

BIOLOGICAL RESOURCES ASSESSMENT REPORT

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

Minor Subdivision

Assessor's Parcel Number (APN): 313-081-028-000

1288 Hatchery Rd.

Blue Lake, Humboldt County, California 95525

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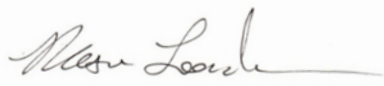
Date Prepared:

September 12th, 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)
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CNDDDB	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)
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 prepared this Biological Resources Assessment (BRA) for the proposed minor subdivision of Assessor's Parcel Number (APN) 313-081-028 at 1288 Hatchery Road in the City of Blue Lake, Humboldt County, California. The BRA documents baseline conditions, evaluates sensitive biological resources, and informs compliance under the California Environmental Quality Act (CEQA) and Humboldt County Planning & Building Department standards. The Project proposes to subdivide the ~2.5-acre parcel into two resultant parcels: Parcel A (~1.5 acres), which is already developed with a single-family residence and associated infrastructure, and Parcel B (~1.0 acre), which is currently vacant pasture. No new construction, grading, or infrastructure improvements are proposed as part of this subdivision application.

The Study Area encompasses ~2.5 acres within a rural-residential setting north of Hatchery Road, immediately west of the Mad River corridor. Habitat consists of ornamental landscaping, ruderal grasses/forbs, grazed pasture, and a dense Himalayan blackberry (*Rubus armeniacus*) thicket along the eastern fenceline. No wetlands, riparian zones, vernal pools, or jurisdictional aquatic features occur onsite; field verification confirmed that nearby aquatic features are separated from the property by county-maintained roads and intervening development. Soils are mapped as Ferndale silty clay loam, a non-hydric, non-serpentine substrate typical of Blue Lake Valley floodplain terraces.

A records review identified 77 special-status animal taxa and 67 special-status plant taxa within the regional quadrangles. Site-specific evaluation determined that nearly all taxa have No Effect/None potential due to the absence of required habitat conditions (e.g., aquatic, riparian, serpentine, coastal dune). A small subset of disturbance-tolerant upland species retain Low potential, including nesting birds/raptors, grassland birds, American badger, and several bat species that may forage overhead. Special-status plants are not expected onsite, though two checkerbloom species (*Sidalcea malachroides* and *S. oregana* ssp. *eximia*) retain Low potential along disturbed edges. No special-status species were observed during the April 24, 2025 survey. The site does not overlap USFWS-designated critical habitat and does not provide suitable habitat for northern spotted owl, with the nearest documented activity center located ~0.92 miles west-southwest.

To reduce potential impacts if future development occurs on Parcel B, this BRA recommends implementation of trigger-based Avoidance and Minimization Measures (AMMs), including: BIO-1 (nesting bird/raptor surveys and buffers), BIO-2 (reptile and small vertebrate clearance), BIO-3 (burrowing mammal surveys), BIO-4 (bat roost protection), BIO-5 (pollinator protection), BIO-6 (limits of disturbance fencing), BIO-7 (worker environmental awareness training), BIO-8 (erosion/spill BMPs), and BIO-9 (native reseeding/edge stabilization). Non-AMM recommendations include optional spring reconnaissance for CNPS taxa if requested by agencies, and Year 1–2 invasive weed monitoring following any future construction.

With the proposed minor subdivision boundary confined to previously disturbed residential and pasture lands and the AMMs in place, potential effects to special-status species and sensitive resources are expected to be avoided or reduced to less-than-significant levels under CEQA.

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 proposed minor subdivision of Assessor's Parcel Number (APN) 313-081-028, located at 1288 Hatchery Road in Blue Lake, Humboldt County, California. The proposed project involves dividing the ~2.5-acre parcel into two resultant parcels (Parcel A and Parcel B). Parcel A is developed with an existing single-family residence, detached garage, septic system, well, and shed that will remain. Parcel B is currently vacant pasture. No residential construction or development is proposed at this time as part of the subdivision application.

The purpose of this assessment is to document existing biological resources within the parcel and evaluate potential biological constraints associated with the subdivision. 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 intended to support compliance with the California Environmental Quality Act (CEQA) and Humboldt 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) and the U.S. Fish and Wildlife Service (USFWS), should future consultation become necessary.

The findings of this assessment will inform the County's environmental review process by identifying biological resources that may be present and evaluating whether the proposed subdivision has potential to affect them. This information provides a foundation for County staff and 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 1288 Hatchery Road minor subdivision project, Mr. London conducted the site survey, documented existing biological resources, evaluated potential for special-status species and sensitive habitats, and prepared this Biological Resources Assessment to inform Humboldt County's environmental review process.

