commission and Coastal Zone Jurisdiction

The entire Study Area is located within the California Coastal Zone (Figure 1) and is subject to oversight by the California Coastal Commission (CCC) and Humboldt County's certified Local Coastal Program (LCP). Development within the Coastal Zone generally requires a Coastal Development Permit (CDP) and must conform to Coastal Act policies, including those pertaining to environmentally sensitive habitat areas (ESHA) and wetlands.

Under the Coastal Act, wetlands are defined using a "one-parameter" approach, meaning that the presence of just one of the three federal wetland indicators (hydrophytic vegetation, hydric soils, or wetland hydrology) is sufficient for classification. As a result, areas that may not qualify as wetlands under federal or state criteria could still be regulated as wetlands under the Coastal Act.

Given the property's location within the certified LCP boundary, wetland delineation and development proposals must be reviewed for consistency with both federal/state wetland regulations and the Coastal Act's more protective definitions. Delineation results will inform the County's CDP review and any necessary agency consultations

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Section 4 Methods

4.1 Pre-Site Visit Data Compilation and Preparation

Prior to fieldwork, a comprehensive desktop review was conducted to characterize site conditions and guide the delineation approach. Data sources included recent aerial imagery, topographic mapping, watershed boundaries, the California Aquatic Resource Inventory (CARI), National Wetlands Inventory (NWI) mapping, and Natural Resources Conservation Service (NRCS) Web Soil Survey data for the Study Area and surrounding landscape (Figure 2; Appendices A). CARI provides a standardized statewide inventory of aquatic resources and was reviewed to identify any previously mapped wetlands or surface waters in the vicinity of the parcel. In addition, the November 2022 biological scoping letter prepared by NRM (Jenell Jackson, Botanist/Wetland Specialist) was reviewed to incorporate prior observations and recommendations regarding potential wetland indicators adjacent to the property.

The Study Area boundary and base imagery were uploaded to a Trimble GeoXH 6000 GPS unit to support accurate navigation and in-field mapping.

To evaluate antecedent hydrologic conditions, a Wetland Ecosystem Technical Standard (WETS) table was generated prior to the infield delineation (April 18th, 2025) to determine relative site conditions prior to the site visit (Table 1). The WETS table is generated using the Antecedent Precipitation Tool (APT) v2.0.0, a tool developed jointly by the NRCS and the USACE (Appendix B). The table is calculated by analyzing historical precipitation data from nearby weather stations to establish monthly precipitation normals and compare them with actual precipitation for the period of interest. APT evaluates conditions as "normal," "wetter than normal," or "drier than normal" based on deviation from long-term averages, using statistical thresholds set by NRCS guidelines. This analysis helps determine hydrologic conditions relevant to wetland assessments. Precipitation in the region follows a very strong seasonal pattern of a wet season (October to April) and a dry season (May to September).

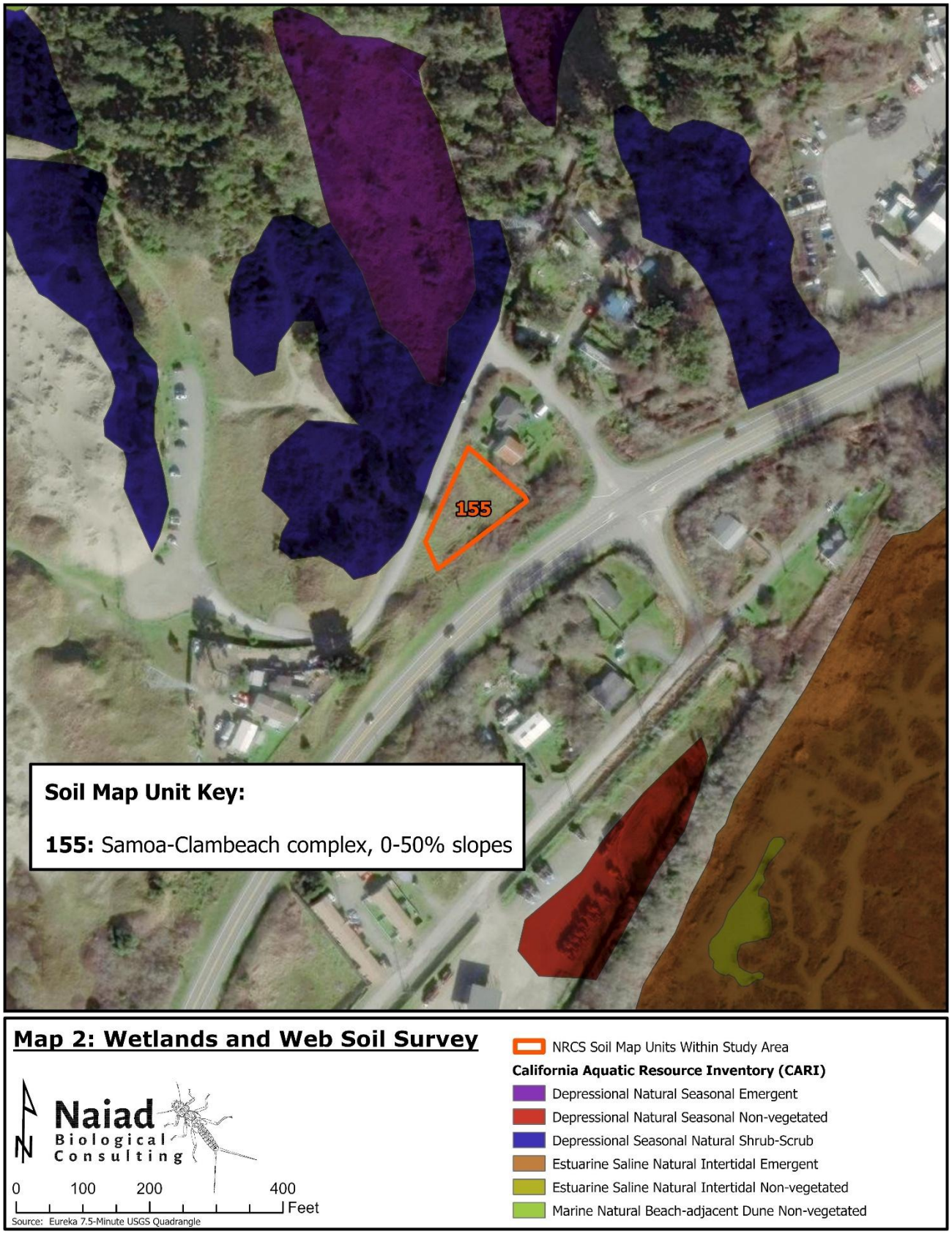

Figure 2. The NRCS Soil Map Unit for the Study Area, as well as surrounding mapped NWI and CARI wetlands.

Table 1. WETS Table Analysis for the April 18th, 2025 Survey

Precipitation Data from the Last 30 Years (1995 – 2025) [1]			Recent Field Conditions Compared to Precipitation Data from the Last 30 Years, and Analysis [1]					
30 Days Ending	**30th Percentile (inches)**	**70th Percentile (inches)**	**Date**	**Recorded Rainfall (inches)**	**Rainfall Condition Compared to Previous 30 years [2]**	**Numeric Condition Value [3]**	**Weighting Factor [4]**	**Product of Condition Value and Weighting Factor [5]**
Apr 18	2.84	7.05	Apr 18 2025	5.33	Normal	2	3	6
Mar 19	3.85	7.83	Mar 19 2025	8.24	Wet	3	2	6
Feb 17	4.52	7.09	Feb 17 2025	6.84	Normal	2	1	2
[1] All precipitation data is obtained from Weather Station: Eureka WFO Woodly Is [2] Below 30th percentile = dry; between 30th and 70th percentile = normal; above 70th percentile = wet. [3] Relative rainfall conditions are then translated to a numeric condition value, as follows: dry = 1, normal = 2, wet = 3. [4] Greater weight is given to the most recent month as this would most likely influence what hydrologic or vegetative characteristics are observed. [5] The numeric condition value is then multiplied by the weighting factor, then the subtotals are added to get the total value. Total value equivalents: 6-9 = dry; 10-14 = normal; 15-18 = wet						**TOTAL [5]**		14, or Normal (wet side of normal)

4.2 Field Survey

A wetland delineation of the Study Area was conducted on April 18, 2025, with a follow up site visit to check site features on June 20, 2025, by NBC Principal Biologist Mason London. The survey included a systematic traverse of the parcel to evaluate vegetation, soils, and hydrologic indicators in accordance with both federal and state regulatory standards, specifically the USACE three-parameter method and the CCC's one-parameter definition applicable within the Coastal Zone.

A total of three delineation plots (P1–P3) were established to document representative site conditions across the parcel. Data points were selected based on site topography and habitat characteristics: P1 was placed at the lowest point of the parcel, P2 at an intermediate elevation, and P3 at the highest elevation. This distribution ensured that the full range of site variability was captured. At each plot, vegetation, soils, and hydrology were assessed, and georeferenced photographs were taken to illustrate habitat features and hydrologic indicators. Conducting the survey during the spring growing season of the 2025 water year allowed for accurate detection of hydrophytic vegetation, hydric soil characteristics, and evidence of wetland hydrology.

All data collection procedures followed the protocols outlined in the USACE Wetlands Delineation Manual (Environmental Laboratory, 1987) and the Regional Supplement for the Western Mountains, Valleys, and Coast Region, Version 2.0 (USACE, 2010). For purposes of Coastal Act compliance, areas meeting any one of the three federal wetland parameters (hydrophytic vegetation, hydric soils, or wetland hydrology) were also identified and evaluated under the CCC's one-parameter standard.

Spatial data were recorded using a Trimble GeoXH 6000 handheld GPS unit with sub-foot nominal precision, allowing for accurate mapping of delineation points, data plots, and any potential jurisdictional

wetland or aquatic features within the parcel. Detailed methods and criteria for vegetation, soils, and hydrology assessments are provided in the subsections below.

4.2.1 Soils

At each data point, soil profile pits were excavated using a rounded drain spade shovel, and an examination was conducted to identify positive hydric soil indicators. These indicators are characteristic features resulting from anaerobic conditions and persist in the soil during both saturated (reduced) and dry (oxidized) states within the upper 12 inches of soil. Examples include mottled color patterns from iron or manganese reduction and reoxidation, and the accumulation of organic matter due to saturated environments promoting slow decomposition rates. Hydric soil field indicators exhibit distinct morphologies due to the accumulation or loss of iron, manganese, sulfur, or carbon compounds in anaerobic conditions. These indicators include assessing features such as low matrix chromas, redox features, gleys, and the presence of iron and manganese concretions. Detailed records of soil color and texture encountered at each layer were documented on delineation forms. Soil color was determined using a Munsell soil color chart (Kollmorgen, 2000), while soil texture was assessed using a standardized chart endorsed by the California Native Plant Society (CNPS), adapted from Brewer and McCann (1982). Prior to assessment, all soil samples were moistened. Soil map units were cross-referenced with both the California hydric soils list (SCS, 1993) and the national hydric soils list (SCS, 1991). Determination of whether the hydric soil criterion was met followed guidelines outlined by the National Technical Committee for Hydric Soils and the 2010 Regional Supplement: Western Mountains, Valleys, and Coast Region (Version 2.0) (USACE, 2010). Typically, soils with a matrix chroma of 1, and mottled soils with a matrix chroma of 2 or less, are considered to meet hydric soil criteria. Additionally, soils not exhibiting low matrix chromas but experiencing inundation or saturation within 12 inches of the surface for at least 5 percent of the growing season (14 consecutive days) are also classified as hydric.

4.2.2 Hydrology

Indicators of wetland hydrology were noted at each data point, such as the presence of surface water, surface soil cracks, saturated soil, water-stained vegetation, drainage patterns, and sediment deposits. Hydrological connectivity was investigated throughout the study area and surrounding habitats. Although wetland hydrology indicators are important in delineating wetlands, they are the least credible compared to soil and vegetation indicators due to variability of seasonal and local weather patterns that influence hydrology. Wetland hydrology exists at a site when it is flooded (A1), ponded (A1), or has groundwater within 12 inches of the ground surface (A2) for 14 or more consecutive days during the growing season in at least 5 out of 10 years. Wetland hydrology is the most seasonal and transitory of the three parameters. The USACE manual describes primary and secondary wetland hydrology “Indicators” that allow delineators to evaluate hydrology throughout the growing season, even late in the dry season when saturation in the upper part of the soil may no longer be present. Examples of primary indicators include surface water (A1), a high-water table (A2) (groundwater within 12 inches of soil surface), saturated soil (A3), oxidized iron along live root channels or on live root surfaces (C3), sparsely vegetated concave surfaces (B8), water-stained leaves (B9), sediment deposits (B2), stunted vegetation or stressed plants (D1) or drainage patterns (B10). Examples of secondary indicators include presence of a “dry season water table” between 12 and 24 inches below the ground surface (C2), a shallow aquitard (D3), a dense layer within 24 inches of the soil surface, the FAC Neutral Test (D5), and “geomorphic position” (D2) of

the site (e.g., toe slopes, drainageways, depressions, and swales). The presence of one primary or two secondary indicators confirms wetland hydrology.

The delineation was conducted during and throughout the wet season with “normal” precipitation and therefore normal potential wetland conditions (Table 1).

4.2.3 Vegetation

At each delineation data point, plant species were identified and recorded by stratum. Herbaceous species were documented within a 5-foot radius, with visual estimates of percent cover made for each taxon. Sapling and shrub species, when present, were identified within a 30-foot radius, and tree species were also recorded within a 30-foot radius. Percent cover estimates for each stratum were calibrated using California Native Plant Society (CNPS) percent cover templates[1].

The indicator status of each species was then checked using the most recent USACE National Wetland Plant List—Version 3.5 (USACE, 2020).

Indicator status categories are as follows:

- OBL = obligate wetland; >99% probability of occurring in a wetland
- FACW = facultative wetland; 67%-99% probability of occurring in a wetland
- FAC = facultative; 33%-67% probability of occurring in a wetland
- FACU = facultative upland; 1%-33% probability of occurring in a wetland
- UPL = obligate upland; <1% probability of occurring in a wetland
- NI = no indicator (plants not listed in the 2020 ACOE National Wetland Plant List—Version 3.5)

The wetland vegetation criterion is met when the dominant plants pass the dominance test, showing that over 50 percent of these species are designated as OBL, FACW, or FAC wetland indicators. Dominant plant species collectively account for 50 percent of the total cover within their stratum (tree, sapling/shrub/subshrub, herb, or woody vine), listed in descending order of percent cover. Additionally, any species with at least 20 percent coverage within a stratum are always considered dominant. Plant names follow Baldwin et al. (2012) and/or the Calflora database (2019). If the dominance test is not met, vegetation may still be considered hydrophytic if it meets the prevalence index, morphological adaptations, or addresses problematic wetland situations (USACE 2008).

[1] **CNPS percent cover templates**: http://www.cnps.org/cnps/vegetation/pdf/percent_cover_diag-cnps.pdf

Section 5 Results

5.1 Aquatic Resources

A wetland delineation was conducted on April 18, and June 20, 2025 by Principal Biologist Mason London of Naiad Biological Consulting. Three delineation plots (P1–P3) were established to assess the presence or absence of aquatic resources subject to federal and Coastal Zone jurisdiction (Figure 3, Photos 3–8, Appendix D). Sampling was conducted using the Routine Determination Method as outlined in the 1987 U.S. Army Corps of Engineers Wetlands Delineation Manual and the 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region.

Plot sizes were stratified by vegetation layer and adjusted slightly from standard USACE protocol to accommodate spatial limitations and vegetation structure observed in the field. The tree, sapling/shrub, and woody vine strata were assessed over a 30-ft radius (≈262 m²), while the herbaceous stratum was assessed over a 5-ft radius (≈7.35 m²). These plot sizes were appropriate for the stabilized dune flat setting and allowed representative sampling without incorporating uncharacteristic adjacent habitat.

All three delineation plots were located within the mapped Samoa–Clambeach complex, 0–50 percent slopes (NRCS 2024). This mapping unit occurs on coastal dune landforms and is composed primarily of excessively to somewhat poorly drained sandy soils derived from marine and eolian sands. The Samoa component (65%) is excessively drained and non-hydric, while the Clambeach component (30%) is very poorly drained and considered hydric. A minor unmapped hydric component (Oxyaquic udipsamments) may occur in small deflation basins but was not observed within the study plots.

The results of the delineation are presented below.

5.1.1 Watercourses

No streams, swales, seeps, or springs were observed within the Study Area. The site is characterized by stabilized dune flats and hummocky topography, with no evidence of surface hydrology or channel morphology (e.g., bed/bank, scour, sediment deposition, or flow patterns). Therefore, no watercourses subject to USACE, CDFW, or Coastal Commission jurisdiction occur within the Study Area.

5.1.2 Wetlands

Three delineation plots (P1–P3) were established to evaluate vegetation, soils, and hydrology (Figure 3). Plots were positioned at different microtopographic elevations across the dune flat: P1 was located in the lowest position (Photo 3 & 4), P2 at an intermediate elevation (Photo 5 & 6), and P3 at the highest elevation (Photo 7 & 8). None of the plots met all three criteria (hydric soils, hydrophytic vegetation, and wetland hydrology).

Table 2. Wetland Plot Summary (Datasheets Provided in Appendix D)

Plot	Soils	Hydrology	Vegetation	Wetland Status
P1	Non-hydric	Absent	Upland/FACU with scattered FACW (insufficient to meet criteria)	Non-Wetland
P2	Non-hydric	Absent	Upland/FACU/NI	Non-Wetland
P3	Non-hydric	Absent	Upland/FACU/NI	Non-Wetland

5.1.2.1 Soils

Soil pits were excavated at each delineation point to depths of 12 inches. All plots exhibited uniform sandy textures with high permeability and no evidence of gleying, redoximorphic features, or saturation.

- **P1:** Surface soils consisted of 0–2 inches 10YR 3/2 sand, underlain by 10YR 4/3 sand to 12 inches. Substrates were well-aerated, freely draining sands with no hydric indicators.
- **P2:** Profile of 10YR 4/3 sand from 0–12 inches. Well-drained, lacking hydric indicators.
- **P3:** Profile of 10YR 4/3 sand from 0–12 inches. Well-drained, no hydric features.

These findings are consistent with the Samoa component of the Samoa–Clambeach complex, which is excessively drained and mapped as non-hydric. No evidence of the Clambeach hydric component was observed in the Study Area.

5.1.2.2 Hydrology

No indicators of wetland hydrology (e.g., surface water, saturation within the upper 12 inches, water-stained leaves, oxidized rhizospheres, or drift deposits) were observed at any of the delineation points. Substrates were highly permeable sands with little to no capacity for water retention. The APT confirmed typical seasonal conditions at the time of the April 2025 survey.

5.1.2.3 Vegetation

Vegetation across the plots was composed primarily of upland or facultative upland species, with scattered facultative species but insufficient to meet hydrophytic criteria.

- **P1:** Dominated by *Rubus ursinus* (FACU), *Prunus emarginata* (FACU), *Salix hookeriana* (FACW, low cover), *Anthoxanthum odoratum* (FACU), *Juncus patens* (FACW), and *Equisetum telmateia* (FACW). While some FACW species were present, the Dominance Test returned 0% hydrophytic dominants (0/2), and the Prevalence Index was 3.69 (>3.01). Thus, P1 failed hydrophytic vegetation criteria.
- **P2:** Dominated by *Festuca bromoides* (NI), *Bromus diandrus* (NI), *Medicago polymorpha* (FACU), *Rumex acetosella* (FACU), *Anthoxanthum odoratum* (FACU), and *Hypochaeris radicata* (FACU). The Dominance Test returned 0% hydrophytic dominants (0/3), and the Prevalence Index was 4.0. Fails hydrophytic vegetation criteria.
- **P3:** Dominated by *Bromus diandrus* (NI), *Briza maxima* (NI), *Rumex acetosella* (FACU), *Anthoxanthum odoratum* (FACU), and *Hypochaeris radicata* (FACU). The Dominance Test returned 0% hydrophytic dominants (0/5), and the Prevalence Index was 4.0. Fails hydrophytic vegetation criteria.

Across all plots, hydrophytic vegetation indicators were not met.

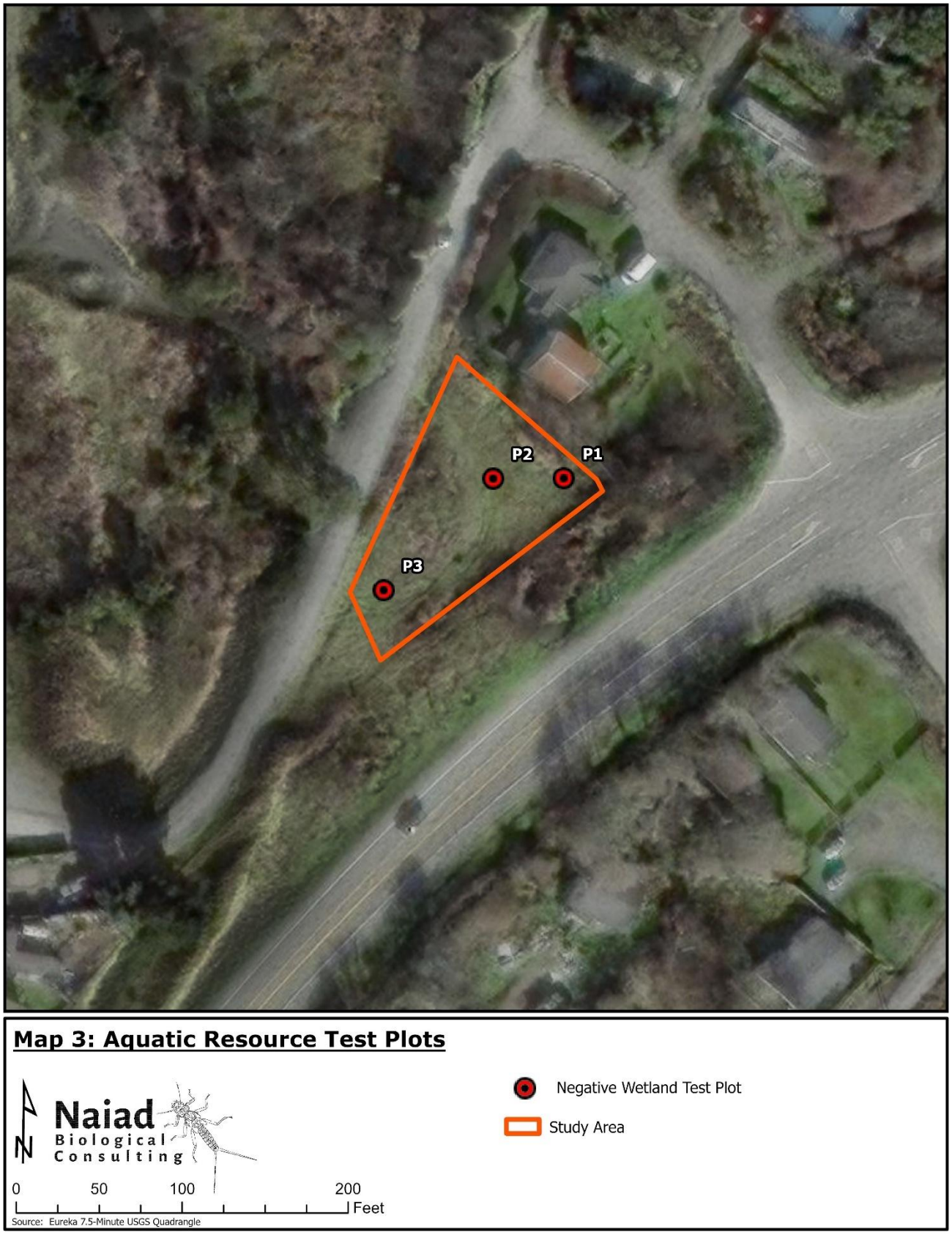

Figure 3. Map showing the locations of all three negative wetland delineation plots within the Study Area.