2.3 Study Area Description and Geographic Setting

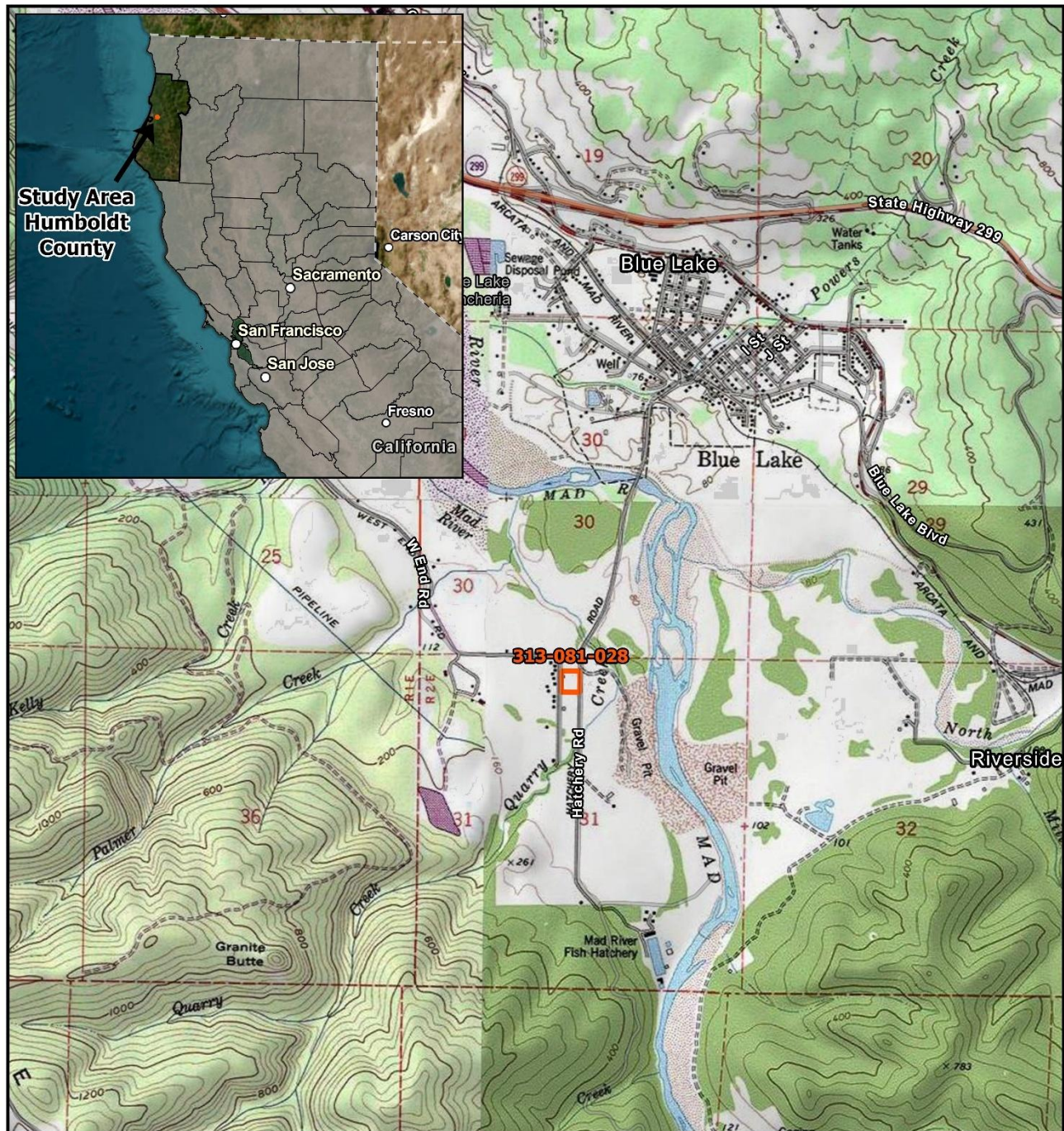
The Study Area is located at 1288 Hatchery Road in the City of Blue Lake, Humboldt County, California (APN 313-081-028) (Map 1). The parcel is approximately 2.5 acres in size, relatively flat, and situated within a rural residential setting on the north side of Hatchery Road (County Road No. 5L015). The center location of the Study Area is 40°52'1.29"N, 123°59'46.54"W. The property is bordered by rural residential development and pastureland, with the Mad River located immediately east of the parcel, outside of the project boundary, and drains to the Pacific Ocean approximately 10.10 air miles to the northwest. Elevation across the site ranges from approximately 92 to 100 feet above sea level, based on USGS topographic mapping. The Study Area occurs within the USGS Korbel 7.5-minute quadrangle.

The property is zoned Rural Residential (RR) under the Humboldt County Zoning Ordinance. Parcel A, the western portion of the site, is developed with a single-family residence, detached garage, septic system, well, and shed. Parcel B, the eastern portion of the site, is currently undeveloped and maintained as a horse pasture.

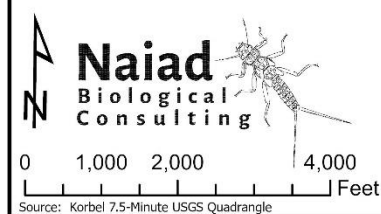
Soils mapped for the parcel consist of 220—Ferndale, 0 to 2 percent slopes, a nearly level, poorly drained soil commonly occurring on floodplains and low terraces. These soils have slow permeability and a seasonal high-water table but support pasture, agricultural, and rural residential uses. The site is not located within a designated Alquist-Priolo Fault Hazard Zone but is mapped within the 100-year flood hazard zone.

The area experiences a cool-summer Mediterranean climate (Köppen Csb), characterized by mild, wet winters and cool, dry summers influenced by coastal marine conditions. Average annual precipitation in the Blue Lake area is approximately 45–50 inches, primarily falling between October and April.