Section 6 Conclusions, Discussion, and Recommendations

6.1 Conclusions

Based on the April 18, and June 20, 2025 wetland delineation and supporting NRCS soil data, no wetlands or other jurisdictional aquatic features were identified within the Study Area under either the federal three-parameter approach or the CCC's one-parameter definition for the Coastal Zone.

All three delineation plots (P1–P3) failed to meet wetland criteria:

- **Vegetation:** Dominance Test and Prevalence Index values confirmed upland/FACU communities with only scattered FACW species, insufficient to qualify as hydrophytic vegetation.
- **Soils:** Uniform sandy substrates (10YR hues) lacked hydric indicators such as gleying, redox features, or low-chroma matrices.
- **Hydrology:** No evidence of saturation, ponding, or hydrologic indicators was observed; the Antecedent Precipitation Tool confirmed conditions were seasonally typical.

Accordingly, no portion of the parcel qualifies as a wetland under USACE, CCC, or Humboldt County Local Coastal Program criteria, and no features are subject to Sections 401/404 of the Clean Water Act, the Porter-Cologne Water Quality Control Act, or Coastal Act wetland policies.

6.2 Discussion

The delineation addressed agency concerns regarding potential wetland features within the parcel. Plots were positioned across topographic gradients of the stabilized dune flat: P1 at the lowest position, P2 at an intermediate elevation, and P3 at the highest. None exhibited hydrophytic vegetation, hydric soils, or hydrology.

Although the NRCS mapping unit (Samoa–Clambeach complex) includes a hydric Clambeach component, only excessively drained Samoa-type soils were observed in the Study Area. These well-aerated sands are consistent with upland dune habitats, which lack the capacity to retain surface or subsurface water.

Given the size of the parcel, uniform sandy profiles, and absence of hydric or hydrophytic indicators during a seasonally appropriate survey, the likelihood of unmapped wetlands elsewhere on site is very low.

6.3 Recommendations

Based on the findings of this delineation, the following recommendations are provided:

1. **Proceed with Coastal Development Permit Review:**

   The delineation confirms the absence of CCC- and County-jurisdictional wetlands within the Study Area. The County of Humboldt and Coastal Commission should be provided with this delineation report to support the CDP application and confirm that no wetland setbacks or mitigation measures pertaining to wetlands are required.

2. **No Further Delineation Necessary Unless Site Conditions Change:**

If site conditions remain consistent and no significant changes to drainage patterns or vegetation occur, this delineation should remain valid for regulatory purposes for a period of 5 years. However, if grading, vegetation clearing, or hydrologic modifications occur prior to permit issuance, an updated site inspection may be warranted.

3. **Maintain Supporting Documentation:**

   It is recommended that the applicant retain a copy of this delineation report and associated data forms in project records to address any future regulatory review or inquiries regarding wetland status on the property.

4. **Consult Agencies If New Features Are Observed:**

   Should any new or unanticipated features (e.g., standing water, saturated depressions) be observed during or after project implementation, consultation with the County, Coastal Commission, or qualified biologist is advised to determine whether a supplemental delineation is necessary.

6.4 Conditions and Limitations

This delineation represents professional judgment based on conditions observed on April 18, and June 20, 2025, and current regulatory guidance. Results are valid only for the date and site conditions documented. Changes in land use, vegetation, hydrology, or soils could alter wetland determinations.

This report does not constitute a formal jurisdictional determination by the U.S. Army Corps of Engineers, California Coastal Commission, or any other agency. Final authority rests with the relevant regulatory agencies, and the applicant is responsible for submitting this delineation for verification.

Section 7 References

California Coastal Commission (CCC). 2021. *California Coastal Act and Local Coastal Program Regulations*. Available at: https://www.coastal.ca.gov

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Western Regional Climate Center (WRCC). 2025. *Antecedent Precipitation Tool (APT)*. U.S. Army Corps of Engineers Regulatory Program. Accessed June 2025.

Photo Documentation

Photo 1. The relatively flat dune habitat that makes up the entire Study Area. Photo taken April 18, 2025

Photo 2. The flat dune habitat that makes up the entire Study Area. Photo taken June 20, 2025

Photo 4. P1 location in the lowest portion of the Study Area.

Photo 3. P1 soil profile showing no hydrologic soil indicators.

Photo 5. P2 location within the intermediate elevation of the Study Area.

Photo 6. P2 soil profile showing no hydrologic soil indicators.

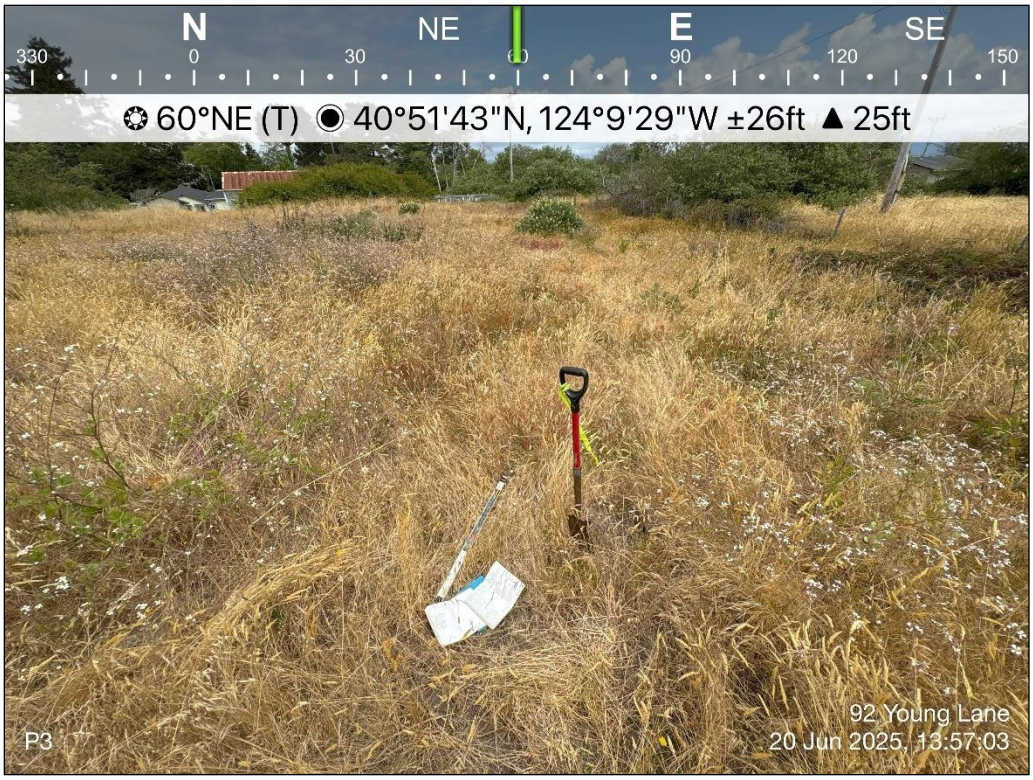


Photo 8. P3 location along the upper highest portion of the Study Area.

Photo 7. P3 non-restricted soil profile displaying no hydric indicators.

Appendix A

Web Soil Survey Report

AQUATIC RESOURCES DELINEATION

92 Young Lane, Manila (Arcata), 95521, Humboldt County, CA
Assessor Parcel Number (APN):
506 – 071 – 020

August 2025

Naiad
Biological
Consulting

Humboldt County, Central Part, California

155—Samoa-Clambeach complex, 0 to 50 percent slopes

Map Unit Setting

National map unit symbol: hs2h
Elevation: 0 to 70 feet
Mean annual precipitation: 35 to 80 inches
Mean annual air temperature: 50 to 55 degrees F
Frost-free period: 275 to 330 days
Farmland classification: Not prime farmland

Map Unit Composition

Samoa and similar soils: 65 percent
Clambeach and similar soils: 30 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Samoa

Setting

Landform: Dunes
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Tread
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Parent material: Eolian and marine sand derived from mixed sources

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
A - 1 to 6 inches: sand
AC - 6 to 18 inches: sand
C - 18 to 63 inches: sand

Properties and qualities

Slope: 2 to 50 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e

Hydrologic Soil Group: A
Ecological site: F004BI100CA - Fluventic, salt-affected, rarely flooded, alluvial floodplains
Hydric soil rating: No

Description of Clambeach

Setting

Landform: Deflation basins
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave, linear
Across-slope shape: Linear, concave
Parent material: Eolian and marine sand derived from mixed sources

Typical profile

A - 0 to 9 inches: sand
Cg1 - 9 to 20 inches: sand
Cg2 - 20 to 63 inches: sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: About 0 to 4 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: A/D
Ecological site: R004BA206CA - Deflation basins
Hydric soil rating: Yes

Minor Components

Oxyaquic udipsamments, unvegetated

Percent of map unit: 5 percent
Landform: Beaches
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R004BA206CA - Deflation basins

Hydric soil rating: No

Data Source Information

Soil Survey Area: Humboldt County, Central Part, California
Survey Area Data: Version 11, Aug 28, 2024

Appendix B

Antecedent Precipitation Tool Graph

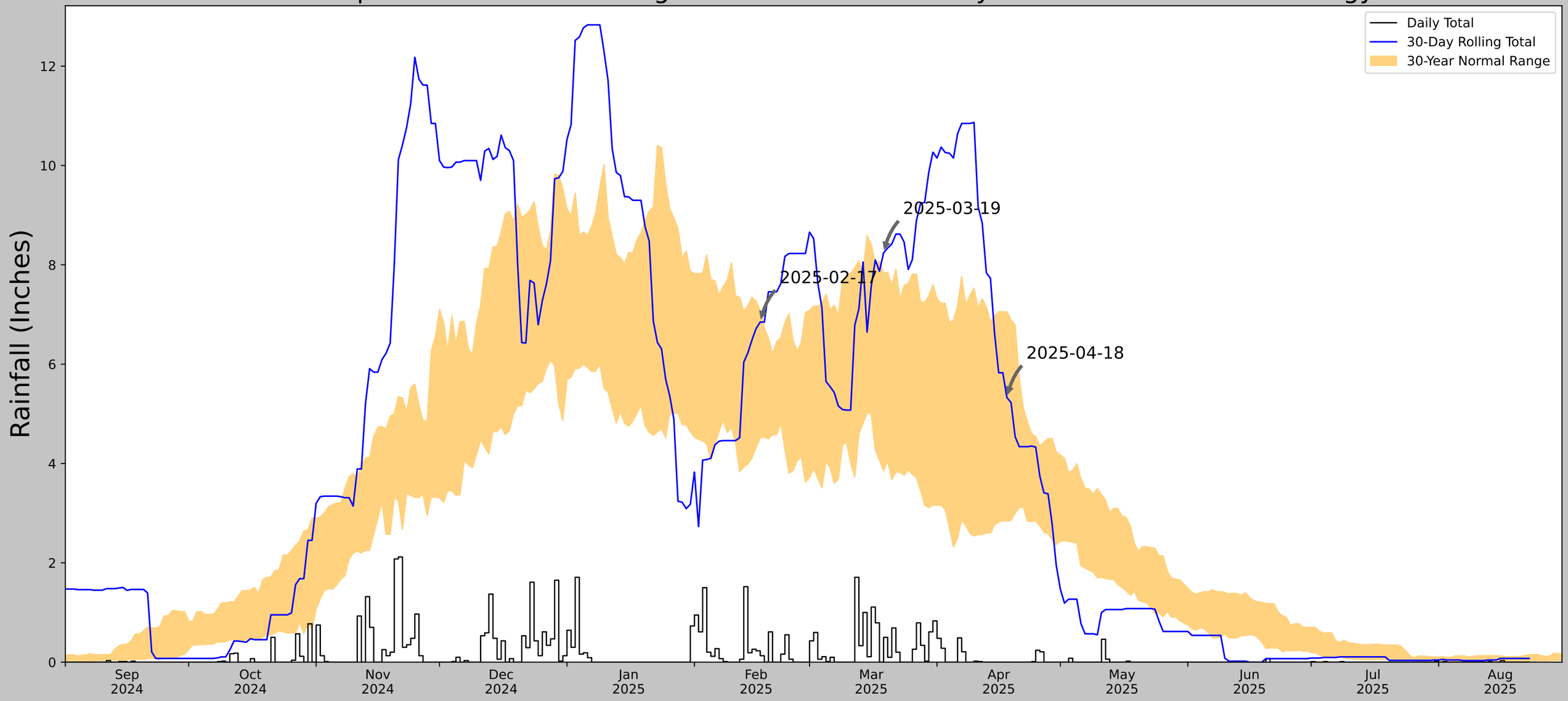
AQUATIC RESOURCES DELINEATION

92 Young Lane, Manila (Arcata), 95521, Humboldt County, CA
Assessor Parcel Number (APN):
506 – 071 – 020

August 2025

Naiad
Biological
Consulting

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	40.8621, -124.15804
Observation Date	2025-04-18
Elevation (ft)	22.025
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Not available

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2025-04-18	2.843701	7.053937	5.326772	Normal	2	3	6
2025-03-19	3.852756	7.831103	8.240158	Wet	3	2	6
2025-02-17	4.516929	7.08504	6.846457	Normal	2	1	2
Result							Normal Conditions - 14

Figures and tables made by the
Antecedent Precipitation Tool
Version 3.0

US Army Corps of Engineers.
ERDC

Developed by:
U.S. Army Corps of Engineers and
U.S. Army Engineer Research and
Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
EUREKA WFO WOODLEY IS	40.8097, -124.1603	20.013	3.622	2.012	1.637	11353	90

Appendix C

Wetland Determination Data Forms

AQUATIC RESOURCES DELINEATION

92 Young Lane, Manila (Arcata), 95521, Humboldt County, CA
Assessor Parcel Number (APN):
506 – 071 – 020

August 2025

Naiad
Biological
Consulting

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: 92 Young Ln. City/County: Manila, Humboldt Co. Sampling Date: 04/18/2025

Applicant/Owner: Friesen Homes State: CA Sampling Point: P1

Investigator(s): Mason London Section, Township, Range: SEC35, T6N, R1W

Landform (hillslope, terrace, etc.): dune flat Local relief (concave, convex, none): concave Slope (%): 2 %

Subregion (LRR): LRR A Lat: 40.862164 Long: -124.157737 Datum: WGS84

Soil Map Unit Name: 155 - Samoa-Clambeach complex, 0-50% slopes NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	

Remarks:

The plot is located adjacent to a county road and appears to contain fill material that were likely deposited during road construction.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Prunus emarginata	5	No	FACU
2.			
3.			
4.			
	48	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30 ft r)			
1. Salix hookeriana	5	No	FACW
2.			
3.			
4.			
5.			
	60	= Total Cover	
Herb Stratum (Plot size: 5 ft r)			
1. Anthoxanthum odoratum	60	Yes	FACU
2. Juncus pattens	10	No	FACW
3. Equisetum telmateia	2	No	FACW
4. Scrophularia californica	3	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	79	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft r)			
1. Rubus ursinus	35	Yes	FACU
2.			
	15	= Total Cover	

% Bare Ground in Herb Stratum approx 20%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0/2 = 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	-	x 1 =	-
FACW species	17	x 2 =	34
FAC species	3	x 3 =	9
FACU species	100	x 4 =	400
UPL species	-	x 5 =	-
Column Totals:	120 (A)		443 (B)

Prevalence Index = B/A = 443/120 = 3.69

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks:

NA

SOIL

Sampling Point: P1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-2"	10YR 3/2	100%	----------				Sandy	completely sand
2-12"	10YR 4/3	100%	----------				Sandy	completely sand

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: NA

Depth (inches): NA

Hydric Soil Present? Yes _____ No X

Remarks:

Substrate comprised well-aerated sandy soils with high permeability and apppeares to have limited to no water retention ability due to sand feature.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): NA

Water Table Present? Yes _____ No X Depth (inches): NA

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): NA

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

NA

Remarks:

No evidence of hydrologgy or hydrologic indicators at this location.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: 92 Young Ln. City/County: Manila, Humboldt Co. Sampling Date: 04/18/2025

Applicant/Owner: Friesen Homes State: CA Sampling Point: P2

Investigator(s): Mason London Section, Township, Range: SEC35, T6N, R1W

Landform (hillslope, terrace, etc.): dune flat Local relief (concave, convex, none): none Slope (%): 0%

Subregion (LRR): LRR A Lat: 40.862159 Long: -124.157939 Datum: WGS84

Soil Map Unit Name: 155 - Samoa-Clambeach complex, 0-50% slopes NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	

Remarks:

The plot is located adjacent to a county road and appears to contain fill material that were likely deposited during road construction.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 30 ft r)			
1. Lupinus arboreus	5	No	NI
2.			
3.			
4.			
5.			
	5 = Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Festuca bromoides	40	Yes	NI
2. Bromus diandrus	20	Yes	NI
3. Anthoxanthum odoratum	20	Yes	FACU
4. Medicago polymorpha	5	No	FACU
5. Rumex acetosella	5	No	FACU
6. Vicia hirsuta	5	No	NI
7. Daucus carota	2	No	FACU
8. Hypochaeris radicata	2	No	FACU
9. Hypochaeris glabra	1	No	NI
10.			
11.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum approx 20%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0/3 = 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	-	x 1 =	-
FACW species		x 2 =	
FAC species		x 3 =	
FACU species	34	x 4 =	136
UPL species	-	x 5 =	-
Column Totals:	34 (A)		136 (B)

Prevalence Index = B/A = 136/34= 4

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks:

NA

SOIL

Sampling Point: P2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-12"	10YR 4/3	100%	----------				Sandy	completely sand

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: NA

Depth (inches): NA

Hydric Soil Present? Yes _____ **No** X

Remarks:

Substrate comprised well-aerated sandy soils with high permeability and apppeares to have limited to no water retention ability due to sand feature.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): NA

Water Table Present? Yes _____ No X Depth (inches): NA

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): NA

Wetland Hydrology Present? Yes _____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

NA

Remarks:

No evidence of hydrologgy or hydrologic indicators at this location.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: 92 Young Ln. City/County: Manila, Humboldt Co. Sampling Date: 06/20/2025

Applicant/Owner: Friesen Homes State: CA Sampling Point: P3

Investigator(s): Mason London Section, Township, Range: SEC35, T6N, R1W

Landform (hillslope, terrace, etc.): dune flat Local relief (concave, convex, none): none Slope (%): <1%

Subregion (LRR): LRR A Lat: 40.861982 Long: -124.158134 Datum: WGS84

Soil Map Unit Name: 155 - Samoa-Clambeach complex, 0-50% slopes NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	

Remarks:

The plot is located adjacent to a county road and appears to contain fill material that were likely deposited during road construction.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Anthoxanthum odoratum	20	Yes	FACU
2. Bromus diandrus	20	Yes	NI
3. Rumex acetosella	15	Yes	FACU
4. Raphanus raphanistrum	15	Yes	NI
5. Briza maxima	15	Yes	NI
6. Hypochaeris radicata	10	No	FACU
7.			
8.			
9.			
10.			
11.			
	95 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum approx 20%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0/5 = 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	-	x 1 =	-
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	45	x 4 =	180
UPL species	-	x 5 =	-
Column Totals:	45 (A)		136 (B)

Prevalence Index = B/A = 180/45= 4

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks:

NA

SOIL

Sampling Point: P3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-12"	10YR 4/3	100%	----------				Sandy	all sand

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: NA

Depth (inches): NA

Hydric Soil Present? Yes _____ **No** X

Remarks:

Substrate comprised well-aerated sandy soils with high permeability and apppeares to have limited to no water retention ability due to sand feature.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): NA

Water Table Present? Yes _____ No X Depth (inches): NA

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): NA

Wetland Hydrology Present? Yes _____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

NA

Remarks:

No evidence of hydrologgy or hydrologic indicators at this location.

Appendix C

OCCURRENCE REPORTS

BIOLOGICAL RESOURCES ASSESSMENT

Single Family Residence Development

Assessor's Parcel Number (APN): 506 – 071 – 020

92 Young Lane
Manila (Arcata), Humboldt County, California 95521

September 2025

Naiad
Biological
Consulting

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Species IS (Falco peregrinus anatum)

Map Index Number:	B8152	**EO Index:**	121265
Key Quad:	Eureka (4012472)	**Element Code:**	ABNKD06071
Occurrence Number:	63	**Occurrence Last Updated:**	2022-06-03

Scientific Name: *Falco peregrinus anatum* **Common Name:** American peregrine falcon

Listing Status:	**Federal:**	Delisted	**Rare Plant Rank:**	
*** SENSITIVE ***	**State:**	Delisted	**Other Lists:**	CDF_S-Sensitive
CNDDB Element Ranks:	**Global:**	G4T4		
	State:	S3S4		

General Habitat:

NEAR WETLANDS, LAKES, RIVERS, OR OTHER WATER; ON CLIFFS, BANKS, DUNES, MOUNDS; ALSO, HUMAN-MADE STRUCTURES.

Micro Habitat:

NEST CONSISTS OF A SCRAPE OR A DEPRESSION OR LEDGE IN AN OPEN SITE.

Last Date Observed:	2020-02-26	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2020-02-26	**Occurrence Rank:**	Good
Owner/Manager:		**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

SENSITIVE LOCATION INFORMATION SUPPRESSED.