Hydrologically, the Study Area lies within the Mad River watershed (HUC 8: 18010102). No wetlands, streams, or aquatic features were observed within the parcel during the April 2025 field survey; however, the Mad River forms a major hydrologic feature to the east and exerts regional influence on floodplain and groundwater conditions.



Map 1: Project Location



 Study Area

Siena Nelson

Project Location:
1288 Hatchery Rd,
Blue Lake, CA 95525
APN: 313-081-028

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

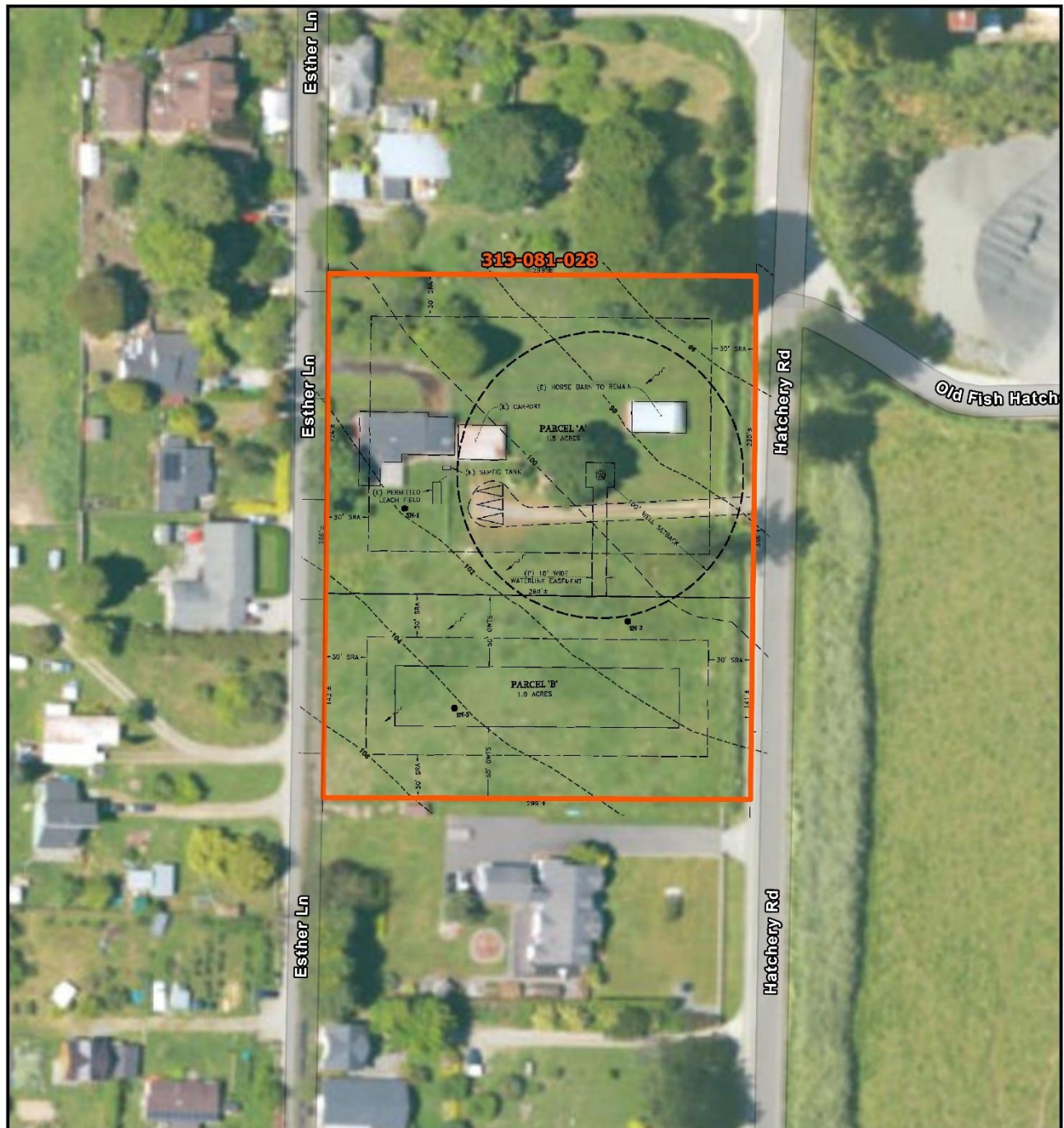
2.4 Project Description

The project applicant is proposing a minor subdivision of an existing ~2.5-acre parcel (APN 313-081-028) located at 1288 Hatchery Road in the City of Blue Lake, Humboldt County. The subdivision will create two resultant parcels: Parcel A (~1.5 acres), which is currently developed with a single-family residence, detached garage, septic system, well, and shed; and Parcel B (~1.0 acre), which is currently vacant pasture. All existing structures and infrastructure on Parcel A will remain in place. No new residential construction, grading, or infrastructure improvements are proposed as part of this subdivision application.

Both parcels will take access from Hatchery Road (County Road No. 5L015). Parcel A already supports an established residence with utilities in place, while Parcel B would remain undeveloped until a future land use application is submitted to the County. Any subsequent development on Parcel B, such as residential construction or utility installation, would be subject to additional project review, permitting, and compliance with applicable regulations.