Detailed Location:

PLEASE CONTACT THE CALIFORNIA NATURAL DIVERSITY DATABASE, CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE, FOR MORE INFORMATION: (916) 322-2493

Ecological:

NEST ON LEDGE OF BRIDGE. HOME RANGE ANALYSIS OF TAGGED AND TRACKED PAIR DETERMINED YEAR ROUND RESIDENCY WITH THE MAJORITY OF HABITAT USE WITHIN 1.5 MILES OF THE BRIDGE. LIKELY FORAGING ON SHOREBIRDS IN ARCATA BAY.

Threats:

General:

PLSS:	**Accuracy:**	80 meters	**Area (acres):**	5
UTM:	**Latitude/Longitude:**		**Elevation (feet):**	40

County Summary:	**Quad Summary:**
Humboldt	Eureka (4012472)

Sources:

DFW19D0004	BATTISTONE, C. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - PEREGRINE FALCON OBSERVATIONS (BIOS DATASET DS2837). 2019-XX-XX
MAD04R0001	MAD RIVER BIOLOGISTS - SAMOA TOWN MASTER PLAN BIOLOGICAL RESOURCE STUDY 2004-12-XX
MOR18U0008	MORATA, E. (HUMBOLDT STATE UNIVERSITY) - SEASONAL HOME RANGE VARIATION AND SPATIAL ECOLOGY OF PEREGRINE FALCONS (FALCO PEREGRINUS) IN COASTAL HUMBOLDT COUNTY, CA. MS THESIS, HUMBOLDT STATE UNIVERSITY. 81PP 2018 -07-XX
ORA20F0001	ORAHOSKE, A. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - FIELD SURVEY FORM FOR FALCO PEREGRINUS ANATUM 2020-02-26

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Species IS (Falco peregrinus anatum)

Map Index Number:	B8155	**EO Index:**	121267
Key Quad:	Eureka (4012472)	**Element Code:**	ABNKD06071
Occurrence Number:	64	**Occurrence Last Updated:**	2022-06-03

Scientific Name: *Falco peregrinus anatum* **Common Name:** American peregrine falcon

Listing Status: **Federal:** Delisted **Rare Plant Rank:**

*** SENSITIVE *** **State:** Delisted **Other Lists:** CDF_S-Sensitive

CNDDB Element Ranks: **Global:** G4T4

State: S3S4

General Habitat:

NEAR WETLANDS, LAKES, RIVERS, OR OTHER WATER; ON CLIFFS, BANKS, DUNES, MOUNDS; ALSO, HUMAN-MADE STRUCTURES.

Micro Habitat:

NEST CONSISTS OF A SCRAPE OR A DEPRESSION OR LEDGE IN AN OPEN SITE.

Last Date Observed:	2009-02-07	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2012-XX-XX	**Occurrence Rank:**	Good
Owner/Manager:		**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

SENSITIVE LOCATION INFORMATION SUPPRESSED.

Detailed Location:

PLEASE CONTACT THE CALIFORNIA NATURAL DIVERSITY DATABASE, CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE, FOR MORE INFORMATION: (916) 322-2493

Ecological:

NEST IN LIVE REDWOOD, LIKELY WITH EITHER BROKEN OR DEAD TOP CREATING A LEDGE OR BOWL PLATFORM. WEST-FACING SLOPE. SUSPECTED TO BE 1 OF 2 NEST SITES IN A SINGLE TERRITORY; OTHER NEST SITE EO #65, 1.7 MILES SSE, AND USED PRIOR TO THIS SITE.

Threats:

General:

PLSS:		**Accuracy:**	80 meters	**Area (acres):**	5
UTM:		**Latitude/Longitude:**		**Elevation (feet):**	256

County Summary:	**Quad Summary:**
Humboldt	Eureka (4012472)

Sources:

BUC14A0001	BUCHANAN, J. ET AL. - TREE-NESTING BY PEREGRINE FALCONS IN NORTH AMERICA: HISTORICAL AND ADDITIONAL RECORDS. JOURNAL OF RAPTOR RESEARCH 48(1):61-67. 2014-XX-XX
GDR03F0146	GREEN DIAMOND RESOURCE COMPANY - FIELD SURVEY FORM FOR FALCO PEREGRINUS ANATUM 2003-XX-XX
GDR05F0289	GREEN DIAMOND RESOURCE COMPANY - FIELD SURVEY FORM FOR FALCO PEREGRINUS ANATUM 2005-04-22
GDR06F0402	GREEN DIAMOND RESOURCE COMPANY - FIELD SURVEY FORM FOR FALCO PEREGRINUS ANATUM 2006-XX-XX
GDR07F0467	GREEN DIAMOND RESOURCE COMPANY - FIELD SURVEY FORM FOR FALCO PEREGRINUS ANATUM 2007-XX-XX
GDR08F0412	GREEN DIAMOND RESOURCE COMPANY - FIELD SURVEY FORM FOR FALCO PEREGRINUS ANATUM 2008-XX-XX
GDR12D0002	GREEN DIAMOND RESOURCE COMPANY - TABLE OF KNOWN PEREGRINE FALCON NESTS ON GREEN DIAMOND OWNED LANDS 2012-12-27

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Species IS (Lilium occidentale)

Map Index Number:	06892	**EO Index:**	21851
Key Quad:	Arcata South (4012471)	**Element Code:**	PMLIL1A0G0
Occurrence Number:	18	**Occurrence Last Updated:**	2016-03-03

Scientific Name: *Lilium occidentale* **Common Name:** western lily

Listing Status: **Federal:** Endangered **Rare Plant Rank:** 1B.1

*** SENSITIVE *** **State:** Endangered **Other Lists:** SB_BerrySB-Berry Seed Bank

CNDDB Element Ranks: **Global:** G1G2

State: S1

General Habitat:

COASTAL SCRUB, FRESHWATER MARSH, BOGS AND FENS, COASTAL BLUFF SCRUB, COASTAL PRAIRIE, NORTH COAST CONIFEROUS FOREST, MARSHES AND SWAMPS.

Micro Habitat:

WELL-DRAINED, OLD BEACH WASHES OVERLAIN WITH WIND-BLOWN ALLUVIUM AND ORGANIC TOPSOIL; USUALLY NEAR MARGINS OF SITKA SPRUCE. 3-110 M.

Last Date Observed:	1925-06-25	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	1925-06-25	**Occurrence Rank:**	None
Owner/Manager:		**Trend:**	Unknown
Presence:	Possibly Extirpated		

Location:

SENSITIVE LOCATION INFORMATION SUPPRESSED.

Detailed Location:

PLEASE CONTACT THE CALIFORNIA NATURAL DIVERSITY DATABASE, CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE, FOR MORE INFORMATION: (916) 322-2493

Ecological:

0-200 FT IN FERNS ON NATURAL PRAIRIE GROUNDS.

Threats:

General:

PLSS:		**Accuracy:**	1 mile	**Area (acres):**	1,987
UTM:		**Latitude/Longitude:**		**Elevation (feet):**	

County Summary:	**Quad Summary:**
Humboldt	Arcata South (4012471), Eureka (4012472)

Sources:

BAL78U0001	BALLANTYNE, O. & W. CRITCHFIELD - CNPS RARE PLANT STATUS REPORT FOR LILIUM OCCIDENTALE 1978-04-XX
FWS98R0003	U.S. FISH & WILDLIFE SERVICE - RECOVERY PLAN FOR THE ENDANGERED WESTERN LILY (LILIUM OCCIDENTALE) 1998-XX-XX
HUT13S0002	HUTCHINSON, M. - HUTCHINSON SN CAS #108970 1913-06-XX
KIL25S0009	KILDALE, D. - KILDALE #751 DS #160617 1925-06-25
TRA01S0018	TRACY, J. - TRACY #1189 UC #54670 1901-06-23
TRA12S0002	TRACY, J. - TRACY #3982 UC #176167 1912-09-01
TRA24S0009	TRACY, J. - TRACY #6886 UC #1198243 1924-09-21

Data Version Date:
08/27/2025

Report Generation Date:
9/19/2025

Report #2 - Observations Reported

List of observations reported by site.

Meridian, Township, Range, Section (MTRS) searched:

H_06N_01E Sections(13,14,21,22,23,24,25,26,27,28,33,34,35,36);

H_05N_01E Sections(02,03,04,05,08,09,10,11,14,15,16,17,20,21,22,23,28,29);

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
Masterowl: HUM0203 Subspecies: NORTHERN											
POS	1989		2	UMUF	Y			40.842252	-124.010666	H 05N 01E 01	Quarter-section centroid
POS	1990		1	UM				40.851026	-124.008652	H 05N 01E 01	Contributor
POS	1990-04-23		1	UU				40.847723	-124.012470	H 05N 01E 01	Contributor
POS	1990-06-07		1	AF	Y	N		40.846057	-124.015434	H 05N 01E 01	Section centroid
POS	1990-06-13		2	SMUF	Y	Y		40.844109	-124.019589	H 05N 01E 01	Contributor
NEG	1991		0					40.844109	-124.019589	H 05N 01E 01	Contributor
POS	1992		2	UMUF	Y			40.852003	-124.023889	H 05N 01E 01	Contributor
POS	1993		1	UM				40.846098	-124.021966	H 05N 01E 01	Contributor
POS	1994		2	UMUF	Y			40.842707	-124.017458	H 05N 01E 01	Contributor
POS	1994-03-11	1602	1	UM				40.831264	-124.015587	H 05N 01E 12	Section centroid
POS	1994-04-05	2119	1	UF				40.834897	-124.020363	H 05N 01E 12	Quarter-section centroid
POS	1995		2	UMUF	Y	Y	0	40.843156	-124.018539	H 05N 01E 01	Contributor
POS	1996		2	UMUF	Y	N		40.843072	-124.018753	H 05N 01E 01	Contributor
POS	1997		1	UM				40.844471	-124.019631	H 05N 01E 01	Contributor
POS	1998		2	AMUF	Y	Y	1	40.841632	-124.015684	H 05N 01E 01	Contributor
POS	1998-03-25		2	AMUF	Y			40.842285	-124.020263	H 05N 01E 01	Quarter-section centroid

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
POS	1998-07-01		2	AMUF	Y		1	40.842285	-124.020263	H 05N 01E 01	Quarter-section centroid
POS	1999		2	UMUF	Y	N	0	40.841496	-124.015549	H 05N 01E 01	Contributor
POS	2000		2	UMUF	Y	Y	1	40.845138	-124.020757	H 05N 01E 01	Contributor
POS	2001		1	UF		N		40.841537	-124.015537	H 05N 01E 01	Contributor
POS	2002		2	UMUF	Y	Y	1	40.840554	-124.014721	H 05N 01E 01	Contributor
POS	2003		2	UMUF	Y	N		40.844625	-124.019843	H 05N 01E 01	Contributor
NEG	2003-05-20	2336	0					40.846057	-124.015434	H 05N 01E 01	Section centroid
POS	2004		1	UM				40.840824	-124.015557	H 05N 01E 01	Contributor
NEG	2004-03-23	1907	0					40.846057	-124.015434	H 05N 01E 01	Section centroid
NEG	2004-04-12	2013	0					40.846057	-124.015434	H 05N 01E 01	Section centroid
NEG	2004-04-28	2228	0					40.846057	-124.015434	H 05N 01E 01	Section centroid
NEG	2004-05-19	2155	0					40.846057	-124.015434	H 05N 01E 01	Section centroid
POS	2005		2	UMUF	Y	Y	2	40.843156	-124.018539	H 05N 01E 01	Contributor
NEG	2005-04-11	0835	0					40.846057	-124.015434	H 05N 01E 01	Section centroid
NEG	2005-05-05	0810	0					40.846057	-124.015434	H 05N 01E 01	Section centroid
NEG	2005-05-20		0			Y		40.844055	-124.019804	H 05N 01E 01	Contributor
NEG	2005-06-01	0840	0					40.846057	-124.015434	H 05N 01E 01	Section centroid

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
POS	2005-07-13		2	UMUF	Y		2	40.847788	-124.022376	H 05N 01E 01	Contributor
POS	2006		2	UMUF	Y			40.840824	-124.015557	H 05N 01E 01	Contributor
POS	2006-03-27	2132	1	UM				40.849912	-124.029669	H 05N 01E 02	Quarter-section centroid
NEG	2006-03-28	0800	0					40.846176	-124.034416	H 05N 01E 02	Section centroid
NEG	2006-04-14	2035-2046	0					40.848740	-124.025600	H 05N 01E 02	Contributor
NEG	2006-04-24	2020-2030	0					40.848740	-124.025600	H 05N 01E 02	Contributor
NEG	2006-04-24	2102-2114	0					40.850980	-124.031350	H 05N 01E 02	Contributor
NEG	2006-06-04	2100-2110	0					40.848740	-124.025600	H 05N 01E 02	Contributor
POS	2007		2	UMUF	Y	Y	1	40.839563	-124.014572	H 05N 01E 01	Contributor
POS	2008		2	UMUF	Y	Y	1	40.839564	-124.014572	H 05N 01E 01	Contributor
NEG	2009		0					40.839563	-124.014572	H 05N 01E 01	Contributor
NEG	2010		0					40.839563	-124.014572	H 05N 01E 01	Contributor
NEG	2011		0					40.839563	-124.014572	H 05N 01E 01	Contributor
NEG	2011	2400	0					40.847959	-124.023191	H 05N 01E 01	Contributor
NEG	2012		0					40.839563	-124.014572	H 05N 01E 01	Contributor
NEG	2012	2400	0					40.847959	-124.023191	H 05N 01E 01	Contributor
NEG	2013	2400	0					40.847959	-124.023191	H 05N 01E 01	Contributor

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
POS	2013		2	UMUF	Y			40.839564	-124.014572	H 05N 01E 01	Contributor
NEG	2014	2400	0					40.847959	-124.023191	H 05N 01E 01	Contributor
POS	2014-05-17		2	UMUF	Y	N	0	40.840554	-124.014721	H 05N 01E 01	Contributor
POS	2015-04-12		2	AMAF	Y	Y	0	40.839395	-124.013712	H 05N 01E 01	Contributor
POS	2015-06-30		2	AMAF	Y	Y	0	40.839395	-124.013712	H 05N 01E 01	Contributor
POS	2016		2	AMAF	Y	Y	2	40.839454	-124.014081	H 05N 01E 01	Contributor
NEG	2016-03-07	1814-1824	0					40.848076	-124.020705	H 05N 01E 01	Contributor
NEG	2017	2400	0					40.848076	-124.020705	H 05N 01E 01	Contributor
POS	2017		2	UMUF	Y	Y	1	40.840347	-124.012991	H 05N 01E 01	Contributor
POS	2018		2	UMUF	Y	N	0	40.840347	-124.012991	H 05N 01E 01	Activity center
NEG	2018-03-05	1820-1832	0					40.848076	-124.020705	H 05N 01E 01	Contributor
NEG	2018-03-18	0018-0028	0					40.848076	-124.020705	H 05N 01E 01	Contributor
NEG	2018-03-25	1933-1943	0					40.848076	-124.020705	H 05N 01E 01	Contributor
AC	2019		2	AMAF	Y	Y	0	40.839457	-124.014828	H 05N 01E 01	Contributor
POS	2020		2	UMAF	Y	N	0	40.840347	-124.012991	H 05N 01E 01	Contributor
POS	2021		1	UM		N	0	40.839457	-124.014828	H 05N 01E 01	Contributor
POS	2022		1	UM			0	40.839457	-124.014828	H 05N 01E 01	Activity center

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
POS	2023		2	UMUF	Y		0	40.839457	-124.014828	H 05N 01E 01	Activity center
POS	2024		2	UMUF	Y	N	0	40.839457	-124.014828	H 05N 01E 01	Activity center
Masterowl: HUM0228 Subspecies: NORTHERN											
NEG	1990	2400	0					40.884619	-124.042273	H 06N 01E 23	Contributor
NEG	1990	2400	0					40.885823	-124.052537	H 06N 01E 22	Contributor
NEG	1990	2400	0					40.884503	-124.045669	H 06N 01E 22	Contributor
NEG	1990	2400	0					40.884848	-124.050407	H 06N 01E 22	Contributor
NEG	1990	2400	0					40.885321	-124.051344	H 06N 01E 22	Contributor
NEG	1990	2400	0					40.884259	-124.049441	H 06N 01E 22	Contributor
NEG	1990	2400	0					40.883553	-124.040394	H 06N 01E 23	Contributor
NEG	1990	2400	0					40.884580	-124.046608	H 06N 01E 22	Contributor
NEG	1990	2400	0					40.884354	-124.040472	H 06N 01E 23	Contributor
NEG	1990	2400	0					40.883521	-124.038885	H 06N 01E 23	Contributor
NEG	1990	2400	0					40.884617	-124.044726	H 06N 01E 22	Contributor
NEG	1990-08-02	2400	0					40.882077	-124.033721	H 06N 01E 26	Contributor
NEG	1990-08-02	2400	0					40.886713	-124.044647	H 06N 01E 22	Contributor
NEG	1990-08-02	2400	0					40.882554	-124.037247	H 06N 01E 26	Contributor

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NVAC	1990-08-02	2400	1	UU				40.884713	-124.046506	H 06N 01E 22	Contributor
NEG	1990-08-02	2400	0					40.886331	-124.044280	H 06N 01E 22	Contributor
NEG	1990-08-02	2400	0					40.882220	-124.039107	H 06N 01E 26	Contributor
NEG	1990-08-02	2400	0					40.887136	-124.046131	H 06N 01E 22	Contributor
NEG	1990-08-02	2400	0					40.884993	-124.045282	H 06N 01E 22	Contributor
NEG	1990-08-02	2400	0					40.882870	-124.034830	H 06N 01E 26	Contributor
NEG	1990-08-02	2400	0					40.882653	-124.035723	H 06N 01E 26	Contributor
NEG	1990-08-02	2400	0					40.885541	-124.043827	H 06N 01E 22	Contributor
NEG	1990-08-03	1200	0					40.886526	-124.048208	H 06N 01E 22	Quarter-section centroid
NEG	1997		0					40.875619	-124.052949	H 06N 01E 27	Section centroid
NEG	1999		0					40.875619	-124.052949	H 06N 01E 27	Section centroid
NEG	1999-04-17	2200	0					40.890142	-124.033807	H 06N 01E 23	Section centroid
NEG	1999-04-27	2048	0					40.890142	-124.033807	H 06N 01E 23	Section centroid
NEG	1999-05-24	2148	0					40.890142	-124.033807	H 06N 01E 23	Section centroid
NEG	1999-06-28	2106	0					40.890142	-124.033807	H 06N 01E 23	Section centroid
NEG	1999-08-16	2210	0					40.890142	-124.033807	H 06N 01E 23	Section centroid
NEG	1999-08-30	2115	0					40.890142	-124.033807	H 06N 01E 23	Section centroid

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	2000		0					40.875619	-124.052949	H 06N 01E 27	Section centroid
NEG	2000-03-16	1832	0					40.890142	-124.033807	H 06N 01E 23	Section centroid
NEG	2000-03-23	2026	0					40.890142	-124.033807	H 06N 01E 23	Section centroid
NEG	2000-04-12	2132	0					40.890142	-124.033807	H 06N 01E 23	Section centroid
NEG	2000-04-29	2047	0					40.890142	-124.033807	H 06N 01E 23	Section centroid
NEG	2000-05-09	2025	0					40.890142	-124.033807	H 06N 01E 23	Section centroid
NEG	2000-05-15	2335	0					40.890142	-124.033807	H 06N 01E 23	Section centroid
NEG	2000-06-20	2128	0					40.886504	-124.038641	H 06N 01E 23	Quarter-section centroid
NEG	2000-07-01	0014	0					40.893756	-124.038612	H 06N 01E 23	Quarter-section centroid
NEG	2000-08-16	2059	0					40.886504	-124.038641	H 06N 01E 23	Quarter-section centroid
NEG	2001-04-03	2020	0					40.886504	-124.038641	H 06N 01E 23	Quarter-section centroid
NEG	2001-04-08	2004	0					40.886526	-124.048208	H 06N 01E 22	Quarter-section centroid
NEG	2001-05-10	2128	0					40.886526	-124.048208	H 06N 01E 22	Quarter-section centroid
NEG	2001-05-16	1949	0					40.886504	-124.038641	H 06N 01E 23	Quarter-section centroid
NEG	2001-06-08	2104	0					40.890114	-124.014731	H 06N 01E 24	Section centroid
NEG	2001-06-10	2112	0					40.886526	-124.048208	H 06N 01E 22	Quarter-section centroid
NEG	2001-06-15	2100	0					40.890114	-124.014731	H 06N 01E 24	Section centroid

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	2001-06-22	2103	0					40.890114	-124.014731	H 06N 01E 24	Section centroid
NEG	2001-06-29	2103	0					40.890114	-124.014731	H 06N 01E 24	Section centroid
NEG	2001-07-23	2055	0					40.890114	-124.014731	H 06N 01E 24	Section centroid
NEG	2002-03-14	2152	0					40.890142	-124.033807	H 06N 01E 23	Section centroid
NEG	2002-03-28	2036	0					40.886526	-124.048208	H 06N 01E 22	Quarter-section centroid
NEG	2002-04-11	2040	0					40.886526	-124.048208	H 06N 01E 22	Quarter-section centroid
NEG	2002-04-18	2108	0					40.890142	-124.033807	H 06N 01E 23	Section centroid
NEG	2002-04-18	2229	0					40.886526	-124.048208	H 06N 01E 22	Quarter-section centroid
NEG	2002-04-26	0509	0					40.886526	-124.048208	H 06N 01E 22	Quarter-section centroid
NEG	2002-05-16	2034	0					40.886526	-124.048208	H 06N 01E 22	Quarter-section centroid
NEG	2003-03-03	1809	0					40.890149	-124.052954	H 06N 01E 22	Section centroid
NEG	2003-03-17	0602	0					40.890149	-124.052954	H 06N 01E 22	Section centroid
NEG	2003-03-24	1950	0					40.875594	-124.033794	H 06N 01E 26	Section centroid
NEG	2003-03-31	1840	0					40.890149	-124.052954	H 06N 01E 22	Section centroid
NEG	2003-04-14	2008	0					40.886526	-124.048208	H 06N 01E 22	Quarter-section centroid
NEG	2003-04-30	2026	0					40.886526	-124.048208	H 06N 01E 22	Quarter-section centroid
NEG	2003-05-01	0541	0					40.890149	-124.052954	H 06N 01E 22	Section centroid

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	2003-05-07	2035	0					40.886526	-124.048208	H 06N 01E 22	Quarter-section centroid
NEG	2003-05-13	2039	0					40.886526	-124.048208	H 06N 01E 22	Quarter-section centroid
NEG	2003-05-20	2351	0					40.875619	-124.052949	H 06N 01E 27	Section centroid
NEG	2003-05-21	2039	0					40.875619	-124.052949	H 06N 01E 27	Section centroid
NEG	2003-06-02	2204	0					40.890149	-124.052954	H 06N 01E 22	Section centroid
NEG	2003-06-05	2045	0					40.890149	-124.052954	H 06N 01E 22	Section centroid
NEG	2003-06-12	2049	0					40.890149	-124.052954	H 06N 01E 22	Section centroid
NEG	2003-06-24	2110	0					40.875619	-124.052949	H 06N 01E 27	Section centroid
POS	2004-03-23	2053	1	UM				40.879265	-124.048188	H 06N 01E 27	Quarter-section centroid
NEG	2004-03-24	1020	0					40.879265	-124.048188	H 06N 01E 27	Quarter-section centroid
NEG	2004-04-08	1950	0					40.890149	-124.052954	H 06N 01E 22	Section centroid
NEG	2004-04-27	2207	0					40.890149	-124.052954	H 06N 01E 22	Section centroid
NEG	2004-05-17	2023	0					40.879285	-124.052948	H 06N 01E 27	Half-section centroid
NEG	2004-05-26	2030	0					40.879285	-124.052948	H 06N 01E 27	Half-section centroid
NEG	2004-06-16	2040	0					40.879285	-124.052948	H 06N 01E 27	Half-section centroid
NEG	2005-04-04	2231	0					40.890149	-124.052954	H 06N 01E 22	Section centroid
NEG	2005-04-28	0905	0					40.890149	-124.052954	H 06N 01E 22	Section centroid

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	2005-04-29	1011	0					40.875619	-124.052949	H 06N 01E 27	Section centroid
NEG	2005-05-06	1032	0					40.890149	-124.052954	H 06N 01E 22	Section centroid
NEG	2005-05-23	1101	0					40.886526	-124.048208	H 06N 01E 22	Quarter-section centroid
NEG	2005-06-07	2230	0					40.875619	-124.052949	H 06N 01E 27	Section centroid
NEG	2005-06-20	1944	0					40.875619	-124.052949	H 06N 01E 27	Section centroid
NEG	2005-06-22	2305	0					40.875619	-124.052949	H 06N 01E 27	Section centroid
NEG	2005-06-30	2223	0					40.875619	-124.052949	H 06N 01E 27	Section centroid
NEG	2005-07-08	2122	0					40.875619	-124.052949	H 06N 01E 27	Section centroid
NEG	2006-03-27		0					40.883310	-124.039130	H 06N 01E 23	Contributor
NEG	2006-03-28	2031-2041	0					40.885880	-124.049440	H 06N 01E 22	Contributor
NEG	2006-03-28	2017-2028	0					40.888020	-124.056570	H 06N 01E 22	Contributor
NEG	2006-03-28	1857-1907	0					40.878680	-124.042250	H 06N 01E 26	Contributor
NEG	2006-03-28	1931-1941	0					40.879740	-124.047680	H 06N 01E 27	Contributor
NEG	2006-03-28	2047-2058	0					40.883410	-124.039230	H 06N 01E 23	Contributor
NEG	2006-04-12	2244-2255	0					40.885880	-124.049440	H 06N 01E 22	Contributor
NEG	2006-04-12	2301-2311	0					40.883410	-124.039230	H 06N 01E 23	Contributor
NEG	2006-04-12	2118-2128	0					40.878680	-124.042250	H 06N 01E 26	Contributor

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
NEG	2006-04-12	2228-2238	0					40.888020	-124.056570	H 06N 01E 22	Contributor
NEG	2006-04-12	2141-2152	0					40.879740	-124.047680	H 06N 01E 27	Contributor
NEG	2006-04-26	2154-2204	0					40.879740	-124.047680	H 06N 01E 27	Contributor
NEG	2006-04-26	2132-2143	0					40.878680	-124.042250	H 06N 01E 26	Contributor
NEG	2006-04-26	2256-2307	0					40.883410	-124.039230	H 06N 01E 23	Contributor
NEG	2006-04-26	2212-2222	0					40.885880	-124.049440	H 06N 01E 22	Contributor
NEG	2006-04-26	2224-2234	0					40.888020	-124.056570	H 06N 01E 22	Contributor
NEG	2006-04-27	2049-2059	0					40.895240	-124.043820	H 06N 01E 22	Contributor
NEG	2006-04-27	2015-2025	0					40.896230	-124.051870	H 06N 01E 22	Contributor
NEG	2006-04-27	2104-2114	0					40.891150	-124.041330	H 06N 01E 23	Contributor
NEG	2006-05-15	2212-2220	0					40.878300	-124.051690	H 06N 01E 27	Contributor
NEG	2006-05-15	2144-2149	0					40.878590	-124.043540	H 06N 01E 27	Contributor
NEG	2006-06-07	2135-2145	0					40.878680	-124.042250	H 06N 01E 26	Contributor
NEG	2006-06-08		0					40.878770	-124.042220	H 06N 01E 26	Contributor
NEG	2006-06-08		0					40.885880	-124.049440	H 06N 01E 22	Contributor
NEG	2006-06-08		0					40.888020	-124.056570	H 06N 01E 22	Contributor
NEG	2006-06-08		0					40.879740	-124.047680	H 06N 01E 27	Contributor

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
NEG	2006-06-08		0					40.883410	-124.039230	H 06N 01E 23	Contributor
NEG	2006-06-17	1330-1842	0					40.893751	-124.048195	H 06N 01E 22	Contributor
NEG	2006-07-07	2345-2355	0					40.895240	-124.043820	H 06N 01E 22	Contributor
NEG	2006-07-07	2320-2330	0					40.891150	-124.041330	H 06N 01E 23	Contributor
NEG	2006-07-07	2240-2250	0					40.894190	-124.051210	H 06N 01E 22	Contributor
NEG	2006-07-07	1025-1317	0					40.893751	-124.048195	H 06N 01E 22	Contributor
NEG	2006-07-07	2255-2305	0					40.896230	-124.051870	H 06N 01E 22	Contributor
NEG	2006-07-07	1330-1530	0					40.893751	-124.048195	H 06N 01E 22	Quarter-section centroid
NEG	2006-07-26	2146-2156	0					40.894190	-124.051210	H 06N 01E 22	Contributor
NEG	2006-07-26	2050-2100	0					40.891150	-124.041330	H 06N 01E 23	Contributor
NEG	2006-07-26	2105-2115	0					40.895240	-124.043820	H 06N 01E 22	Contributor
NEG	2006-07-26	0731-1143	0					40.893751	-124.048195	H 06N 01E 22	Contributor
NEG	2007-03-22	1943-1953	0					40.896230	-124.051870	H 06N 01E 22	Contributor
NEG	2007-03-22	2020-2030	0					40.891150	-124.041330	H 06N 01E 23	Contributor
NEG	2007-03-22	1930-1940	0					40.894190	-124.051210	H 06N 01E 22	Contributor
NEG	2007-03-22	2035-2045	0					40.895240	-124.043820	H 06N 01E 22	Contributor
NEG	2007-03-24	2214-2224	0					40.890940	-124.040310	H 06N 01E 23	Contributor

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
NEG	2007-03-24	2201-2211	0					40.894960	-124.043420	H 06N 01E 23	Contributor
NEG	2007-04-23	2031-2042	0					40.878300	-124.049350	H 06N 01E 27	Contributor
NEG	2007-04-23	2048-2059	0					40.879080	-124.043390	H 06N 01E 27	Contributor
NEG	2007-04-27	2000-2010	0					40.894190	-124.051210	H 06N 01E 22	Contributor
NEG	2007-05-04	0128-0133	0					40.890940	-124.040310	H 06N 01E 23	Contributor
NEG	2007-05-04	0115-0125	0					40.894960	-124.043420	H 06N 01E 23	Contributor
NEG	2007-05-18	2116-2126	0					40.894960	-124.043420	H 06N 01E 23	Contributor
NEG	2007-05-18	2103-2113	0					40.890940	-124.040310	H 06N 01E 23	Contributor
NEG	2007-05-22	2323-2333	0					40.891150	-124.041330	H 06N 01E 23	Contributor
NEG	2007-05-22	2310-2320	0					40.895240	-124.043820	H 06N 01E 22	Contributor
NEG	2007-05-22	2353-2403	0					40.894190	-124.051210	H 06N 01E 22	Contributor
NEG	2007-05-22	2410-2420	0					40.896230	-124.051870	H 06N 01E 22	Contributor
NEG	2007-06-11	2153-2204	0					40.878300	-124.049350	H 06N 01E 27	Contributor
NEG	2007-06-11	2209-2220	0					40.879080	-124.043390	H 06N 01E 27	Contributor
NEG	2007-07-11	2210-2221	0					40.879080	-124.043390	H 06N 01E 27	Contributor
NEG	2007-07-11	2154-2205	0					40.878300	-124.049350	H 06N 01E 27	Contributor
NEG	2011	2400	0					40.887645	-124.055601	H 06N 01E 22	Contributor

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	2011	2400	0					40.881759	-124.049158	H 06N 01E 27	Contributor
NEG	2011	2400	0					40.883553	-124.038967	H 06N 01E 23	Contributor
NEG	2011-03-08	1902-1912	0					40.878633	-124.043690	H 06N 01E 27	Contributor
NEG	2011-03-11	2257	0					40.885557	-124.049526	H 06N 01E 22	Contributor
POS	2011-03-21	2010	1	UU				40.885557	-124.049526	H 06N 01E 22	Contributor
NEG	2011-04-04	2125	0					40.885557	-124.049526	H 06N 01E 22	Contributor
NEG	2011-04-11	2142-2152	0					40.878633	-124.043690	H 06N 01E 27	Contributor
NEG	2011-04-12	2145-2155	0					40.878633	-124.043690	H 06N 01E 27	Contributor
NEG	2011-06-16	2120-2130	0					40.878633	-124.043690	H 06N 01E 27	Contributor
NEG	2011-07-13	2259-2309	0					40.878633	-124.043690	H 06N 01E 27	Contributor
NEG	2011-07-26	2140-2150	0					40.878633	-124.043690	H 06N 01E 27	Contributor
NEG	2011-08-17	2247	0					40.885557	-124.049526	H 06N 01E 22	Contributor
NEG	2012	2400	0					40.885557	-124.049526	H 06N 01E 22	Contributor
NEG	2012	2400	0					40.881759	-124.049158	H 06N 01E 27	Contributor
NEG	2012	2400	0					40.887645	-124.055601	H 06N 01E 22	Contributor
NEG	2012	2400	0					40.883553	-124.038967	H 06N 01E 23	Contributor
NEG	2012-05-01	0950	0					40.884713	-124.046506	H 06N 01E 22	Contributor

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	2013	2400	0					40.887645	-124.055601	H 06N 01E 22	Contributor
NEG	2013	2400	0					40.883553	-124.038967	H 06N 01E 23	Contributor
NEG	2013	2400	0					40.885557	-124.049526	H 06N 01E 22	Contributor
NEG	2013-03-01	1857	0					40.881759	-124.049158	H 06N 01E 27	Contributor
NEG	2013-03-23	1608	0					40.884713	-124.046506	H 06N 01E 22	Contributor
POS	2013-03-23	2022	1	UM				40.881759	-124.049158	H 06N 01E 27	Contributor
NEG	2013-03-24	0900	0					40.881759	-124.049158	H 06N 01E 27	Contributor
NEG	2013-04-16	2347	0					40.881759	-124.049158	H 06N 01E 27	Contributor
NEG	2013-04-16	1512	0					40.884713	-124.046506	H 06N 01E 22	Contributor
NEG	2013-05-10	2109	0					40.881759	-124.049158	H 06N 01E 27	Contributor
NEG	2013-05-21	2128	0					40.881759	-124.049158	H 06N 01E 27	Contributor
NEG	2013-05-22	1430	0					40.884713	-124.046506	H 06N 01E 22	Contributor
NEG	2013-06-04	2224	0					40.881759	-124.049158	H 06N 01E 27	Contributor
NEG	2014	2400	0					40.881759	-124.049158	H 06N 01E 27	Contributor
NEG	2014	2400	0					40.885557	-124.049526	H 06N 01E 22	Contributor
NEG	2014	2400	0					40.887645	-124.055601	H 06N 01E 22	Contributor
NEG	2014	2400	0					40.883553	-124.038967	H 06N 01E 23	Contributor

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	2014	2400	0					40.878633	-124.043690	H 06N 01E 27	Contributor
NEG	2014-04-17	1530	0					40.884713	-124.046506	H 06N 01E 22	Contributor
NEG	2016	2400	0					40.883410	-124.039230	H 06N 01E 23	Contributor
NEG	2016	2400	0					40.888147	-124.055698	H 06N 01E 22	Contributor
NEG	2016	2400	0					40.881488	-124.048049	H 06N 01E 27	Contributor
NEG	2016	2400	0					40.885880	-124.049440	H 06N 01E 22	Contributor
NEG	2017	2400	0					40.885880	-124.049440	H 06N 01E 22	Contributor
NEG	2017	2400	0					40.883410	-124.039230	H 06N 01E 23	Contributor
NEG	2017	2400	0					40.888147	-124.055698	H 06N 01E 22	Contributor
NEG	2017	2400	0					40.881488	-124.048049	H 06N 01E 27	Contributor
NEG	2018	2400	0					40.888147	-124.055698	H 06N 01E 22	Contributor
NEG	2018	2400	0					40.878633	-124.043690	H 06N 01E 27	Contributor
NEG	2018	2400	0					40.881488	-124.048049	H 06N 01E 27	Contributor
NEG	2018	2400	0					40.885880	-124.049440	H 06N 01E 22	Contributor
NEG	2018	2400	0					40.883410	-124.039230	H 06N 01E 23	Contributor
NEG	2018-04-02	1610-1800	0					40.886509	-124.038641	H 06N 01E 23	Quarter-section centroid
NEG	2022	2400	0					40.878634	-124.043690	H 06N 01E 27	Contributor

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	2023	2400	0					40.878634	-124.043690	H 06N 01E 27	Contributor
Masterowl: HUM0318 Subspecies: NORTHERN											
POS	1990-08-08	9999	2	UMUF	Y			40.864552	-124.019430	H 06N 01E 36	Quarter-section centroid
POS	1990-08-08		2	UMUF	Y			40.864620	-124.029007	H 06N 01E 35	Quarter-section centroid
POS	1990-08-09	9999	2	UMUF	Y			40.864552	-124.019430	H 06N 01E 36	Quarter-section centroid
POS	1990-08-09		2	UMUF	Y			40.864620	-124.029007	H 06N 01E 35	Quarter-section centroid
POS	1990-08-29	9999	2	UMUF	Y			40.864552	-124.019430	H 06N 01E 36	Quarter-section centroid
POS	1990-08-29		2	UMUF	Y			40.864620	-124.029007	H 06N 01E 35	Quarter-section centroid
POS	1991		2	UMUF	Y	N	0	40.866235	-124.017229	H 06N 01E 36	Contributor
POS	1991		1	UM				40.859065	-124.007173	H 06N 01E 36	Contributor
POS	1992		2	UMUF	Y	N	0	40.863807	-124.010503	H 06N 01E 36	Contributor
POS	1992		1	UM				40.857846	-124.002396	H 06N 02E 31	Contributor
POS	1992-04-14		2	UMUF	Y			40.864474	-124.009853	H 06N 01E 36	Quarter-section centroid
POS	1992-06-18		1	UM				40.864552	-124.019430	H 06N 01E 36	Quarter-section centroid
POS	1993		2	UMUF	Y			40.863919	-124.010212	H 06N 01E 36	Contributor
POS	1994		1	UU				40.864474	-124.009853	H 06N 01E 36	Quarter-section centroid
POS	1997		2	UMUF	Y	N	0	40.864300	-124.016594	H 06N 01E 36	Contributor

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	1999-04-17	2200	0					40.860901	-124.014652	H 06N 01E 36	Section centroid
NEG	1999-04-27	2048	0					40.860901	-124.014652	H 06N 01E 36	Section centroid
NEG	1999-05-24	2148	0					40.860901	-124.014652	H 06N 01E 36	Section centroid
NEG	1999-06-28	2106	0					40.860901	-124.014652	H 06N 01E 36	Section centroid
NEG	1999-08-16	2210	0					40.860901	-124.014652	H 06N 01E 36	Section centroid
NEG	1999-08-30	2115	0					40.860901	-124.014652	H 06N 01E 36	Section centroid
NEG	2000-03-29	1945	0					40.860901	-124.014652	H 06N 01E 36	Section centroid
NEG	2000-04-21	2012	0					40.860901	-124.014652	H 06N 01E 36	Section centroid
NEG	2000-05-07	2105	0					40.860901	-124.014652	H 06N 01E 36	Section centroid
POS	2000-06-22	2325	1	UM				40.864552	-124.019430	H 06N 01E 36	Quarter-section centroid
POS	2000-06-30	2248	1	UM				40.860901	-124.014652	H 06N 01E 36	Section centroid
NEG	2000-07-03	2005	0					40.864474	-124.009853	H 06N 01E 36	Quarter-section centroid
POS	2001		2	UMUF	Y			40.863518	-124.012116	H 06N 01E 36	Contributor
POS	2001-04-08	1805	1	UM				40.864474	-124.009853	H 06N 01E 36	Quarter-section centroid
POS	2001-05-16	2307	1	UM				40.864474	-124.009853	H 06N 01E 36	Quarter-section centroid
POS	2001-05-18	1350	2	UMUF	Y			40.864474	-124.009853	H 06N 01E 36	Quarter-section centroid
NEG	2002-03-28	2120	0					40.860901	-124.014652	H 06N 01E 36	Section centroid

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
POS	2002-04-11	1710	2	UMUF	Y	Y		40.862912	-124.016379	H 06N 01E 36	Contributor
POS	2003		2	UMUF	Y	Y		40.864097	-124.014927	H 06N 01E 36	Contributor
POS	2003-03-31	1715	2	UMUF	Y	N		40.864552	-124.019430	H 06N 01E 36	Quarter-section centroid
POS	2003-04-15	2031	1	UM				40.857309	-124.019426	H 06N 01E 36	Quarter-section centroid
POS	2003-06-12	1640	2	UMUF	Y	Y		40.864097	-124.014927	H 06N 01E 36	Contributor
POS	2004-03-23	1735	1	UM				40.864474	-124.009853	H 06N 01E 36	Quarter-section centroid
POS	2004-04-09	1830	2	UMUF	Y	Y		40.862850	-124.013414	H 06N 01E 36	Contributor
POS	2004-07-05	1400	1	UF	Y		1	40.864474	-124.009853	H 06N 01E 36	Quarter-section centroid
POS	2004-07-15	1400	1	UF	Y		1	40.864474	-124.009853	H 06N 01E 36	Quarter-section centroid
POS	2005-04-05	1803	2	UMUF	Y			40.863665	-124.012713	H 06N 01E 36	Contributor
POS	2005-04-29	1745	2	UMUF	Y	Y		40.863665	-124.012713	H 06N 01E 36	Contributor
POS	2005-05-23	1850	2	UMUF	Y	Y	1	40.863665	-124.012713	H 06N 01E 36	Contributor
NEG	2006-03-28	2311-2322	0					40.855140	-124.020260	H 06N 01E 36	Contributor
NEG	2006-03-28	2133-2143	0					40.869650	-124.014980	H 06N 01E 25	Contributor
NEG	2006-03-28	2147-2157	0					40.865400	-124.020430	H 06N 01E 36	Contributor
AC	2006-03-28	1145-1230	2	UMUF	Y	Y		40.863670	-124.013160	H 06N 01E 36	Contributor
NEG	2006-03-28		0					40.863130	-124.010090	H 06N 01E 36	Contributor

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	2006-04-12	0127-0137	0					40.855140	-124.020260	H 06N 01E 36	Contributor
NEG	2006-04-12	0059-0109	0					40.869650	-124.014980	H 06N 01E 25	Contributor
NEG	2006-04-12	2035-2045	0					40.865400	-124.020430	H 06N 01E 36	Contributor
NEG	2006-04-26	2347-2357	0					40.869650	-124.014980	H 06N 01E 25	Contributor
NEG	2006-04-26	0018-0030	0					40.855140	-124.020260	H 06N 01E 36	Contributor
POS	2006-05-05	1945-1955	1	UM		Y	1	40.863670	-124.013160	H 06N 01E 36	Contributor
NEG	2006-06-08		0					40.855140	-124.020260	H 06N 01E 36	Contributor
NEG	2006-06-08		0					40.869650	-124.014980	H 06N 01E 25	Contributor
POS	2010-04-25	2153	1	UU				40.860117	-124.031713	H 06N 01E 35	Contributor
POS	2011-03-11	2004	1	AF				40.861279	-124.033671	H 06N 01E 35	Contributor
POS	2011-03-11	1800	2	AMAF	Y			40.863520	-124.013540	H 06N 01E 36	Contributor
NEG	2011-03-21	2304	0					40.861279	-124.033671	H 06N 01E 35	Contributor
NEG	2011-04-04	2117	0					40.858737	-124.009356	H 06N 01E 36	Contributor
POS	2011-04-04	2348	1	UU				40.863775	-124.024443	H 06N 01E 35	Contributor
NEG	2011-04-04	2045	0					40.855711	-124.019537	H 06N 01E 36	Contributor
NEG	2011-04-04	2149	0					40.868578	-124.015094	H 06N 01E 25	Contributor
NEG	2011-04-04	2312	0					40.861279	-124.033671	H 06N 01E 35	Contributor