The subdivision boundary is illustrated in Map 2 and provides the basis for evaluating potential environmental impacts associated with the Project. Implementation of the subdivision itself will not result in new ground disturbance or modification of currently undeveloped lands, but it will establish a vacant legal parcel (Parcel B) that could support future residential development.

To address these considerations, 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, ensuring that sensitive biological resources are appropriately considered during Project approval.



Map 2: Study Area



Map 2. Map illustrates Study Area boundaries and the proposed minor subdivision into Parcel A (~1.5 acres, developed) and Parcel B (~1.0 acre, vacant pasture), with boundaries overlaid on 2025 aerial imagery.

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 survey protocols, USFWS technical guidance), Humboldt County Planning & Building requirements, and professional best practices. Although no protocol-level botanical survey or formal wetland delineation was performed due to project scope and on-site observations, the Study Area was systematically evaluated to determine the presence or potential for sensitive biological resources.

The methodology consisted of:

1. Pre-field data review of existing biological resource databases and habitat information.
2. Field assessment to document habitat types, plant and wildlife species observed, and to visually assess the potential for wetlands or other aquatic features.
3. Analysis and mapping to evaluate potential for special-status resources and to support regulatory compliance.

3.2 Pre-Field Data Review and Preparation

3.2.1 Special-Status Species and Habitat Desktop Review

A desktop review was conducted to identify special-status plant and animal species with potential to occur in the Study Area. Data sources included:

- California Natural Diversity Database (CNDDDB) – Biogeographic Information and Observation System (BIOS) (CDFW, 2025) (Map 6)
- 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)
- U.S. Forest Service CALVEG classification mapping (CALVEG, 2025) (Map 5)
- USDA Web Soil Survey (NRCS, 2025) for soils and hydric soil potential (Map 4)
- U.S. Fish and Wildlife Service National Wetlands Inventory (NWI) maps (USFWS, 2025) (Map 4)
- USGS Korbel 7.5-minute quadrangle and recent aerial imagery

The review focused on identifying special-status species and sensitive natural communities known from the region, their habitat requirements, and whether suitable conditions may be present within the Study Area.

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 available weather stations. The Wetland Ecosystem Technical Standard (WETS) table was generated to compare actual precipitation against long-term monthly normals and determine if site hydrology was influenced by atypical rainfall patterns (Table 1 & Appendix B).

This analysis provides context for interpreting hydrology and habitat conditions observed in the field and helps distinguish between typical site conditions and those influenced by short-term climatic variability. The Blue Lake area experiences a cool-summer Mediterranean climate, with mild, wet winters and cool, dry summers influenced by coastal marine conditions.

3.2.5 Wetlands, Soils, and Aquatic Resource Evaluation

Prior to fieldwork, potential wetland and aquatic resources within the Study Area were evaluated through a desktop review of available mapping resources, including:

- U.S. Fish and Wildlife Service National Wetlands Inventory (NWI) maps to identify previously mapped wetland features (Map 4)
- NRCS Web Soil Survey for soil mapping and assessment of hydric soil potential (Map 4 & Appendix A)
- USGS Korb 7.5-minute topographic quadrangle for drainage patterns, slope gradients, and depressional landforms.

- High-resolution aerial imagery to detect potential surface saturation, drainage swales, and vegetation patterns suggestive of wet features.

Mapped soil units for the Study Area consist of 220—Ferndale, 0 to 2 percent slopes, a poorly drained soil typical of low terraces and floodplains. These units were reviewed for their hydric soil potential using the NRCS Hydric Soils List for Humboldt County.

Because no protocol-level wetland delineation was conducted, this evaluation was limited to identifying areas where hydrology, soils, or vegetation suggested the potential for wetlands or other aquatic resources. These areas were noted during the site visit for consideration of whether further delineation or regulatory verification may be warranted.

3.3 Field Assessment

3.3.1 Site Visit Summary

A site visit was conducted by Mason London, Principal Biologist, on April 24, 2025 from 1:00 pm to 3:30 pm under overcast skies, calm wind (0 mph), and a temperature of 53°F (Map 3). The survey was reconnaissance-level in nature and focused on:

- Identifying general vegetation communities and habitat types (Map 5).
- Documenting plant and wildlife species observed.
- Assessing the suitability of habitats for supporting special-status species.
- Conducting a visual assessment for potential wetlands or aquatic resources

3.3.2 Habitat and Botanical Assessment

A protocol-level botanical survey was not conducted, as the project involves only subdivision and does not propose new development at this time. Instead, habitat types present within the Study Area were described and evaluated for their potential to support special-status plant species based on floristic composition, soil types, and environmental conditions. Plant identifications were made in the field using the *Jepson Manual* (Baldwin et al. 2012), *Calflora*, and other standard references.

3.3.3 Wetland and Aquatic Resources Visual Assessment

A protocol-level wetland delineation was not conducted. Instead, a visual reconnaissance was performed to identify any indicators of potential wetland features that may warrant further delineation. Observations focused on:

- Surface hydrology (e.g., saturation, ponding, or drainage features).
- Vegetation indicative of hydric or mesic conditions.
- Topographic depressions or swales with potential to concentrate runoff.

No formal data points, prevalence index calculations, or soil pit analyses were performed. The intent of this assessment was to determine whether potential wetland or aquatic features exist within the Study Area that could require follow-up delineation under USACE or CDFW guidelines.