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	2011-04-04	2132	0					40.863265	-124.009792	H 06N 01E 36	Contributor
POS	2011-04-04	2355	1	AMAF	Y			40.868578	-124.015094	H 06N 01E 25	Contributor
NEG	2011-08-17	2109	0					40.861279	-124.033671	H 06N 01E 35	Contributor
NEG	2012	2400	0					40.861279	-124.033671	H 06N 01E 35	Contributor
NEG	2012	2400	0					40.855711	-124.019537	H 06N 01E 36	Contributor
NEG	2012-03-25	2017	0					40.868578	-124.015094	H 06N 01E 25	Contributor
NEG	2012-03-25	2158	0					40.868578	-124.015094	H 06N 01E 25	Contributor
NEG	2012-03-25	1951	0					40.863265	-124.009792	H 06N 01E 36	Contributor
POS	2012-03-25	2139	2	AMAF	Y			40.863775	-124.024443	H 06N 01E 35	Contributor
POS	2012-03-26	1216	1	UU				40.864067	-124.014119	H 06N 01E 36	Contributor
NEG	2013	2400	0					40.861279	-124.033671	H 06N 01E 35	Contributor
NEG	2013	2400	0					40.855711	-124.019537	H 06N 01E 36	Contributor
NEG	2013-03-01	1518	0					40.863665	-124.012713	H 06N 01E 36	Contributor
NEG	2013-03-01	2329	0					40.863265	-124.009792	H 06N 01E 36	Contributor
NEG	2013-03-01	2245	0					40.863775	-124.024443	H 06N 01E 35	Contributor
NEG	2013-03-01	2350	0					40.858737	-124.009356	H 06N 01E 36	Contributor
NEG	2013-03-01	2310	0					40.868578	-124.015094	H 06N 01E 25	Contributor

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	2013-03-23	2016	0					40.863265	-124.009792	H 06N 01E 36	Contributor
POS	2013-03-23	2112	1	UU				40.863775	-124.024443	H 06N 01E 35	Contributor
POS	2013-03-23	2112	1	UM				40.865400	-124.020430	H 06N 01E 36	Contributor
POS	2013-03-24	0838	1	AM				40.864300	-124.016594	H 06N 01E 36	Contributor
NEG	2014	2400	0					40.855711	-124.019537	H 06N 01E 36	Contributor
NEG	2014	2400	0					40.861279	-124.033671	H 06N 01E 35	Contributor
NEG	2014	2400	0					40.868578	-124.015094	H 06N 01E 25	Contributor
NEG	2014	2400	0					40.863265	-124.009792	H 06N 01E 36	Contributor
NEG	2014-03-13	1800	0					40.864300	-124.016594	H 06N 01E 36	Contributor
POS	2014-03-13	2200	1	AF				40.863775	-124.024443	H 06N 01E 35	Contributor
POS	2014-03-15	1723	2	AMAF	Y			40.862200	-124.021670	H 06N 01E 36	Contributor
NEG	2014-04-10	2000	0					40.863775	-124.024443	H 06N 01E 35	Contributor
NEG	2014-04-10	2055	0					40.858737	-124.009356	H 06N 01E 36	Contributor
NEG	2014-04-11	0700	0					40.863665	-124.012713	H 06N 01E 36	Contributor
NEG	2014-04-22	2039	0					40.858737	-124.009356	H 06N 01E 36	Contributor
NEG	2014-04-22	2144	0					40.863775	-124.024443	H 06N 01E 35	Contributor
POS	2014-05-22	2350	1	UF				40.863775	-124.024443	H 06N 01E 35	Contributor

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	2014-05-24	0730	0					40.863775	-124.024443	H 06N 01E 35	Contributor
NEG	2014-05-30	2235	0					40.863775	-124.024443	H 06N 01E 35	Contributor
NEG	2014-06-09	2212	0					40.863775	-124.024443	H 06N 01E 35	Contributor
NEG	2016-03-07	2027-2037	0					40.864073	-124.023558	H 06N 01E 36	Contributor
NEG	2016-03-07	1907-1917	0					40.863385	-124.009352	H 06N 01E 36	Contributor
NEG	2016-03-07	1928-1938	0					40.868578	-124.015094	H 06N 01E 25	Contributor
NEG	2017	2400	0					40.868578	-124.015094	H 06N 01E 25	Contributor
NEG	2017	2400	0					40.864073	-124.023558	H 06N 01E 36	Contributor
NEG	2017-04-11	2050-2100	0					40.863385	-124.009352	H 06N 01E 36	Contributor
POS	2017-05	2108-2114	1	UM				40.863385	-124.009352	H 06N 01E 36	Contributor
NEG	2017-05-03	2327-2337	0					40.863385	-124.009352	H 06N 01E 36	Contributor
POS	2017-05-17	2124-2030	1	UU				40.863385	-124.009352	H 06N 01E 36	Contributor
NEG	2017-05-24	0056-0109	0					40.863385	-124.009352	H 06N 01E 36	Contributor
NEG	2018	2400	0					40.864073	-124.023558	H 06N 01E 36	Contributor
NEG	2018	2400	0					40.868578	-124.015094	H 06N 01E 25	Contributor
NEG	2018	2400	0					40.863385	-124.009352	H 06N 01E 36	Contributor
NEG	2018-04-01	1620-1920	0					40.864473	-124.009849	H 06N 01E 36	Quarter-section centroid

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
Masterowl: HUM0343 Subspecies: NORTHERN											
POS	1991-05-17		2	UMUF	Y			40.819314	-124.016187	H 05N 01E 13	Contributor
POS	1991-05-17	1200	1	UU		Y		40.818481	-124.017984	H 05N 01E 13	Contributor
POS	1991-05-20		2	UMUF	Y	Y		40.818481	-124.017984	H 05N 01E 13	Contributor
POS	1991-06-14		1	UM				40.817040	-124.020646	H 05N 01E 13	Half-section centroid
POS	1991-06-19		2	UMUF				40.820604	-124.030187	H 05N 01E 14	Quarter-section centroid
POS	1991-06-22		1	UM				40.817040	-124.020646	H 05N 01E 13	Half-section centroid
POS	1992		2	UMUF	Y	Y	2	40.819911	-124.019401	H 05N 01E 13	Contributor
POS	1993		2	UMUF	Y	N	0	40.819853	-124.019059	H 05N 01E 13	Contributor
POS	1993-04-03	1019	1	AU				40.820581	-124.020582	H 05N 01E 13	Quarter-section centroid
POS	1993-05-14	2111	1	UM				40.827708	-124.020466	H 05N 01E 12	Quarter-section centroid
POS	1993-05-14	2307	1	UF				40.827649	-124.010800	H 05N 01E 12	Quarter-section centroid
POS	1993-05-14	2356	1	UF				40.834847	-124.010732	H 05N 01E 12	Quarter-section centroid
POS	1993-05-15	0619	1	AM				40.820581	-124.020582	H 05N 01E 13	Quarter-section centroid
POS	1993-05-29	0605	2	AMAF	Y			40.819915	-124.019517	H 05N 01E 13	Contributor
POS	1993-07-01	2146	1	AM				40.820581	-124.020582	H 05N 01E 13	Quarter-section centroid
POS	1994		2	UMUF	Y	Y	1	40.815443	-124.018484	H 05N 01E 13	Contributor

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
POS	1994-04-22	1709	1	UU				40.820581	-124.020582	H 05N 01E 13	Quarter-section centroid
POS	1994-05-22	1707	1	AM	Y			40.820581	-124.020582	H 05N 01E 13	Quarter-section centroid
POS	1994-05-22	1850	1	AF	Y			40.813499	-124.020722	H 05N 01E 13	Quarter-section centroid
POS	1994-05-22		1	UF				40.813499	-124.020722	H 05N 01E 13	Quarter-section centroid
POS	1994-05-31	1700	1	UF		Y	1	40.815443	-124.018484	H 05N 01E 13	Contributor
POS	1995		2	UMUF	Y	Y	0	40.815443	-124.018484	H 05N 01E 13	Contributor
POS	1996		2	UMUF	Y	Y		40.820079	-124.019196	H 05N 01E 13	Contributor
POS	1997		2	UMUF	Y	N	0	40.820165	-124.019813	H 05N 01E 13	Contributor
POS	1997-04-11		2	UMUF	Y			40.820581	-124.020582	H 05N 01E 13	Quarter-section centroid
AC	1998		2	UMAF	Y		2	40.819579	-124.019318	H 05N 01E 13	Contributor
NEG	1999		0					40.819579	-124.019318	H 05N 01E 13	Contributor
POS	1999-03-31	2144	1	UM				40.820581	-124.020582	H 05N 01E 13	Quarter-section centroid
POS	1999-03-31	2027	1	UM				40.813499	-124.020722	H 05N 01E 13	Quarter-section centroid
NEG	1999-04-02		0					40.816984	-124.015808	H 05N 01E 13	Section centroid
NEG	1999-04-26		0					40.816984	-124.015808	H 05N 01E 13	Section centroid
NEG	1999-05-11	2109	0					40.817038	-124.035018	H 05N 01E 14	Section centroid
NEG	1999-05-20		0					40.816984	-124.015808	H 05N 01E 13	Section centroid

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	1999-06-08	2102	0					40.817038	-124.035018	H 05N 01E 14	Section centroid
NEG	1999-06-16	2100	0					40.817038	-124.035018	H 05N 01E 14	Section centroid
NEG	1999-06-30	2058	0					40.817038	-124.035018	H 05N 01E 14	Section centroid
NEG	1999-08-03		0					40.816984	-124.015808	H 05N 01E 13	Section centroid
NEG	1999-08-05	2217	0					40.817038	-124.035018	H 05N 01E 14	Section centroid
NEG	1999-08-19	2135	0					40.817038	-124.035018	H 05N 01E 14	Section centroid
POS	2000		2	UMUF	Y	N	0	40.819593	-124.019683	H 05N 01E 13	Contributor
NEG	2000-03-22		0					40.816984	-124.015808	H 05N 01E 13	Section centroid
NEG	2000-04-06	0209	0					40.817038	-124.035018	H 05N 01E 14	Section centroid
NEG	2000-04-10		0					40.816984	-124.015808	H 05N 01E 13	Section centroid
NEG	2000-04-21	0116	0					40.817038	-124.035018	H 05N 01E 14	Section centroid
POS	2000-05-16	0710	2	UMUF	Y			40.820581	-124.020582	H 05N 01E 13	Quarter-section centroid
POS	2000-05-16	0056	1	UM				40.817038	-124.035018	H 05N 01E 14	Section centroid
POS	2000-05-23	1108	1	UU	Y			40.820581	-124.020582	H 05N 01E 13	Quarter-section centroid
POS	2000-05-31	0648	1	UM	Y			40.820581	-124.020582	H 05N 01E 13	Quarter-section centroid
NEG	2001		0					40.819593	-124.019683	H 05N 01E 13	Contributor
NEG	2001-05-13	2144	0					40.817038	-124.035018	H 05N 01E 14	Section centroid

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	2001-06-23	2355	0					40.817038	-124.035018	H 05N 01E 14	Section centroid
NEG	2001-08-18	2139	0					40.817038	-124.035018	H 05N 01E 14	Section centroid
NEG	2002		0					40.819593	-124.019683	H 05N 01E 13	Contributor
NEG	2002-03-20		0					40.816984	-124.015808	H 05N 01E 13	Section centroid
NEG	2002-04-17		0					40.816984	-124.015808	H 05N 01E 13	Section centroid
NEG	2002-04-24		0					40.816984	-124.015808	H 05N 01E 13	Section centroid
NEG	2002-04-25	2155	0					40.817038	-124.035018	H 05N 01E 14	Section centroid
NEG	2002-05-20	2053	0					40.817038	-124.035018	H 05N 01E 14	Section centroid
NEG	2002-07-25	2056	0					40.817038	-124.035018	H 05N 01E 14	Section centroid
NEG	2003		0					40.819593	-124.019682	H 05N 01E 13	Contributor
NEG	2004		0					40.819593	-124.019683	H 05N 01E 13	Contributor
NEG	2004-03-10		0					40.822790	-124.007400	H 05N 01E 13	Contributor
NEG	2004-03-10		0					40.818890	-124.007140	H 05N 01E 13	Contributor
NEG	2004-03-10		0					40.821040	-124.013100	H 05N 01E 13	Contributor
NEG	2004-03-17		0					40.821040	-124.013100	H 05N 01E 13	Contributor
NEG	2004-03-17		0					40.822790	-124.007400	H 05N 01E 13	Contributor
POS	2004-03-17		1	UU				40.820450	-124.017950	H 05N 01E 13	Contributor

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	2004-04-05		0					40.821040	-124.013100	H 05N 01E 13	Contributor
NEG	2004-04-05		0					40.818890	-124.007140	H 05N 01E 13	Contributor
NEG	2004-04-05		0					40.822790	-124.007400	H 05N 01E 13	Contributor
NEG	2004-05-24	2010-2020	0					40.814540	-124.022550	H 05N 01E 13	Contributor
NEG	2004-05-24		0					40.821040	-124.013100	H 05N 01E 13	Contributor
NEG	2004-05-24		0					40.822790	-124.007400	H 05N 01E 13	Contributor
NEG	2004-05-24		0					40.818890	-124.007140	H 05N 01E 13	Contributor
NEG	2004-05-24		0					40.821040	-124.013100	H 05N 01E 13	Contributor
NEG	2004-06-02	1953-2009	0					40.814540	-124.022550	H 05N 01E 13	Contributor
NEG	2004-06-12	0550-0608	0					40.814540	-124.022550	H 05N 01E 13	Contributor
NEG	2004-08-29		0					40.818890	-124.007140	H 05N 01E 13	Contributor
NEG	2005		0					40.819593	-124.019683	H 05N 01E 13	Contributor
NEG	2005-03-18		0					40.829480	-124.014560	H 05N 01E 12	Contributor
NEG	2005-03-31		0					40.829480	-124.014560	H 05N 01E 12	Contributor
NEG	2005-04-27	0546-0558	0					40.814380	-124.025760	H 05N 01E 14	Contributor
NEG	2005-05-02		0					40.829480	-124.014560	H 05N 01E 12	Contributor
NEG	2005-05-04	0558-0608	0					40.814380	-124.025760	H 05N 01E 14	Contributor

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	2005-05-19	0555-0607	0					40.814380	-124.025760	H 05N 01E 14	Contributor
NEG	2005-05-24	2010	0					40.816984	-124.015808	H 05N 01E 13	Section centroid
NEG	2005-06-02	1953	0					40.816984	-124.015808	H 05N 01E 13	Section centroid
NEG	2005-06-12	0550	0					40.816984	-124.015808	H 05N 01E 13	Section centroid
NEG	2006		0					40.819593	-124.019682	H 05N 01E 13	Contributor
NEG	2007	2400	0					40.829583	-124.029712	H 05N 01E 11	Contributor
NEG	2007	2400	0					40.827216	-124.028458	H 05N 01E 11	Contributor
POS	2017		1	UM				40.819593	-124.019683	H 05N 01E 13	Activity center
POS	2018		2	UMUF	Y			40.819593	-124.019683	H 05N 01E 13	Activity center
POS	2020		1	UM				40.819593	-124.019683	H 05N 01E 13	Contributor
NEG	2021		0					40.819593	-124.019683	H 05N 01E 13	Activity center
NEG	2022		0					40.819593	-124.019683	H 05N 01E 13	Activity center
Masterowl: HUM0446 Subspecies: NORTHERN											
POS	1992		1	UU				40.803524	-124.052112	H 05N 01E 22	Contributor
NEG	1993		0					40.803524	-124.052112	H 05N 01E 22	Contributor
NEG	1994		0					40.803524	-124.052111	H 05N 01E 22	Contributor
ABAN	1995		1	UM				40.815187	-124.061867	H 05N 01E 15	Contributor

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	1997-03-20	1843	0					40.802418	-124.073342	H 05N 01E 21	Section centroid
NEG	1997-04-05	1845	0					40.802418	-124.073342	H 05N 01E 21	Section centroid
NEG	1997-08-30	1910	0					40.802418	-124.073342	H 05N 01E 21	Section centroid
NEG	1998		0					40.815186	-124.061866	H 05N 01E 15	Contributor
NEG	1999		0					40.815186	-124.061866	H 05N 01E 15	Contributor
NEG	2000		0					40.815187	-124.061867	H 05N 01E 15	Contributor
NEG	2000-04-05	0651	0					40.802418	-124.073342	H 05N 01E 21	Section centroid
NEG	2000-04-20	1910	0					40.802418	-124.073342	H 05N 01E 21	Section centroid
NEG	2000-05-10	0741	0					40.802418	-124.073342	H 05N 01E 21	Section centroid
NEG	2000-05-10	2037	0					40.802550	-124.054246	H 05N 01E 22	Section centroid
NEG	2000-05-19	2033	0					40.802550	-124.054246	H 05N 01E 22	Section centroid
NEG	2000-05-24	2040	0					40.802418	-124.073342	H 05N 01E 21	Section centroid
NEG	2000-05-30	2044	0					40.802550	-124.054246	H 05N 01E 22	Section centroid
NEG	2000-06-06	2048	0					40.802550	-124.054246	H 05N 01E 22	Section centroid
NEG	2000-06-08	2110	0					40.802418	-124.073342	H 05N 01E 21	Section centroid
NEG	2000-06-13	2100	0					40.802550	-124.054246	H 05N 01E 22	Section centroid
NEG	2000-06-19	2107	0					40.802550	-124.054246	H 05N 01E 22	Section centroid

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	2000-06-26	2145	0					40.802418	-124.073342	H 05N 01E 21	Section centroid
NEG	2001		0					40.815187	-124.061867	H 05N 01E 15	Contributor
NEG	2001-03-17	2137	0					40.802418	-124.073342	H 05N 01E 21	Section centroid
NEG	2001-04-13	2036	0					40.802418	-124.073342	H 05N 01E 21	Section centroid
NEG	2001-05-16	2234	0					40.802418	-124.073342	H 05N 01E 21	Section centroid
NEG	2002		0					40.815187	-124.061867	H 05N 01E 15	Contributor
NEG	2002-03-04	1916	0					40.802418	-124.073342	H 05N 01E 21	Section centroid
NEG	2002-03-19	0556	0					40.802418	-124.073342	H 05N 01E 21	Section centroid
NEG	2002-04-02	2202	0					40.802418	-124.073342	H 05N 01E 21	Section centroid
NEG	2003		0					40.815187	-124.061867	H 05N 01E 15	Contributor
NEG	2003-04-15	1950	0					40.802550	-124.054246	H 05N 01E 22	Section centroid
NEG	2003-05-05	2020	0					40.802550	-124.054246	H 05N 01E 22	Section centroid
NEG	2003-05-12	2042	0					40.802550	-124.054246	H 05N 01E 22	Section centroid
NEG	2004		0					40.815186	-124.061866	H 05N 01E 15	Contributor
NEG	2005		0					40.815186	-124.061866	H 05N 01E 15	Contributor
NEG	2006		0					40.815186	-124.061866	H 05N 01E 15	Contributor
NEG	2007		0					40.815186	-124.061866	H 05N 01E 15	Contributor

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	2008		0					40.815186	-124.061866	H 05N 01E 15	Contributor
NEG	2011		0					40.815186	-124.061866	H 05N 01E 15	Contributor
NEG	2012		0					40.815186	-124.061866	H 05N 01E 15	Contributor
NEG	2013		0					40.815187	-124.061867	H 05N 01E 15	Contributor
NEG	2014		0				0	40.815187	-124.061867	H 05N 01E 15	Activity center
NEG	2015		0				0	40.815187	-124.061867	H 05N 01E 15	Activity center
NEG	2016		0					40.815187	-124.061867	H 05N 01E 15	Activity center
NEG	2017		0					40.815187	-124.061867	H 05N 01E 15	Activity center
NEG	2018		0					40.815187	-124.061867	H 05N 01E 15	Activity center
NEG	2019		0					40.815187	-124.061867	H 05N 01E 15	Activity center
NEG	2020		0					40.815187	-124.061867	H 05N 01E 15	Activity center
NEG	2021		0					40.815187	-124.061867	H 05N 01E 15	Activity center
NEG	2022		0					40.815187	-124.061867	H 05N 01E 15	Activity center
NEG	2023		0					40.815187	-124.061867	H 05N 01E 15	Activity center
NEG	2024		0					40.815187	-124.061867	H 05N 01E 15	Activity center
Masterowl: HUM0586 Subspecies: NORTHERN											
POS	1992-03-06		2	UMUF	Y			40.875010	-124.033654	H 06N 01E 26	Contributor

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
POS	1992-03-25		1	UF				40.877712	-124.033696	H 06N 01E 26	Contributor
POS	1992-04-13		2	UMUF				40.877712	-124.033696	H 06N 01E 26	Contributor
POS	1992-04-14		2	UMUF	Y			40.877712	-124.033696	H 06N 01E 26	Contributor
NEG	1997		0					40.875594	-124.033794	H 06N 01E 26	Section centroid
NEG	1999		0					40.875594	-124.033794	H 06N 01E 26	Section centroid
NEG	1999-04-17	2200	0					40.890114	-124.014731	H 06N 01E 24	Section centroid
NEG	1999-04-27	2048	0					40.890114	-124.014731	H 06N 01E 24	Section centroid
NEG	1999-05-24	2148	0					40.890114	-124.014731	H 06N 01E 24	Section centroid
NEG	1999-06-28	2106	0					40.890114	-124.014731	H 06N 01E 24	Section centroid
NEG	1999-08-16	2210	0					40.890114	-124.014731	H 06N 01E 24	Section centroid
NEG	1999-08-30	2115	0					40.890114	-124.014731	H 06N 01E 24	Section centroid
NEG	2000		0					40.875594	-124.033794	H 06N 01E 26	Section centroid
NEG	2000-03-16	1832	0					40.890114	-124.014731	H 06N 01E 24	Section centroid
NEG	2000-03-23	2026	0					40.890114	-124.014731	H 06N 01E 24	Section centroid
NEG	2000-04-12	2132	0					40.890114	-124.014731	H 06N 01E 24	Section centroid
NEG	2000-04-29	2047	0					40.890114	-124.014731	H 06N 01E 24	Section centroid
NEG	2000-05-09	2025	0					40.890114	-124.014731	H 06N 01E 24	Section centroid

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	2000-05-15	2335	0					40.890114	-124.014731	H 06N 01E 24	Section centroid
NEG	2000-06-20	2150	0					40.875594	-124.033794	H 06N 01E 26	Section centroid
NEG	2000-06-30	2213	0					40.875594	-124.033794	H 06N 01E 26	Section centroid
NEG	2000-08-16	2020	0					40.875594	-124.033794	H 06N 01E 26	Section centroid
NEG	2001-03-16	2252	0					40.886519	-124.029014	H 06N 01E 23	Quarter-section centroid
NEG	2001-04-03	2151	0					40.875594	-124.033794	H 06N 01E 26	Section centroid
NEG	2001-04-03	2227	0					40.886519	-124.029014	H 06N 01E 23	Quarter-section centroid
POS	2001-04-12	1301	2	UMUF	Y			40.871916	-124.029025	H 06N 01E 26	Quarter-section centroid
POS	2001-05-10	2153	1	UF				40.871916	-124.029025	H 06N 01E 26	Quarter-section centroid
POS	2001-05-10	1320	1	UU				40.871916	-124.029025	H 06N 01E 26	Quarter-section centroid
POS	2001-05-16	2212	1	UF				40.879231	-124.029032	H 06N 01E 26	Quarter-section centroid
NEG	2001-05-16	2125	0					40.875594	-124.033794	H 06N 01E 26	Section centroid
NEG	2001-06-08	2104	0					40.890114	-124.014731	H 06N 01E 24	Section centroid
POS	2001-06-10	2338	1	UU				40.871916	-124.029025	H 06N 01E 26	Quarter-section centroid
POS	2001-06-12	0209	1	UF				40.871916	-124.029025	H 06N 01E 26	Quarter-section centroid
NEG	2001-06-15	2100	0					40.890114	-124.014731	H 06N 01E 24	Section centroid
NEG	2001-06-22	2103	0					40.890114	-124.014731	H 06N 01E 24	Section centroid