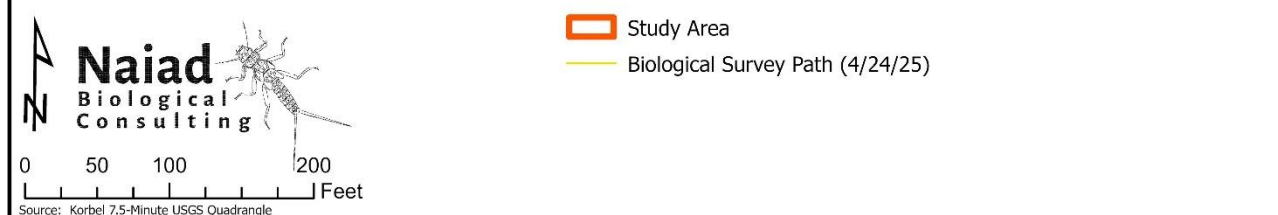
3.4 Data Management and Mapping

Field observations 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).

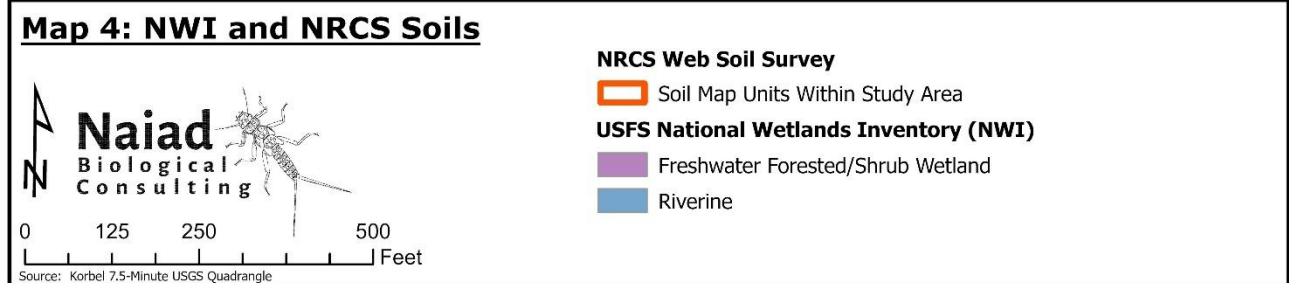
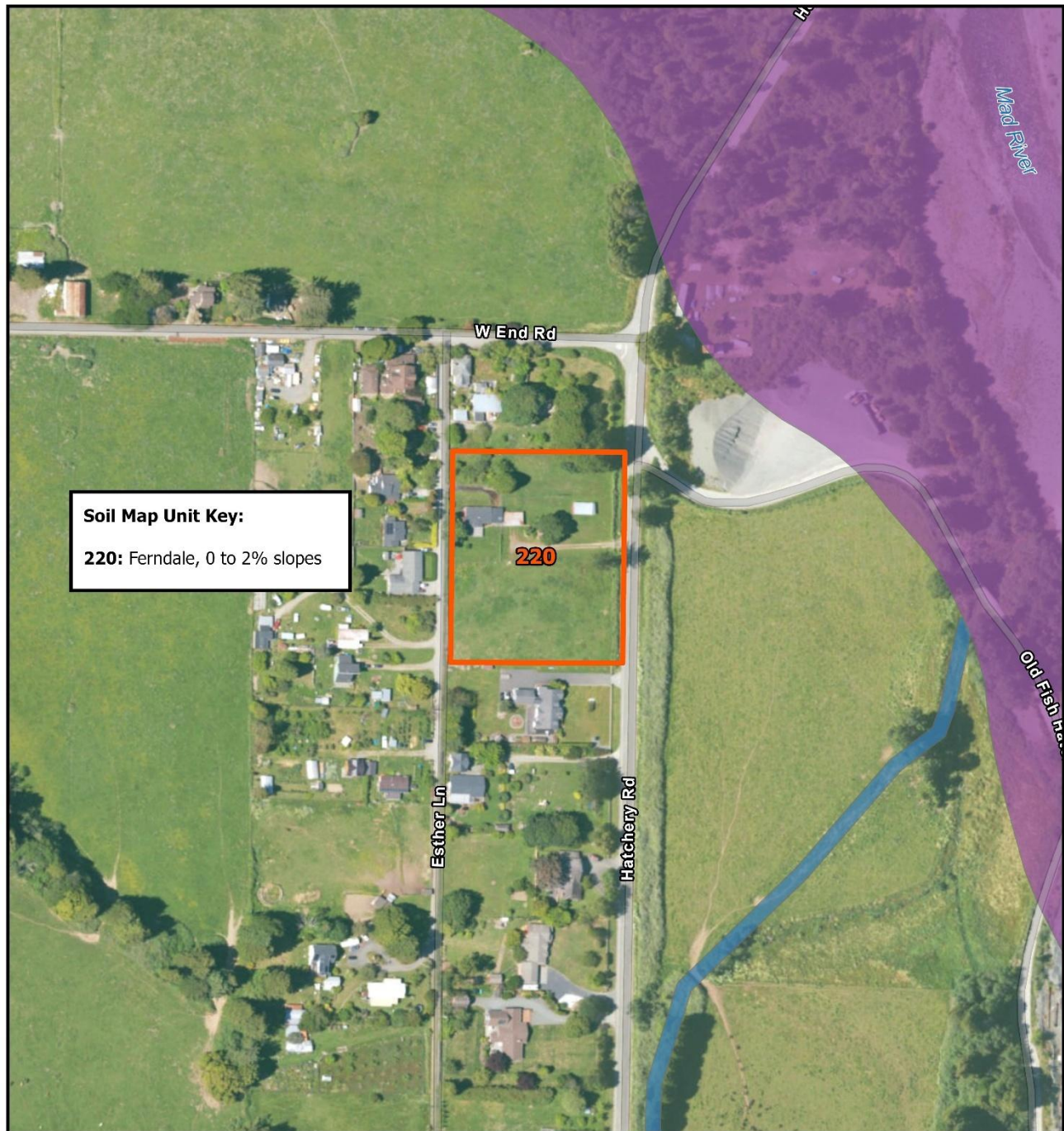




Map 3: Biological Survey Path



Map 3. This map shows the route of the general reconnaissance-level site assessment conducted April 24th, 2025.



Map 4. This map illustrates NWI wetland occurrences and NRCS soil classifications within and surrounding the Study Area.

Section 4 Results and Discussion

4.1 Study Area's Regional Alliances

According to the CALVEG database, vegetation within the Study Area is mapped as part of the *Annual Grasses and Forbs Alliance*, consistent with the observed conditions of an actively grazed horse pasture dominated by nonnative grasses and ruderal forbs. Surrounding areas are mapped as part of several other alliances, including *Grain and Crop Agriculture*, *Riparian Mixed Hardwood*, *Black Cottonwood*, *Red Alder*, *Redwood–Douglas Fir*, and *Willow (Shrub)* alliances. These mapped types represent habitat conditions present along the Mad River corridor and adjacent rural lands, but they do not occur within the Study Area itself (see Map 5).

No direct impacts are anticipated to vegetation alliances located outside the Study Area. Adjacent alliances were reviewed in the context of evaluating potential habitat connectivity and wildlife use, but the high degree of surrounding residential development and pastureland makes it unlikely that species dependent on intact riparian or forested habitats would rely on or regularly move through the Study Area.

For the purposes of this assessment, the *Annual Grasses and Forbs Alliance* was used as the primary indicator of on-site habitat conditions when evaluating potential direct impacts to plant and wildlife species. It is important to note that CALVEG classifications are derived from mapped vegetation datasets rather than direct field observations. While not a substitute for site-specific surveys, CALVEG mapping provides a useful regional context and informs evaluation of habitat conditions suitable for special-status species.

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 Grain and Crop Agriculture Alliance

Irrigated and dry crop agriculture typically consists of row plantings of herbaceous crops cultivated for human consumption and livestock use. Common cereal grains include wheat, sorghum, oats, millet, corn, and rye, while vegetable crops may include squash, celery, beans, peas, and other produce. Fields may also be planted with legumes such as alfalfa or clover, both as animal forage and to enhance soil fertility through nitrogen fixation. In addition, some crops are cultivated for multiple purposes, such as flax and cotton, which are valued for their seed oils (e.g., linseed and cottonseed), fiber production, and occasional medicinal applications.

4.1.3 Riparian Mixed Hardwood Alliance

The *Riparian Mixed Hardwood Alliance* is characterized by a diverse assemblage of riparian trees, including willows (*Salix* spp.), cottonwoods (*Populus* spp.), white alder (*Alnus rhombifolia*), red alder (*A. rubra*), and other associated hardwoods, with no single species dominant. Typically, at least three genera are present within a stand. This alliance occurs in moist lowland areas and along stream corridors throughout coastal and inland regions, mapped widely but discontinuously across 25 subsections of the Coast and Mountains Sections, from sea level to elevations of approximately 5,800 feet (1,768 m). Riparian mixed hardwood stands often occur adjacent to upland lower montane conifer forests, including Douglas-fir (*Pseudotsuga menziesii*), gray pine (*Pinus sabiniana*), and ponderosa pine (*P. ponderosa*). In the coastal ranges, they also intergrade with redwood (*Sequoia sempervirens*), tanoak (*Notholithocarpus densiflorus*), and various oak (*Quercus* spp.) woodlands.

4.1.4 Black Cottonwood Alliance

Black cottonwood (*Populus balsamifera* ssp. *trichocarpa*) occurs in select riparian areas within this region, particularly along the Eel River drainage. While often too small in extent to be mapped at coarse scales, this alliance has been documented in six subsections across three sections, at elevations up to approximately 4,400 feet (1,342 m). As a shade-intolerant species, black cottonwood depends on freshly deposited alluvial substrates for establishment and is typically found in even-aged stands that originate from episodic flood events.

Associated species may include tree and shrub willows (*Salix* spp.), Oregon ash (*Fraxinus latifolia*), and red and white alders (*Alnus rubra*, *A. rhombifolia*). Over time, older stands may transition to dominance by more shade-tolerant conifers such as Sitka spruce (*Picea sitchensis*), grand fir (*Abies grandis*), or western hemlock (*Tsuga heterophylla*), with black cottonwood persisting beneath the conifer canopy. Shrub associates may include vine maple (*Acer circinatum*) and hawthorn (*Crataegus* spp.), while herbaceous species such as coast nettle (*Urtica californica*) are also commonly present.