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	2001-06-29	2103	0					40.890114	-124.014731	H 06N 01E 24	Section centroid
NEG	2001-07-23	2055	0					40.890114	-124.014731	H 06N 01E 24	Section centroid
POS	2002		1	UF				40.875594	-124.033794	H 06N 01E 26	Section centroid
POS	2002-03-27	1928	1	UF				40.879231	-124.029032	H 06N 01E 26	Quarter-section centroid
POS	2002-03-28	1859	1	UM				40.871916	-124.029025	H 06N 01E 26	Quarter-section centroid
NEG	2002-03-29	0720	0					40.875594	-124.033794	H 06N 01E 26	Section centroid
NEG	2002-04-11	2008	0					40.875594	-124.033794	H 06N 01E 26	Section centroid
NEG	2002-04-11	1810	0					40.875594	-124.033794	H 06N 01E 26	Section centroid
POS	2002-04-18	2105	1	UU				40.871916	-124.029025	H 06N 01E 26	Quarter-section centroid
NEG	2002-04-19	1100	0					40.875594	-124.033794	H 06N 01E 26	Section centroid
NEG	2002-04-26	0616	0					40.875594	-124.033794	H 06N 01E 26	Section centroid
POS	2002-05-16	2147	1	UU				40.871916	-124.029025	H 06N 01E 26	Quarter-section centroid
POS	2002-05-16	1806	1	UM				40.871916	-124.029025	H 06N 01E 26	Quarter-section centroid
POS	2003		1	UF				40.875594	-124.033794	H 06N 01E 26	Section centroid
NEG	2003-03-31	1825	0					40.875594	-124.033794	H 06N 01E 26	Section centroid
NEG	2003-04-15	1956	0					40.875594	-124.033794	H 06N 01E 26	Section centroid
POS	2003-04-30	2222	1	UU				40.871916	-124.029025	H 06N 01E 26	Quarter-section centroid

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	2003-05-01	0930	0					40.871839	-124.019447	H 06N 01E 25	Quarter-section centroid
NEG	2003-05-20	2032	0					40.875594	-124.033794	H 06N 01E 26	Section centroid
POS	2003-06-04	2037	2	UMUF	Y			40.871916	-124.029025	H 06N 01E 26	Quarter-section centroid
POS	2003-06-05	0950	1	UF				40.871916	-124.029025	H 06N 01E 26	Quarter-section centroid
POS	2004-03-23	1933	1	UM				40.879231	-124.029032	H 06N 01E 26	Quarter-section centroid
NEG	2004-03-24	1220	0					40.875594	-124.033794	H 06N 01E 26	Section centroid
NEG	2004-04-08	2207	0					40.875594	-124.033794	H 06N 01E 26	Section centroid
NEG	2004-04-27	2153	0					40.875594	-124.033794	H 06N 01E 26	Section centroid
NEG	2004-05-17	2023	0					40.875626	-124.048178	H 06N 01E 27	Half-section centroid
NEG	2004-05-24	2035	0					40.875594	-124.033794	H 06N 01E 26	Section centroid
NEG	2004-05-26	2030	0					40.875626	-124.048178	H 06N 01E 27	Half-section centroid
NEG	2004-06-16	2040	0					40.875626	-124.048178	H 06N 01E 27	Half-section centroid
NEG	2005-04-05	1944	0					40.875594	-124.033794	H 06N 01E 26	Section centroid
POS	2005-04-05	0012	1	UF				40.871975	-124.038591	H 06N 01E 26	Quarter-section centroid
NEG	2005-04-28	0935	0					40.875594	-124.033794	H 06N 01E 26	Section centroid
NEG	2005-04-29	2108	0					40.875594	-124.033794	H 06N 01E 26	Section centroid
NEG	2005-04-29	1028	0					40.875594	-124.033794	H 06N 01E 26	Section centroid

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	2005-05-05	1043	0					40.879231	-124.029032	H 06N 01E 26	Quarter-section centroid
NEG	2005-05-06	0850	0					40.875594	-124.033794	H 06N 01E 26	Section centroid
NEG	2005-05-23	0926	0					40.875594	-124.033794	H 06N 01E 26	Section centroid
NEG	2006-03-27	1851-1901	0					40.871500	-124.029490	H 06N 01E 26	Contributor
NEG	2006-03-27	1909-1920	0					40.875590	-124.021630	H 06N 01E 25	Contributor
NEG	2006-03-28	1833-1844	0					40.871980	-124.040860	H 06N 01E 26	Contributor
NEG	2006-03-28	2103-2114	0					40.881110	-124.031290	H 06N 01E 26	Contributor
NEG	2006-03-28	2116-2127	0					40.881140	-124.024470	H 06N 01E 26	Contributor
NEG	2006-04-12	2055-2105	0					40.871980	-124.040860	H 06N 01E 26	Contributor
NEG	2006-04-12	1954-2005	0					40.871500	-124.029490	H 06N 01E 26	Contributor
NEG	2006-04-12	0045-0055	0					40.875590	-124.021630	H 06N 01E 25	Contributor
NEG	2006-04-12	2326-2338	0					40.881140	-124.024470	H 06N 01E 26	Contributor
NEG	2006-04-12	2314-2324	0					40.881110	-124.031290	H 06N 01E 26	Contributor
NEG	2006-04-26	2334-2345	0					40.875590	-124.021630	H 06N 01E 25	Contributor
NEG	2006-04-26	2323-2333	0					40.881140	-124.024470	H 06N 01E 26	Contributor
NEG	2006-04-26	2310-2321	0					40.881110	-124.031290	H 06N 01E 26	Contributor
NEG	2006-04-26	2108-2118	0					40.871980	-124.040860	H 06N 01E 26	Contributor

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
NEG	2006-04-26	2008-2022	0					40.871500	-124.029490	H 06N 01E 26	Contributor
NEG	2006-05-15	2157-2204	0					40.872890	-124.044140	H 06N 01E 27	Contributor
NEG	2006-06-07	2028-2056	0					40.871500	-124.029490	H 06N 01E 26	Contributor
NEG	2006-06-07	2116-2126	0					40.871980	-124.040860	H 06N 01E 26	Contributor
NEG	2006-06-07	2100-2110	0					40.875590	-124.021630	H 06N 01E 25	Contributor
NEG	2006-06-07	2150-2200	0					40.881110	-124.031290	H 06N 01E 26	Contributor
NEG	2006-06-07	2201-2211	0					40.881140	-124.024470	H 06N 01E 26	Contributor
NEG	2006-06-08		0					40.871600	-124.029430	H 06N 01E 26	Contributor
NEG	2006-06-08		0					40.872150	-124.041060	H 06N 01E 26	Contributor
NEG	2006-06-08		0					40.881270	-124.031410	H 06N 01E 26	Contributor
NEG	2006-06-08		0					40.881230	-124.024540	H 06N 01E 26	Contributor
NEG	2007-04-23	2110-2121	0					40.873060	-124.044140	H 06N 01E 27	Contributor
NEG	2007-06-11	2230-2241	0					40.873060	-124.044140	H 06N 01E 27	Contributor
NEG	2007-07-11	2229-2230	0					40.873060	-124.044140	H 06N 01E 27	Contributor
NEG	2011	2400	0					40.881251	-124.031078	H 06N 01E 26	Contributor
NEG	2011	2400	0					40.870292	-124.026026	H 06N 01E 26	Contributor
NEG	2011	2400	0					40.875745	-124.021648	H 06N 01E 25	Contributor

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	2011-03-08	1922-1937	0					40.872917	-124.044116	H 06N 01E 27	Contributor
NEG	2011-03-11	2107	0					40.872123	-124.037815	H 06N 01E 26	Contributor
NEG	2011-03-11	1902	0					40.879418	-124.023983	H 06N 01E 25	Contributor
POS	2011-03-21	2226	1	UU				40.879418	-124.023983	H 06N 01E 25	Contributor
POS	2011-03-21	2152	1	UU				40.872123	-124.037815	H 06N 01E 26	Contributor
NEG	2011-04-04	1955	0					40.872123	-124.037815	H 06N 01E 26	Contributor
NEG	2011-04-04	2257	0					40.879418	-124.023983	H 06N 01E 25	Contributor
NEG	2011-04-11	2200-2210	0					40.872917	-124.044116	H 06N 01E 27	Contributor
NEG	2011-04-12	2203-2213	0					40.872917	-124.044116	H 06N 01E 27	Contributor
NEG	2011-06-16	2057-2107	0					40.872917	-124.044116	H 06N 01E 27	Contributor
NEG	2011-07-13	2241-2251	0					40.872917	-124.044116	H 06N 01E 27	Contributor
NEG	2011-07-26	2210-2220	0					40.875266	-124.046252	H 06N 01E 27	Contributor
NEG	2011-07-26	2157-2207	0					40.872917	-124.044116	H 06N 01E 27	Contributor
NEG	2011-08-17	2135	0					40.872123	-124.037815	H 06N 01E 26	Contributor
NEG	2011-08-17	2147	0					40.879418	-124.023983	H 06N 01E 25	Contributor
NEG	2012	2400	0					40.872123	-124.037815	H 06N 01E 26	Contributor
NEG	2012	2400	0					40.870292	-124.026026	H 06N 01E 26	Contributor

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	2012	2400	0					40.875745	-124.021648	H 06N 01E 25	Contributor
NEG	2012	2400	0					40.878788	-124.040922	H 06N 01E 26	Contributor
NEG	2012	2400	0					40.881251	-124.031078	H 06N 01E 26	Contributor
NEG	2012	2400	0					40.879418	-124.023983	H 06N 01E 25	Contributor
NEG	2012-04-24	1403	0					40.871980	-124.026570	H 06N 01E 26	Contributor
NEG	2013	2400	0					40.879418	-124.023983	H 06N 01E 25	Contributor
NEG	2013	2400	0					40.872123	-124.037815	H 06N 01E 26	Contributor
NEG	2013	2400	0					40.870292	-124.026026	H 06N 01E 26	Contributor
NEG	2013	2400	0					40.875745	-124.021648	H 06N 01E 25	Contributor
NEG	2013	2400	0					40.881251	-124.031078	H 06N 01E 26	Contributor
NEG	2013	2400	0					40.878788	-124.040922	H 06N 01E 26	Contributor
NEG	2013-03-23	1500	0					40.871980	-124.026570	H 06N 01E 26	Contributor
NEG	2013-04-16	1700	0					40.871980	-124.026570	H 06N 01E 26	Contributor
NEG	2013-05-10	1800	0					40.871980	-124.026570	H 06N 01E 26	Contributor
NEG	2014	2400	0					40.879418	-124.023983	H 06N 01E 25	Contributor
NEG	2014	2400	0					40.881251	-124.031078	H 06N 01E 26	Contributor
NEG	2014	2400	0					40.878788	-124.040922	H 06N 01E 26	Contributor

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
NEG	2014	2400	0					40.870292	-124.026026	H 06N 01E 26	Contributor
NEG	2014	2400	0					40.872917	-124.044116	H 06N 01E 27	Contributor
NEG	2014-03-14	0126	0					40.872123	-124.037815	H 06N 01E 26	Contributor
NEG	2014-03-14	0018	0					40.875745	-124.021648	H 06N 01E 25	Contributor
NEG	2014-04-10	2314	0					40.872123	-124.037815	H 06N 01E 26	Contributor
NEG	2014-04-10	2230	0					40.875745	-124.021648	H 06N 01E 25	Contributor
NEG	2014-04-11	0930	0					40.871980	-124.026570	H 06N 01E 26	Contributor
NEG	2014-04-22	2223	0					40.875745	-124.021648	H 06N 01E 25	Contributor
NEG	2014-04-22	2257	0					40.872123	-124.037815	H 06N 01E 26	Contributor
NEG	2014-05-22	2231	0					40.872123	-124.037815	H 06N 01E 26	Contributor
NEG	2014-05-22	2252	0					40.875745	-124.021648	H 06N 01E 25	Contributor
NEG	2014-05-24	1000	0					40.871980	-124.026570	H 06N 01E 26	Contributor
POS	2014-05-30	2302	1	UU				40.875745	-124.021648	H 06N 01E 25	Contributor
POS	2014-05-30	2332	1	UU				40.872123	-124.037815	H 06N 01E 26	Contributor
NEG	2014-05-31	0930	0					40.875745	-124.021648	H 06N 01E 25	Contributor
NEG	2014-05-31	1820	0					40.872123	-124.037815	H 06N 01E 26	Contributor
NEG	2014-06-09	2250	0					40.875745	-124.021648	H 06N 01E 25	Contributor

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	2014-06-09	2341	0					40.872123	-124.037815	H 06N 01E 26	Contributor
NEG	2014-06-10	0800	0					40.871980	-124.026570	H 06N 01E 26	Contributor
NEG	2014-06-17	2200	0					40.872123	-124.037815	H 06N 01E 26	Contributor
NEG	2014-06-17	2130	0					40.875745	-124.021648	H 06N 01E 25	Contributor
POS	2015-03-28	2400	1	UM				40.875010	-124.033654	H 06N 01E 26	Activity center
POS	2015-04-29	1200	2	UMUF	Y	N		40.875010	-124.033654	H 06N 01E 26	Activity center
NEG	2016	2400	0					40.871980	-124.040860	H 06N 01E 26	Contributor
NEG	2016	2400	0					40.879418	-124.023983	H 06N 01E 25	Contributor
POS	2016-03-07	2144-2153	1	UF				40.875745	-124.021648	H 06N 01E 25	Contributor
NEG	2016-03-07	2208-2218	0					40.881251	-124.031078	H 06N 01E 26	Contributor
POS	2016-03-07	2115-2116	1	UF				40.870292	-124.026026	H 06N 01E 26	Contributor
POS	2016-03-24	2149	1	UF				40.881251	-124.031078	H 06N 01E 26	Contributor
NEG	2016-04-11	2126-2136	0					40.881251	-124.031078	H 06N 01E 26	Contributor
NEG	2016-04-11	2215-2225	0					40.875745	-124.021648	H 06N 01E 25	Contributor
NEG	2017	2400	0					40.879418	-124.023983	H 06N 01E 25	Contributor
NEG	2017	2400	0					40.872917	-124.044116	H 06N 01E 27	Contributor
NEG	2017	2400	0					40.870292	-124.026026	H 06N 01E 26	Contributor

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	2017-04-11	0041-0051	0					40.871980	-124.040860	H 06N 01E 26	Contributor
NEG	2017-04-11	2332-2342	0					40.875745	-124.021648	H 06N 01E 25	Contributor
POS	2017-04-11	0104-0118	1	UU				40.881251	-124.031078	H 06N 01E 26	Contributor
NEG	2017-05	2222-2232	0					40.871980	-124.040860	H 06N 01E 26	Contributor
NEG	2017-05	2152-2202	0					40.881251	-124.031078	H 06N 01E 26	Contributor
NEG	2017-05	2243-2253	0					40.875745	-124.021648	H 06N 01E 25	Contributor
NEG	2017-05-02	2147-2157	0					40.881251	-124.031078	H 06N 01E 26	Contributor
NEG	2017-05-03	2119-2129	0					40.871980	-124.040860	H 06N 01E 26	Contributor
NEG	2017-05-17	0028-0038	0					40.881251	-124.031078	H 06N 01E 26	Contributor
NEG	2017-05-17	2310-2320	0					40.875745	-124.021648	H 06N 01E 25	Contributor
POS	2017-05-17	0000-0008	1	UU				40.871980	-124.040860	H 06N 01E 26	Contributor
POS	2017-05-24	2219-2227	1	UU				40.881251	-124.031078	H 06N 01E 26	Contributor
NEG	2017-05-24	2312-2322	0					40.875745	-124.021648	H 06N 01E 25	Contributor
NEG	2017-05-24	2251-2301	0					40.871980	-124.040860	H 06N 01E 26	Contributor
NEG	2017-06-01	2040-2050	0					40.871980	-124.040860	H 06N 01E 26	Contributor
POS	2017-06-01	2229-2237	1	UU				40.875745	-124.021648	H 06N 01E 25	Contributor
NEG	2018	2400	0					40.872917	-124.044116	H 06N 01E 27	Contributor

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	2018	2400	0					40.871980	-124.040860	H 06N 01E 26	Contributor
POS	2018-03-05	2108	1	UM				40.874437	-124.028750	H 06N 01E 26	Contributor
POS	2018-03-05	2122	1	UM				40.876861	-124.022856	H 06N 01E 25	Contributor
POS	2018-03-05	2203	2	UMUF	Y			40.877132	-124.023324	H 06N 01E 25	Contributor
NEG	2018-03-05	2127-2141	0					40.881251	-124.031078	H 06N 01E 26	Contributor
POS	2018-03-06	0488-0857	2	AMAF	Y			40.877870	-124.030040	H 06N 01E 26	Contributor
AC	2018-06-11	1726-1846	1	AF		Y	1	40.877390	-124.030110	H 06N 01E 26	Contributor
POS	2018-06-18	1820-1857	1	AF		Y	1	40.877390	-124.030110	H 06N 01E 26	Contributor
NEG	2022	2400	0					40.872917	-124.044116	H 06N 01E 27	Contributor
NEG	2023	2400	0					40.872917	-124.044116	H 06N 01E 27	Contributor
Masterowl: HUM0671 Subspecies: NORTHERN											
POS	1990-08-08		2	UMUF	Y			40.860992	-124.033792	H 06N 01E 35	Section centroid
POS	1990-08-09		2	UMUF	Y			40.860992	-124.033792	H 06N 01E 35	Section centroid
POS	1990-08-29		2	UMUF	Y			40.860992	-124.033792	H 06N 01E 35	Section centroid
POS	1992-12-01		2	UUUU				40.857337	-124.038540	H 06N 01E 35	Quarter-section centroid
AC	1993		2	UMUF	Y			40.855824	-124.030552	H 06N 01E 35	Contributor
POS	1993-12-01		1	UU				40.857337	-124.038540	H 06N 01E 35	Quarter-section centroid

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
POS	1994		1	UU				40.857332	-124.028989	H 06N 01E 35	Quarter-section centroid
NEG	1997-01-01		0					40.860992	-124.033792	H 06N 01E 35	Section centroid
NEG	1999-01-01		0					40.860992	-124.033792	H 06N 01E 35	Section centroid
NEG	2000-01-01		0					40.860992	-124.033792	H 06N 01E 35	Section centroid
NEG	2000-06-22	2255	0					40.860992	-124.033792	H 06N 01E 35	Section centroid
NEG	2000-08-16	2255	0					40.860992	-124.033792	H 06N 01E 35	Section centroid
NEG	2001-04-08	2102	0					40.860992	-124.033792	H 06N 01E 35	Section centroid
NEG	2001-05-16	2159	0					40.860992	-124.033792	H 06N 01E 35	Section centroid
NEG	2001-06-10	2232	0					40.860992	-124.033792	H 06N 01E 35	Section centroid
NEG	2002		0					40.855824	-124.030552	H 06N 01E 35	Activity center
NEG	2003-04-15	2046	0					40.860992	-124.033792	H 06N 01E 35	Section centroid
NEG	2003-05-20	2117	0					40.860992	-124.033792	H 06N 01E 35	Section centroid
NEG	2004-03-23	2003	0					40.860992	-124.033792	H 06N 01E 35	Section centroid
NEG	2004-04-09	2005	0					40.860992	-124.033792	H 06N 01E 35	Section centroid
NEG	2004-04-12	2058	0					40.860992	-124.033792	H 06N 01E 35	Section centroid
NEG	2004-04-28	2258	0					40.860992	-124.033792	H 06N 01E 35	Section centroid
NEG	2004-05-19	2031	0					40.860992	-124.033792	H 06N 01E 35	Section centroid

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	2005-04-11	0720	0					40.857332	-124.028989	H 06N 01E 35	Quarter-section centroid
NEG	2005-05-05	0940	0					40.857332	-124.028989	H 06N 01E 35	Quarter-section centroid
NEG	2005-06-01	1001	0					40.857332	-124.028989	H 06N 01E 35	Quarter-section centroid
NEG	2006-03-27	2120-2131	0					40.855750	-124.029890	H 06N 01E 35	Contributor
NEG	2006-03-27	2214-2225	0					40.854030	-124.035390	H 06N 01E 35	Contributor
NEG	2006-03-28	2207-2218	0					40.861730	-124.033740	H 06N 01E 35	Contributor
NEG	2006-04-12	2018-2028	0					40.861730	-124.033740	H 06N 01E 35	Contributor
NEG	2006-04-14	2020-2031	0					40.855750	-124.029890	H 06N 01E 35	Contributor
NEG	2006-04-14	2122-2132	0					40.850980	-124.031350	H 05N 01E 02	Contributor
NEG	2006-04-14	2020	0					40.857332	-124.028989	H 06N 01E 35	Quarter-section centroid
NEG	2006-04-14	2134-2145	0					40.854030	-124.035390	H 06N 01E 35	Contributor
NEG	2006-04-24	2116-2126	0					40.854030	-124.035390	H 06N 01E 35	Contributor
POS	2006-04-24	2006	1	UU				40.855750	-124.029890	H 06N 01E 35	Contributor
NEG	2006-04-25	0830	0					40.857332	-124.028989	H 06N 01E 35	Quarter-section centroid
NEG	2006-04-26	2037-2047	0					40.861730	-124.033740	H 06N 01E 35	Contributor
NEG	2006-05-05	1935	0					40.857332	-124.028989	H 06N 01E 35	Quarter-section centroid
NEG	2006-05-17	1930	0					40.860992	-124.033792	H 06N 01E 35	Section centroid