Regionally, black cottonwood is replaced by Fremont cottonwood (*Populus fremontii*) toward the south and east, while at higher elevations and in eastern California it occurs in association with quaking aspen (*P. tremuloides*) and white alder (*A. rhombifolia*).

4.1.5 Red Alder Alliance

Red alder (*Alnus rubra*) commonly forms stands in areas with seasonally flooded or permanently saturated soils, occurring in both alluvial flats and mesic upland positions. In Humboldt and Del Norte Counties, dense stands are frequent on moist slopes and riparian corridors, extending southward through nine subsections of the Coast Section and reaching elevations of up to ~3,000 feet (915 m).

Pure or nearly pure red alder stands often intermingle with conifers such as redwood (*Sequoia sempervirens*), Douglas-fir (*Pseudotsuga menziesii*), Sitka spruce (*Picea sitchensis*), and grand fir (*Abies grandis*). Because red alder is relatively short-lived, its dominance is frequently associated with disturbance, such as colonization following low-elevation logging, where it may occur with minor amounts of other hardwoods including bigleaf maple (*Acer macrophyllum*) and Oregon ash (*Fraxinus latifolia*).

The understory of red alder stands may support a variety of shrubs and herbaceous species, including chain fern (*Woodwardia fimbriata*), spikenard (*Aralia californica*), western burning bush (*Euonymus*

occidentalis), red-osier dogwood (*Cornus sericea*), Sitka alder (*Alnus viridis*), and vine maple (*Acer circinatum*). On inland sites, white alder (*Alnus rhombifolia*) may co-occur with or replace red alder as site conditions shift.

4.1.6 Redwood–Douglas Fir Alliance

The *Redwood–Douglas-fir Alliance*, composed of coast redwood (*Sequoia sempervirens*) and Pacific Douglas-fir (*Pseudotsuga menziesii*), typically occurs on protected upland slopes at elevations up to ~3,200 feet (976 m). This alliance has been mapped across fifteen subsections of the Coast Section. Its distribution corresponds closely with the redwood fog belt, where stable temperature and moisture regimes support redwood persistence. The eastern extent of this type is limited by increasingly variable temperatures and reduced humidity and soil moisture, which fall outside the ecological tolerance of redwood.

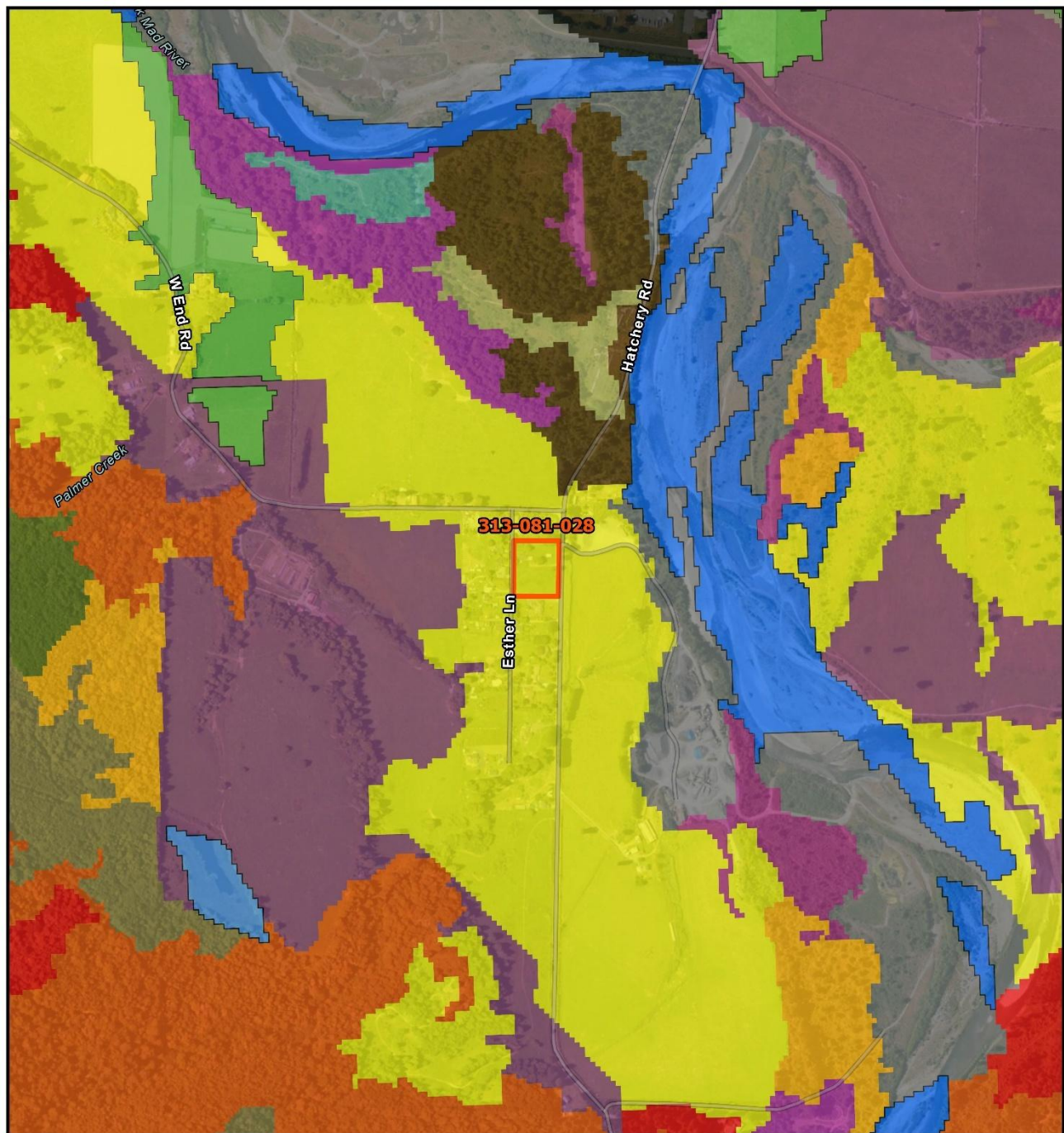
This alliance is especially prominent in the Northern and Coastal Franciscan, Fort Bragg Terraces, and Point Arena subsections. Associated tree species may include bishop pine (*Pinus muricata*), tanoak (*Notholithocarpus densiflorus*), red alder (*Alnus rubra*), madrone (*Arbutus menziesii*), California bay (*Umbellularia californica*), and Oregon white oak (*Quercus garryana*). California hazelnut (*Corylus cornuta* var. *californica*) frequently occurs as a common understory shrub.