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	2006-06-04	2112-2123	0					40.850980	-124.031350	H 05N 01E 02	Contributor
NEG	2006-06-04	2159-2209	0					40.854030	-124.035390	H 06N 01E 35	Contributor
NEG	2006-06-04	2128-2138	0					40.855750	-124.029890	H 06N 01E 35	Contributor
NEG	2006-06-08		0					40.861730	-124.033740	H 06N 01E 35	Contributor
NEG	2007	2400	0					40.853682	-124.033646	H 06N 01E 35	Contributor
NEG	2011-03-21	2304	0					40.861279	-124.033671	H 06N 01E 35	Contributor
NEG	2011-04-04	2312	0					40.861279	-124.033671	H 06N 01E 35	Contributor
NEG	2011-08-17	2109	0					40.861279	-124.033671	H 06N 01E 35	Contributor
NEG	2012	2400	0					40.861279	-124.033671	H 06N 01E 35	Contributor
NEG	2012-04-28	1449	0					40.855824	-124.030552	H 06N 01E 35	Contributor
NEG	2013	2400	0					40.861279	-124.033671	H 06N 01E 35	Contributor
NEG	2013-04-16	1430	0					40.855824	-124.030552	H 06N 01E 35	Contributor
NEG	2013-05-10	1500	0					40.855824	-124.030552	H 06N 01E 35	Contributor
NEG	2013-05-22	1200	0					40.855824	-124.030552	H 06N 01E 35	Contributor
NEG	2014	2400	0					40.861279	-124.033671	H 06N 01E 35	Contributor
NEG	2014-04-22	1430	0					40.855824	-124.030552	H 06N 01E 35	Contributor
NEG	2018		0					40.855824	-124.030552	H 06N 01E 35	Activity center

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	2018-03-18	1521-1850	0					40.857332	-124.028984	H 06N 01E 35	Quarter-section centroid
NEG	2019		0					40.855824	-124.030552	H 06N 01E 35	Activity center
NEG	2020		0					40.855824	-124.030552	H 06N 01E 35	Activity center
NEG	2021		0					40.855824	-124.030552	H 06N 01E 35	Activity center
NEG	2022		0					40.855824	-124.030552	H 06N 01E 35	Activity center
NEG	2023		0					40.855824	-124.030552	H 06N 01E 35	Activity center
NEG	2024		0					40.855824	-124.030552	H 06N 01E 35	Activity center
Masterowl: HUM0754 Subspecies: NORTHERN											
ABAN	1992-03-08	2007	1	UM				40.910311	-124.014612	H 06N 01E 13	Contributor
POS	1992-04-14	2215	1	UM				40.901064	-124.010007	H 06N 01E 13	Quarter-section centroid
POS	1992-04-14	2103	1	UM				40.915713	-124.009838	H 06N 01E 12	Quarter-section centroid
POS	1992-05-20	2124	1	UU				40.915713	-124.009838	H 06N 01E 12	Quarter-section centroid
POS	1992-05-20	2213	1	UM				40.908315	-124.019307	H 06N 01E 13	Quarter-section centroid
POS	1992-05-20	2245	1	UM				40.915657	-124.019278	H 06N 01E 12	Quarter-section centroid
NEG	1993-04-12	2030	0					40.908320	-124.014606	H 06N 01E 13	Half-section centroid
NEG	1993-06-10	2128	0					40.908320	-124.014606	H 06N 01E 13	Half-section centroid
NEG	1993-08-11	2100	0					40.908320	-124.014606	H 06N 01E 13	Half-section centroid

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
NEG	2000-03-16	2022	0					40.904690	-124.014645	H 06N 01E 13	Section centroid
NEG	2000-04-12	2058	0					40.904690	-124.014645	H 06N 01E 13	Section centroid
NEG	2001-03-16	2215	0					40.904690	-124.014645	H 06N 01E 13	Section centroid
NEG	2001-04-26	2045	0					40.904690	-124.014645	H 06N 01E 13	Section centroid
NEG	2001-05-03	2107	0					40.904690	-124.014645	H 06N 01E 13	Section centroid
NEG	2005-03-23	1943	0					40.904690	-124.014645	H 06N 01E 13	Section centroid
NEG	2005-05-03	0845	0					40.904690	-124.014645	H 06N 01E 13	Section centroid
NEG	2005-05-12	0813	0					40.904690	-124.014645	H 06N 01E 13	Section centroid
NEG	2005-05-24	1115	0					40.904690	-124.014645	H 06N 01E 13	Section centroid
NEG	2005-06-01	1104	0					40.904690	-124.014645	H 06N 01E 13	Section centroid
NEG	2005-06-19	0904	0					40.904690	-124.014645	H 06N 01E 13	Section centroid
NEG	2005-07-01	2050	0					40.904690	-124.014645	H 06N 01E 13	Section centroid
NEG	2005-07-06	0019	0					40.904690	-124.014645	H 06N 01E 13	Section centroid
NEG	2006-03-23		0					40.908315	-124.019307	H 06N 01E 13	Quarter-section centroid
NEG	2006-04-07		0					40.908315	-124.019307	H 06N 01E 13	Quarter-section centroid
NEG	2006-04-19		0					40.908315	-124.019307	H 06N 01E 13	Quarter-section centroid
NEG	2006-06-09		0					40.908315	-124.019307	H 06N 01E 13	Quarter-section centroid

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	2007-03-15	2140	0					40.908315	-124.019307	H 06N 01E 13	Quarter-section centroid
NEG	2007-04-09		0					40.908315	-124.019307	H 06N 01E 13	Quarter-section centroid
NEG	2007-04-16		0					40.908315	-124.019307	H 06N 01E 13	Quarter-section centroid
Masterowl: HUM0824 Subspecies: NORTHERN											
POS	1993		1	UM				40.842467	-124.039197	H 05N 01E 02	Quarter-section centroid
POS	1995-05-30	2400	1	AM				40.827780	-124.039549	H 05N 01E 11	Quarter-section centroid
POS	1995-05-31	0930	1	AM				40.827780	-124.039549	H 05N 01E 11	Quarter-section centroid
POS	1995-06-12	2202	1	UM				40.834966	-124.029912	H 05N 01E 11	Quarter-section centroid
POS	1995-06-21	2400	1	UM				40.836964	-124.037095	H 05N 01E 11	Contributor
POS	1995-06-22	0730	1	UM				40.836964	-124.037095	H 05N 01E 11	Contributor
NEG	2001-03-17		0					40.831382	-124.034743	H 05N 01E 11	Section centroid
NEG	2001-04-12		0					40.831382	-124.034743	H 05N 01E 11	Section centroid
AC	2001-04-27		2	UMUF	Y	Y		40.839435	-124.032745	H 05N 01E 02	Contributor
POS	2001-04-27	2131	1	UM				40.842363	-124.029766	H 05N 01E 02	Quarter-section centroid
POS	2001-05-01	1015	2	UMUF	Y	Y		40.842363	-124.029766	H 05N 01E 02	Quarter-section centroid
POS	2002-03-04	1657	1	UF				40.842363	-124.029766	H 05N 01E 02	Quarter-section centroid
POS	2002-03-04		2	UMUF	Y			40.842363	-124.029766	H 05N 01E 02	Quarter-section centroid

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
POS	2002-03-04		1	UF				40.842363	-124.029766	H 05N 01E 02	Quarter-section centroid
NEG	2002-03-04		0					40.831382	-124.034743	H 05N 01E 11	Section centroid
NEG	2002-03-14	2020	0					40.846176	-124.034416	H 05N 01E 02	Section centroid
NEG	2002-03-19		0					40.831382	-124.034743	H 05N 01E 11	Section centroid
NEG	2002-04-02		0					40.831382	-124.034743	H 05N 01E 11	Section centroid
POS	2002-04-08	1650	2	UMUF	Y			40.842363	-124.029766	H 05N 01E 02	Quarter-section centroid
NEG	2002-05-03	2331	0					40.846176	-124.034416	H 05N 01E 02	Section centroid
NEG	2002-05-03	2111	0					40.846176	-124.034416	H 05N 01E 02	Section centroid
NEG	2002-05-06	2352	0					40.834897	-124.020363	H 05N 01E 12	Quarter-section centroid
POS	2002-05-28	1456	1	UF				40.842363	-124.029766	H 05N 01E 02	Quarter-section centroid
POS	2002-05-30	2146	1	UU				40.834897	-124.020363	H 05N 01E 12	Quarter-section centroid
POS	2002-05-31	2400	1	UM				40.846176	-124.034416	H 05N 01E 02	Section centroid
NEG	2003-04-07	1935	0					40.834897	-124.020363	H 05N 01E 12	Quarter-section centroid
NEG	2003-05-11	2216	0					40.834897	-124.020363	H 05N 01E 12	Quarter-section centroid
NEG	2003-05-12	2022	0					40.846176	-124.034416	H 05N 01E 02	Section centroid
POS	2003-05-12	1250	2	UMUF	Y	N		40.842363	-124.029766	H 05N 01E 02	Quarter-section centroid
NEG	2003-05-20	2304	0					40.846176	-124.034416	H 05N 01E 02	Section centroid

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
POS	2003-06-04	2255	1	UU				40.834897	-124.020363	H 05N 01E 12	Quarter-section centroid
NEG	2003-06-05	2144	0					40.846176	-124.034416	H 05N 01E 02	Section centroid
NEG	2003-06-30	2105	0					40.846176	-124.034416	H 05N 01E 02	Section centroid
NEG	2003-07-31	0930	0					40.842363	-124.029766	H 05N 01E 02	Quarter-section centroid
NEG	2004-03-23	1842	0					40.846176	-124.034416	H 05N 01E 02	Section centroid
NEG	2004-04-09	0948	0					40.846176	-124.034416	H 05N 01E 02	Section centroid
NEG	2004-04-12	1954	0					40.846176	-124.034416	H 05N 01E 02	Section centroid
NEG	2004-04-28	2208	0					40.846176	-124.034416	H 05N 01E 02	Section centroid
NEG	2004-05-19	2053	0					40.846176	-124.034416	H 05N 01E 02	Section centroid
NEG	2005-03-08	1815	0					40.846176	-124.034416	H 05N 01E 02	Section centroid
NEG	2005-03-16	2034	0					40.846176	-124.034416	H 05N 01E 02	Section centroid
NEG	2005-04-12	0810	0					40.842363	-124.029766	H 05N 01E 02	Quarter-section centroid
NEG	2005-04-19	2006	0					40.846176	-124.034416	H 05N 01E 02	Section centroid
NEG	2005-05-05	0840	0					40.842363	-124.029766	H 05N 01E 02	Quarter-section centroid
NEG	2005-06-01	0905	0					40.842363	-124.029766	H 05N 01E 02	Quarter-section centroid
NEG	2005-06-03	2052	0					40.846176	-124.034416	H 05N 01E 02	Section centroid
NEG	2005-06-26	2053	0					40.846176	-124.034416	H 05N 01E 02	Section centroid

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
NEG	2005-07-02	2054	0					40.846176	-124.034416	H 05N 01E 02	Section centroid
NEG	2006-03-27	2157-2207	0					40.842540	-124.029250	H 05N 01E 02	Contributor
NEG	2006-03-28	0800	0					40.846176	-124.034416	H 05N 01E 02	Section centroid
NEG	2006-04-14	2052-2103	0					40.842540	-124.029250	H 05N 01E 02	Contributor
NEG	2006-04-24	2035-2045	0					40.842540	-124.029250	H 05N 01E 02	Contributor
NEG	2006-05-15	0849	0					40.846176	-124.034416	H 05N 01E 02	Section centroid
NEG	2006-06-04	2044-2054	0					40.842540	-124.029250	H 05N 01E 02	Contributor
NEG	2006-06-07	0911	0					40.846176	-124.034416	H 05N 01E 02	Section centroid
NEG	2006-06-15	0916	0					40.846176	-124.034416	H 05N 01E 02	Section centroid
NEG	2007	2400	0					40.827216	-124.028458	H 05N 01E 11	Contributor
NEG	2007	2400	0					40.829583	-124.029712	H 05N 01E 11	Contributor
NEG	2007	2400	0					40.839570	-124.041147	H 05N 01E 02	Contributor
NEG	2007	2400	0					40.842441	-124.036528	H 05N 01E 02	Contributor
NEG	2007	2400	0					40.834950	-124.025887	H 05N 01E 11	Contributor
NEG	2007	2400	0					40.830656	-124.033766	H 05N 01E 11	Contributor
NEG	2007	2400	0					40.846593	-124.045601	H 05N 01E 03	Contributor
NEG	2007	2400	0					40.833761	-124.033940	H 05N 01E 11	Contributor

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	2007	2400	0					40.847574	-124.037841	H 05N 01E 02	Contributor
NEG	2007	2400	0					40.826211	-124.033913	H 05N 01E 11	Contributor
NEG	2007-03-29	1957	0					40.846176	-124.034416	H 05N 01E 02	Section centroid
NEG	2007-04-18	2113	0					40.846176	-124.034416	H 05N 01E 02	Section centroid
NEG	2007-04-24	2118	0					40.846176	-124.034416	H 05N 01E 02	Section centroid
NEG	2007-05-01	2126	0					40.846176	-124.034416	H 05N 01E 02	Section centroid
NEG	2008	2400	0					40.846593	-124.045601	H 05N 01E 03	Contributor
NEG	2008	2400	0					40.839570	-124.041147	H 05N 01E 02	Contributor
NEG	2008	2400	0					40.842441	-124.036528	H 05N 01E 02	Contributor
NEG	2008	2400	0					40.847574	-124.037841	H 05N 01E 02	Contributor
NEG	2009	2400	0					40.839570	-124.041147	H 05N 01E 02	Contributor
NEG	2009	2400	0					40.847574	-124.037841	H 05N 01E 02	Contributor
NEG	2009	2400	0					40.842441	-124.036528	H 05N 01E 02	Contributor
NEG	2009	2400	0					40.846593	-124.045601	H 05N 01E 03	Contributor
NEG	2011	2400	0					40.842441	-124.036528	H 05N 01E 02	Contributor
NEG	2011	2400	0					40.839570	-124.041147	H 05N 01E 02	Contributor
NEG	2011	2400	0					40.846593	-124.045601	H 05N 01E 03	Contributor

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	2011	2400	0					40.847574	-124.037841	H 05N 01E 02	Contributor
NEG	2012	2400	0					40.847574	-124.037841	H 05N 01E 02	Contributor
NEG	2012	2400	0					40.846593	-124.045601	H 05N 01E 03	Contributor
NEG	2012	2400	0					40.842441	-124.036528	H 05N 01E 02	Contributor
NEG	2012	2400	0					40.839570	-124.041147	H 05N 01E 02	Contributor
NEG	2017	2400	0					40.842130	-124.042460	H 05N 01E 02	Contributor
NEG	2017	2400	0					40.839940	-124.046350	H 05N 01E 03	Contributor
NEG	2018	2400	0					40.842130	-124.042460	H 05N 01E 02	Contributor
NEG	2018	2400	0					40.839940	-124.046350	H 05N 01E 03	Contributor
NEG	2018	2400	0					40.846270	-124.046460	H 05N 01E 03	Contributor
NEG	2018		0					40.839449	-124.032737	H 05N 01E 02	Activity center
NEG	2019		0					40.839449	-124.032737	H 05N 01E 02	Activity center
NEG	2020		0					40.839449	-124.032737	H 05N 01E 02	Activity center
NEG	2021		0					40.839449	-124.032737	H 05N 01E 02	Activity center
NEG	2022		0					40.839449	-124.032737	H 05N 01E 02	Activity center
NEG	2023		0					40.839449	-124.032737	H 05N 01E 02	Activity center
NEG	2024		0					40.839449	-124.032737	H 05N 01E 02	Activity center

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
Masterowl: HUM1033 Subspecies: NORTHERN											
NEG	2006-03-28	2259-2309	0					40.857060	-124.010520	H 06N 01E 36	Contributor
NEG	2006-04-12	0114-0124	0					40.857060	-124.010520	H 06N 01E 36	Contributor
NEG	2006-04-26	0005-0016	0					40.857060	-124.010520	H 06N 01E 36	Contributor
NEG	2006-06-08		0					40.857060	-124.010520	H 06N 01E 36	Contributor
POS	2010		2	UMUF	Y			40.857256	-124.010864	H 06N 01E 36	Contributor
POS	2011		2	UMUF	Y	Y	2	40.856294	-124.010683	H 06N 01E 36	Contributor
POS	2011-03-11	1845-1851	1	AF				40.855711	-124.019537	H 06N 01E 36	Contributor
NEG	2011-04-04	2045	0					40.855711	-124.019537	H 06N 01E 36	Contributor
NEG	2011-04-04	2117	0					40.858737	-124.009356	H 06N 01E 36	Contributor
NEG	2012	2400	0					40.855711	-124.019537	H 06N 01E 36	Contributor
POS	2012		2	UMUF	Y	Y	1	40.856108	-124.011100	H 06N 01E 36	Contributor
POS	2012-03-25	1908	1	UU				40.858737	-124.009356	H 06N 01E 36	Contributor
POS	2012-03-26	1350	2	AMAF	Y	Y		40.856108	-124.011100	H 06N 01E 36	Contributor
NEG	2013	2400	0					40.855711	-124.019537	H 06N 01E 36	Contributor
POS	2013		2	UMUF	Y		0	40.856290	-124.011122	H 06N 01E 36	Contributor
NEG	2013-03-01	2350	0					40.858737	-124.009356	H 06N 01E 36	Contributor

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	2013-03-01	1348	0					40.856108	-124.011100	H 06N 01E 36	Contributor
POS	2013-03-23	1755	2	AMAF	Y			40.856108	-124.011100	H 06N 01E 36	Contributor
NEG	2013-05-22	0830	0					40.856108	-124.011100	H 06N 01E 36	Contributor
NEG	2013-07-05	0730	0					40.856108	-124.011100	H 06N 01E 36	Contributor
NEG	2014	2400	0					40.855711	-124.019537	H 06N 01E 36	Contributor
POS	2014-03-13	1955	1	AF				40.858737	-124.009356	H 06N 01E 36	Contributor
NEG	2014-04-10	2055	0					40.858737	-124.009356	H 06N 01E 36	Contributor
NEG	2014-04-22	2039	0					40.858737	-124.009356	H 06N 01E 36	Contributor
POS	2014-05-01	1843	2	AMAF	Y	Y		40.856108	-124.011100	H 06N 01E 36	Contributor
POS	2014-06-17	1830	2	AMAF	Y		1	40.856108	-124.011100	H 06N 01E 36	Contributor
POS	2014-06-17		2	UMUF	Y		1	40.856290	-124.011122	H 06N 01E 36	Contributor
AC	2015-04-30		2	AMUF	Y	Y	0	40.854748	-124.010280	H 06N 01E 36	Contributor
POS	2015-07-10		2	AMUF	Y	Y	2	40.854748	-124.010280	H 06N 01E 36	Contributor
POS	2016		2	AMAF	Y			40.854748	-124.010280	H 06N 01E 36	Activity center
NEG	2016-03-07	1839-1854	0					40.855711	-124.019537	H 06N 01E 36	Contributor
NEG	2017	2400	0					40.855711	-124.019537	H 06N 01E 36	Contributor
POS	2017		2	UMUF	Y		1	40.856248	-124.010706	H 06N 01E 36	Contributor

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	2017-04-11	2036-2046	0					40.858737	-124.009356	H 06N 01E 36	Contributor
NEG	2017-05	2054-2104	0					40.858737	-124.009356	H 06N 01E 36	Contributor
NEG	2017-05-03	2341-2351	0					40.858737	-124.009356	H 06N 01E 36	Contributor
NEG	2017-05-17	2110-2120	0					40.858737	-124.009356	H 06N 01E 36	Contributor
POS	2017-05-24	0127-0129	1	UU				40.858737	-124.009356	H 06N 01E 36	Contributor
POS	2018		2	UMUF	Y			40.856248	-124.010706	H 06N 01E 36	Activity center
NEG	2018	2400	0					40.855711	-124.019537	H 06N 01E 36	Contributor
NEG	2018-03-05	1905-1917	0					40.858737	-124.009356	H 06N 01E 36	Contributor
NEG	2018-03-15	1430-1637	0					40.857256	-124.009865	H 06N 01E 36	Quarter-section centroid
NEG	2018-03-18	2400	0					40.858737	-124.009356	H 06N 01E 36	Contributor
POS	2018-03-25	2044	2	UMUF	Y			40.858737	-124.009356	H 06N 01E 36	Contributor
POS	2018-03-26	1635	1	AM				40.855120	-124.010400	H 06N 01E 36	Contributor
POS	2018-04-01	0059-0109	1	UM				40.848076	-124.020705	H 05N 01E 01	Contributor
NEG	2018-05-14	1650-1854	0					40.857256	-124.009865	H 06N 01E 36	Quarter-section centroid
POS	2018-06-01	1623-1951	1	SMUF	Y			40.853670	-124.009900	H 06N 01E 36	Contributor
NEG	2018-06-18	1603-1728	0					40.857256	-124.009865	H 06N 01E 36	Quarter-section centroid
POS	2019		1	AM				40.854748	-124.010280	H 06N 01E 36	Activity center

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
Positive Spotted Owl detections not associated with a known Activity Center Subspecies: NORTHERN											
POS	2022-05-23	2237	1	UM				40.878002	-124.052106	H 06N 01E 27	Contributor
POS	2022-05-24	1957-2108	1	UM				40.878240	-124.053180	H 06N 01E 27	Contributor
POS	2022-06-27	0040-0120	1	UM				40.875040	-124.055100	H 06N 01E 27	Contributor
Additional surveys within the search area with no Spotted Owls detected											
NEG	1999	2103	0					40.784283	-124.068724	H 05N 01E 28	Quarter-section centroid
NEG	2000	2400	0					40.784283	-124.068724	H 05N 01E 28	Quarter-section centroid
NEG	2005-04-27	2015-2115	0					40.875658	-124.072104	H 06N 01E 28	Section centroid
NEG	2005-05-11	2030-2115	0					40.875658	-124.072104	H 06N 01E 28	Section centroid
NEG	2005-06-02	2045-2155	0					40.871982	-124.067298	H 06N 01E 28	Quarter-section centroid
NEG	2005-06-14	1915-2205	0					40.875658	-124.072104	H 06N 01E 28	Section centroid
NEG	2005-06-24	2110-2200	0					40.875658	-124.072104	H 06N 01E 28	Section centroid
NEG	2005-06-30	2120-2235	0					40.875658	-124.072104	H 06N 01E 28	Section centroid
NEG	2006-03-28	2004-2014	0					40.881040	-124.052880	H 06N 01E 27	Contributor
NEG	2006-04-12	2212-2224	0					40.881040	-124.052880	H 06N 01E 27	Contributor
NEG	2006-04-26	2236-2247	0					40.881040	-124.052880	H 06N 01E 27	Contributor
NEG	2006-05-15	2118-2123	0					40.869020	-124.045060	H 06N 01E 27	Contributor

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
NEG	2006-05-15	2105-2115	0					40.869200	-124.047030	H 06N 01E 27	Contributor
NEG	2006-05-15	2129-2139	0					40.876260	-124.055510	H 06N 01E 27	Contributor
NEG	2006-05-15	2115	0					40.874780	-124.067590	H 06N 01E 28	Contributor
NEG	2006-05-15	2045-2055	0					40.873215	-124.062926	H 06N 01E 28	Contributor
NEG	2006-05-15	2030-2040	0					40.870340	-124.066410	H 06N 01E 28	Contributor
NEG	2006-05-15	2035	0					40.872640	-124.067930	H 06N 01E 28	Contributor
NEG	2006-05-30	2212	0					40.874780	-124.067590	H 06N 01E 28	Contributor
NEG	2006-05-30	2133	0					40.872640	-124.067930	H 06N 01E 28	Contributor
NEG	2006-06-08	2302-2312	0					40.857438	-124.047392	H 06N 01E 34	Contributor
NEG	2006-06-08	2246-2258	0					40.859378	-124.050675	H 06N 01E 34	Contributor
NEG	2006-06-08	2223-2239	0					40.862735	-124.050784	H 06N 01E 34	Contributor
NEG	2006-06-08	2121-2135	0					40.877100	-124.061260	H 06N 01E 27	Contributor
NEG	2006-06-08	2147-2203	0					40.880950	-124.059720	H 06N 01E 27	Contributor
NEG	2006-06-08	2319-2335	0					40.882080	-124.066110	H 06N 01E 28	Contributor
NEG	2006-06-08		0					40.881040	-124.052880	H 06N 01E 27	Contributor
NEG	2007	2400	0					40.861076	-124.043956	H 06N 01E 34	Contributor
NEG	2007	2400	0					40.869055	-124.057368	H 06N 01E 27	Contributor

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
NEG	2007-04-23	2248-2259	0					40.877580	-124.061710	H 06N 01E 27	Contributor
NEG	2007-04-23	2010-2021	0					40.881960	-124.060340	H 06N 01E 27	Contributor
NEG	2007-04-23	2320-2331	0					40.871050	-124.065250	H 06N 01E 28	Contributor
NEG	2007-04-23	2306-2317	0					40.872750	-124.062140	H 06N 01E 27	Contributor
NEG	2007-04-23	2147-2158	0					40.868720	-124.044500	H 06N 01E 27	Contributor
NEG	2007-04-23	2202-2213	0					40.871260	-124.051110	H 06N 01E 27	Contributor
NEG	2007-04-23	2226-2237	0					40.876480	-124.056390	H 06N 01E 27	Contributor
NEG	2007-04-23	1945-1956	0					40.882400	-124.066710	H 06N 01E 28	Contributor
NEG	2007-06-11	2136-2147	0					40.881960	-124.060340	H 06N 01E 27	Contributor
NEG	2007-06-11	2411-2422	0					40.872750	-124.062140	H 06N 01E 27	Contributor
NEG	2007-06-11	2100-2111	0					40.882400	-124.066710	H 06N 01E 28	Contributor
NEG	2007-06-11	2301-2312	0					40.868720	-124.044500	H 06N 01E 27	Contributor
NEG	2007-06-11	2353-2404	0					40.877580	-124.061710	H 06N 01E 27	Contributor
NEG	2007-06-11	2120-2131	0					40.878740	-124.065040	H 06N 01E 28	Contributor
NEG	2007-06-11	2333-2344	0					40.876480	-124.056390	H 06N 01E 27	Contributor
NEG	2007-06-11	2426-2437	0					40.871050	-124.065250	H 06N 01E 28	Contributor
NEG	2007-06-11	2317-2328	0					40.871260	-124.051110	H 06N 01E 27	Contributor

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
NEG	2007-07-11	2137-2148	0					40.881960	-124.060340	H 06N 01E 27	Contributor
NEG	2007-07-11	2103-2114	0					40.882400	-124.066710	H 06N 01E 28	Contributor
NEG	2007-07-11	2358-2409	0					40.872750	-124.062140	H 06N 01E 27	Contributor
NEG	2007-07-11	2327-2338	0					40.876480	-124.056390	H 06N 01E 27	Contributor
NEG	2007-07-11	2343-2354	0					40.877580	-124.061710	H 06N 01E 27	Contributor
NEG	2007-07-11	2312-2323	0					40.871260	-124.051110	H 06N 01E 27	Contributor
NEG	2007-07-11	2411-2422	0					40.871050	-124.065250	H 06N 01E 28	Contributor
NEG	2007-07-11	2257-2308	0					40.868720	-124.044500	H 06N 01E 27	Contributor
NEG	2007-07-11	2121-2132	0					40.878740	-124.065040	H 06N 01E 28	Contributor
NEG	2011	2400	0					40.880858	-124.053132	H 06N 01E 27	Contributor
NEG	2011-03-08	2118-2128	0					40.870356	-124.066341	H 06N 01E 28	Contributor
NEG	2011-03-08	2032-2042	0					40.868715	-124.047187	H 06N 01E 27	Contributor
NEG	2011-03-08	1841-1857	0					40.878002	-124.052105	H 06N 01E 27	Contributor
NEG	2011-03-08	1757-1812	0					40.882634	-124.066596	H 06N 01E 28	Contributor
NEG	2011-03-08	2106-2116	0					40.873215	-124.062926	H 06N 01E 28	Contributor
NEG	2011-03-08	1821-1836	0					40.880660	-124.059201	H 06N 01E 27	Contributor
NEG	2011-03-08	1951-2006	0					40.875309	-124.055020	H 06N 01E 27	Contributor

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
NEG	2011-03-08	2049-2059	0					40.877163	-124.061373	H 06N 01E 27	Contributor
NEG	2011-03-08	2013-2028	0					40.869451	-124.044753	H 06N 01E 27	Contributor
NEG	2011-03-31		0					40.857438	-124.047391	H 06N 01E 34	Contributor
NEG	2011-03-31		0					40.862735	-124.050784	H 06N 01E 34	Contributor
NEG	2011-03-31		0					40.859378	-124.050675	H 06N 01E 34	Contributor
NEG	2011-04-01		0					40.862735	-124.050784	H 06N 01E 34	Contributor
NEG	2011-04-01		0					40.859378	-124.050675	H 06N 01E 34	Contributor
NEG	2011-04-01		0					40.857438	-124.047391	H 06N 01E 34	Contributor
NEG	2011-04-11	2221-2231	0					40.878002	-124.052105	H 06N 01E 27	Contributor
NEG	2011-04-11	2328-2338	0					40.877163	-124.061373	H 06N 01E 27	Contributor
NEG	2011-04-11	2121-2131	0					40.880660	-124.059201	H 06N 01E 27	Contributor
NEG	2011-04-11	2255-2305	0					40.868715	-124.047187	H 06N 01E 27	Contributor
NEG	2011-04-11	2100-2110	0					40.882634	-124.066596	H 06N 01E 28	Contributor
NEG	2011-04-11	2345-2355	0					40.873215	-124.062926	H 06N 01E 28	Contributor
NEG	2011-04-11	2400-2410	0					40.870356	-124.066341	H 06N 01E 28	Contributor
NEG	2011-04-11	2313-2323	0					40.875309	-124.055020	H 06N 01E 27	Contributor
NEG	2011-04-11	2241-2251	0					40.869451	-124.044753	H 06N 01E 27	Contributor

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
NEG	2011-04-12	2242-2252	0					40.868715	-124.047187	H 06N 01E 27	Contributor
NEG	2011-04-12	2042-2052	0					40.882634	-124.066596	H 06N 01E 28	Contributor
NEG	2011-04-12	2111-2121	0					40.880660	-124.059201	H 06N 01E 27	Contributor
NEG	2011-04-12	2227-2237	0					40.869451	-124.044753	H 06N 01E 27	Contributor
NEG	2011-04-12	2333-2343	0					40.873215	-124.062926	H 06N 01E 28	Contributor
NEG	2011-04-12	2348-2358	0					40.870356	-124.066341	H 06N 01E 28	Contributor
NEG	2011-04-12	2300-2310	0					40.875309	-124.055020	H 06N 01E 27	Contributor
NEG	2011-04-12	2316-2326	0					40.877163	-124.061373	H 06N 01E 27	Contributor
NEG	2011-04-12	2128-2138	0					40.878002	-124.052105	H 06N 01E 27	Contributor
NEG	2011-05-12		0					40.857438	-124.047391	H 06N 01E 34	Contributor
NEG	2011-05-12		0					40.859378	-124.050675	H 06N 01E 34	Contributor
NEG	2011-05-12		0					40.862735	-124.050784	H 06N 01E 34	Contributor
NEG	2011-05-20		0					40.859378	-124.050675	H 06N 01E 34	Contributor
NEG	2011-05-20		0					40.862735	-124.050784	H 06N 01E 34	Contributor
NEG	2011-05-20		0					40.857438	-124.047391	H 06N 01E 34	Contributor
NEG	2011-06-16	2408-2418	0					40.870356	-124.066341	H 06N 01E 28	Contributor
NEG	2011-06-16	2248-2258	0					40.869451	-124.044753	H 06N 01E 27	Contributor

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
NEG	2011-06-16	2150-2200	0					40.880660	-124.059201	H 06N 01E 27	Contributor
NEG	2011-06-16	2338-2350	0					40.877163	-124.061373	H 06N 01E 27	Contributor
NEG	2011-06-16	2323-2333	0					40.875309	-124.055020	H 06N 01E 27	Contributor
NEG	2011-06-16	2135-2145	0					40.878002	-124.052105	H 06N 01E 27	Contributor
NEG	2011-06-16	2212-2222	0					40.882634	-124.066596	H 06N 01E 28	Contributor
NEG	2011-06-16	2355-2405	0					40.873215	-124.062926	H 06N 01E 28	Contributor
NEG	2011-06-16	2305-2315	0					40.868715	-124.047187	H 06N 01E 27	Contributor
NEG	2011-07-13	2400-2410	0					40.873215	-124.062926	H 06N 01E 28	Contributor
NEG	2011-07-13	2342-2352	0					40.868715	-124.047187	H 06N 01E 27	Contributor
NEG	2011-07-13	2325-2335	0					40.869451	-124.044753	H 06N 01E 27	Contributor
NEG	2011-07-13	2414-2424	0					40.870356	-124.066341	H 06N 01E 28	Contributor
NEG	2011-07-13	2210-2230	0					40.880660	-124.059201	H 06N 01E 27	Contributor
NEG	2011-07-13	2152-2202	0					40.882634	-124.066596	H 06N 01E 28	Contributor
NEG	2011-07-26	2050-2100	0					40.868715	-124.047187	H 06N 01E 27	Contributor
NEG	2011-07-26	2255-2305	0					40.873215	-124.062926	H 06N 01E 28	Contributor
NEG	2011-07-26	2225-2235	0					40.878002	-124.052105	H 06N 01E 27	Contributor
NEG	2011-07-26	2241-2251	0					40.877163	-124.061373	H 06N 01E 27	Contributor

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	2011-07-26	2105-2115	0					40.875309	-124.055020	H 06N 01E 27	Contributor
NEG	2011-07-26	2035-2045	0					40.869451	-124.044753	H 06N 01E 27	Contributor
NEG	2011-07-26	2308-2318	0					40.870356	-124.066341	H 06N 01E 28	Contributor
NEG	2011-07-26	2328-2338	0					40.882634	-124.066596	H 06N 01E 28	Contributor
NEG	2011-07-26	2119-2134	0					40.880660	-124.059201	H 06N 01E 27	Contributor
NEG	2011-07-30		0					40.862735	-124.050784	H 06N 01E 34	Contributor
NEG	2011-07-30		0					40.859378	-124.050675	H 06N 01E 34	Contributor
NEG	2011-07-30		0					40.857438	-124.047391	H 06N 01E 34	Contributor
NEG	2011-08-09		0					40.859378	-124.050675	H 06N 01E 34	Contributor
NEG	2011-08-09		0					40.862735	-124.050784	H 06N 01E 34	Contributor
NEG	2011-08-09		0					40.857438	-124.047391	H 06N 01E 34	Contributor
NEG	2012	2400	0					40.880858	-124.053132	H 06N 01E 27	Contributor
NEG	2013	2400	0					40.880858	-124.053132	H 06N 01E 27	Contributor
NEG	2014	2400	0					40.875309	-124.055020	H 06N 01E 27	Contributor
NEG	2014	2400	0					40.864883	-124.055265	H 06N 01E 34	Contributor
NEG	2014	2400	0					40.857438	-124.047392	H 06N 01E 34	Contributor
NEG	2014	2400	0					40.869451	-124.044753	H 06N 01E 27	Contributor

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	2014	2400	0					40.878002	-124.052105	H 06N 01E 27	Contributor
NEG	2014	2400	0					40.866856	-124.056968	H 06N 01E 34	Contributor
NEG	2014	2400	0					40.862736	-124.050785	H 06N 01E 34	Contributor
NEG	2014	2400	0					40.880858	-124.053132	H 06N 01E 27	Contributor
NEG	2014	2400	0					40.868715	-124.047187	H 06N 01E 27	Contributor
NEG	2014	2400	0					40.860541	-124.053124	H 06N 01E 34	Contributor
NEG	2014	2400	0					40.873215	-124.062926	H 06N 01E 28	Contributor
NEG	2014	2400	0					40.870356	-124.066341	H 06N 01E 28	Contributor
NEG	2014	2400	0					40.877163	-124.061373	H 06N 01E 27	Contributor
NEG	2014	2400	0					40.882634	-124.066596	H 06N 01E 28	Contributor
NEG	2014	2400	0					40.859379	-124.050676	H 06N 01E 34	Contributor
NEG	2014	2400	0					40.880660	-124.059201	H 06N 01E 27	Contributor
NEG	2014	2400	0					40.885089	-124.064611	H 06N 01E 21	Contributor
NEG	2016	2400	0					40.878788	-124.040922	H 06N 01E 26	Contributor
NEG	2016	2400	0					40.881040	-124.052880	H 06N 01E 27	Contributor
NEG	2016-03-07	2003-2013	0					40.861730	-124.033740	H 06N 01E 35	Contributor
NEG	2017	2400	0					40.868715	-124.047187	H 06N 01E 27	Contributor

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
NEG	2017	2400	0					40.844600	-124.057590	H 05N 01E 03	Contributor
NEG	2017	2400	0					40.861730	-124.033740	H 06N 01E 35	Contributor
NEG	2017	2400	0					40.870356	-124.066341	H 06N 01E 28	Contributor
NEG	2017	2400	0					40.877163	-124.061373	H 06N 01E 27	Contributor
NEG	2017	2400	0					40.869451	-124.044753	H 06N 01E 27	Contributor
NEG	2017	2400	0					40.881040	-124.052880	H 06N 01E 27	Contributor
NEG	2017	2400	0					40.873215	-124.062926	H 06N 01E 28	Contributor
NEG	2017	2400	0					40.882634	-124.066596	H 06N 01E 28	Contributor
NEG	2017	2400	0					40.850360	-124.054090	H 05N 01E 03	Contributor
NEG	2017	2400	0					40.878633	-124.043690	H 06N 01E 27	Contributor
NEG	2017	2400	0					40.889573	-124.067543	H 06N 01E 21	Contributor
NEG	2017	2400	0					40.853120	-124.056690	H 05N 01E 03	Contributor
NEG	2017	2400	0					40.879851	-124.058396	H 06N 01E 27	Contributor
NEG	2017	2400	0					40.875309	-124.055020	H 06N 01E 27	Contributor
NEG	2017	2400	0					40.878788	-124.040922	H 06N 01E 26	Contributor
NEG	2017	2400	0					40.878002	-124.052105	H 06N 01E 27	Contributor
NEG	2017-03-28	2024-2034	0					40.880660	-124.059201	H 06N 01E 27	Contributor

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	2018	2400	0					40.881040	-124.052880	H 06N 01E 27	Contributor
NEG	2018	2400	0					40.850360	-124.054090	H 05N 01E 03	Contributor
NEG	2018	2400	0					40.837180	-124.052140	H 05N 01E 10	Contributor
NEG	2018	2400	0					40.844600	-124.057590	H 05N 01E 03	Contributor
NEG	2018	2400	0					40.882634	-124.066596	H 06N 01E 28	Contributor
NEG	2018	2400	0					40.873215	-124.062926	H 06N 01E 28	Contributor
NEG	2018	2400	0					40.879851	-124.058396	H 06N 01E 27	Contributor
NEG	2018	2400	0					40.878788	-124.040922	H 06N 01E 26	Contributor
NEG	2018	2400	0					40.870356	-124.066341	H 06N 01E 28	Contributor
NEG	2018	2400	0					40.853120	-124.056690	H 05N 01E 03	Contributor
NEG	2018	2400	0					40.875309	-124.055020	H 06N 01E 27	Contributor
NEG	2018	2400	0					40.877163	-124.061373	H 06N 01E 27	Contributor
NEG	2018	2400	0					40.889573	-124.067543	H 06N 01E 21	Contributor
NEG	2018	2400	0					40.868715	-124.047187	H 06N 01E 27	Contributor
NEG	2018	2400	0					40.878002	-124.052105	H 06N 01E 27	Contributor
NEG	2018	2400	0					40.869451	-124.044753	H 06N 01E 27	Contributor
NEG	2018	2400	0					40.861730	-124.033740	H 06N 01E 35	Contributor

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	2019	2400	0					40.828708	-124.066347	H 05N 01E 09	Contributor
NEG	2019	2400	0					40.823360	-124.064628	H 05N 01E 16	Contributor
NEG	2019	2400	0					40.817747	-124.066292	H 05N 01E 16	Contributor
NEG	2019	2400	0					40.821481	-124.069404	H 05N 01E 16	Contributor
NEG	2020	2400	0					40.799487	-124.049901	H 05N 01E 22	Contributor
NEG	2020	2400	0					40.795676	-124.050544	H 05N 01E 22	Contributor
NEG	2020	2400	0					40.800038	-124.038187	H 05N 01E 23	Contributor
NEG	2021	2400	0					40.800038	-124.038187	H 05N 01E 23	Contributor
NEG	2021	2400	0					40.799487	-124.049901	H 05N 01E 22	Contributor
NEG	2021	2400	0					40.795676	-124.050544	H 05N 01E 22	Contributor
NEG	2022	2400	0					40.873215	-124.062926	H 06N 01E 28	Contributor
NEG	2022	2400	0					40.885089	-124.064611	H 06N 01E 21	Contributor
NEG	2022	2400	0					40.877164	-124.061373	H 06N 01E 27	Contributor
NEG	2022	2400	0					40.875672	-124.068672	H 06N 01E 28	Contributor
NEG	2022	2400	0					40.799487	-124.049901	H 05N 01E 22	Contributor
NEG	2022	2400	0					40.795676	-124.050544	H 05N 01E 22	Contributor
NEG	2022	2400	0					40.869452	-124.044753	H 06N 01E 27	Contributor

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	2022	2400	0					40.889573	-124.067543	H 06N 01E 21	Contributor
NEG	2022	2400	0					40.868716	-124.047188	H 06N 01E 27	Contributor
NEG	2022	2400	0					40.888920	-124.067436	H 06N 01E 21	Contributor
NEG	2022	2400	0					40.882635	-124.066597	H 06N 01E 28	Contributor
NEG	2022	2400	0					40.800038	-124.038187	H 05N 01E 23	Contributor
NEG	2022	2400	0					40.870357	-124.066342	H 06N 01E 28	Contributor
NEG	2022	2400	0					40.880660	-124.059201	H 06N 01E 27	Contributor
NEG	2022	2400	0					40.867320	-124.039060	H 06N 01E 35	Contributor
NEG	2022-03-16	2046-2056	0					40.875310	-124.055020	H 06N 01E 27	Contributor
NEG	2022-03-16	2142-2152	0					40.878002	-124.052106	H 06N 01E 27	Contributor
NEG	2022-04-12	2246-2256	0					40.875310	-124.055020	H 06N 01E 27	Contributor
NEG	2022-04-12	2123-2133	0					40.878002	-124.052106	H 06N 01E 27	Contributor
NEG	2022-04-27	2245-2255	0					40.875310	-124.055020	H 06N 01E 27	Contributor
NEG	2022-04-27	2200-2210	0					40.878002	-124.052106	H 06N 01E 27	Contributor
NEG	2022-05-09	2255-2305	0					40.878002	-124.052106	H 06N 01E 27	Contributor
NEG	2022-05-09	0018-0028	0					40.875310	-124.055020	H 06N 01E 27	Contributor
NEG	2022-06-14	2020-2100	0					40.878002	-124.052106	H 06N 01E 27	Contributor

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	2022-06-14	2208-2218	0					40.878002	-124.052106	H 06N 01E 27	Contributor
NEG	2022-06-14	2352-0002	0					40.875310	-124.055020	H 06N 01E 27	Contributor
NEG	2022-06-27	2206-2216	0					40.878002	-124.052106	H 06N 01E 27	Contributor
NEG	2023	2400	0					40.878002	-124.052106	H 06N 01E 27	Contributor
NEG	2023	2400	0					40.877164	-124.061373	H 06N 01E 27	Contributor
NEG	2023	2400	0					40.882635	-124.066597	H 06N 01E 28	Contributor
NEG	2023	2400	0					40.799487	-124.049901	H 05N 01E 22	Contributor
NEG	2023	2400	0					40.885089	-124.064611	H 06N 01E 21	Contributor
NEG	2023	2400	0					40.880660	-124.059201	H 06N 01E 27	Contributor
NEG	2023	2400	0					40.869452	-124.044753	H 06N 01E 27	Contributor
NEG	2023	2400	0					40.873215	-124.062926	H 06N 01E 28	Contributor
NEG	2023	2400	0					40.888920	-124.067436	H 06N 01E 21	Contributor
NEG	2023	2400	0					40.870357	-124.066342	H 06N 01E 28	Contributor
NEG	2023	2400	0					40.868716	-124.047188	H 06N 01E 27	Contributor
NEG	2023	2400	0					40.875672	-124.068672	H 06N 01E 28	Contributor
NEG	2023	2400	0					40.875310	-124.055020	H 06N 01E 27	Contributor
NEG	2023	2400	0					40.795676	-124.050544	H 05N 01E 22	Contributor

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
NEG	2023	2400	0					40.867320	-124.039060	H 06N 01E 35	Contributor