4.1.7 Willow (Shrub) Alliance

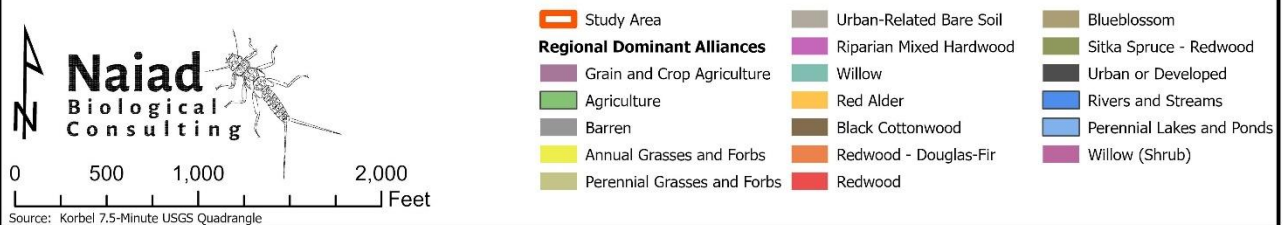
This alliance is mapped where shrub-form willows (*Salix* spp.) dominate the understory in riparian corridors, seeps, or meadow habitats. Because these sites are typically well-watered, shrub willow stands are widespread and have been documented broadly—across twelve subsections of the Coast Section, seventeen subsections of the Mountains Section, and three subsections of the Ranges Section—generally at elevations below ~6,800 feet (2,074 m).

This diverse alliance may include numerous native willow species, such as 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.

Shrub willow stands often occur in association with 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*), California bay (*Umbellularia californica*), and tree willows (*Salix* spp.). Common shrub associates may include coyote brush (*Baccharis pilularis*), salal (*Gaultheria shallon*), and California huckleberry (*Vaccinium ovatum*).



Map 5: CalVeg Regional Dominance Type



Map 5. 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

A reconnaissance-level biological survey of the Study Area was conducted on April 24, 2025, between 1:00 pm and 3:30 pm. Weather conditions during the survey were overcast, calm (0 mph wind), and cool, with an ambient temperature of 53 °F. The assessment focused on documenting vegetation communities, habitat conditions, and potential aquatic features, supported by a pre-field desktop review of aerial imagery, NRCS soils data, GPS field mapping, and photo documentation.

Antecedent precipitation conditions were evaluated using the Antecedent Precipitation Tool (APT v2.0.0) and 30-year historical data (1995–2025) from the Eureka WFO Woodley Island weather station. Rainfall totals for the 30-, 60-, and 90-day periods preceding the survey were all within or above the 70th percentile of long-term records, resulting in a weighted score of 15 (Table 1). This classification indicates wetter-than-normal conditions during the field visit, providing a conservative basis for evaluating hydrologic features and vegetative indicators.

Table 1. Precipitation data from the last 30 years (1995 – 2025) comparing recent field conditions to historical trends, with rainfall classified as dry, normal, or wet based on percentile thresholds.

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					
Date (30 Days Ending)	30 th Percentile (inches)	70 th 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 24	2.83	4.59	Apr 24, 2025	4.35	Normal	2	3	6
Mar 25	3.87	7.62	Mar 25, 2025	7.91	Normal	3	2	6
Feb 25	4.29	6.83	Feb 25, 2025	8.17	Normal	3	1	3
¹ All precipitation data is obtained from Weather Station: Eureka WFO Woodly Island 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 15, or Wet

Overall, the parcel reflects long-term disturbance from rural residential use, livestock grazing, and pasture maintenance. Vegetation is dominated by nonnative grasses and ruderal forbs, with scattered native species. A dense Himalayan blackberry (*Rubus armeniacus*) thicket is present along the eastern fence line, while a single mature coast redwood (*Sequoia sempervirens*) occurs in the northeast corner of Parcel B (Photo 6). Habitat value is generally low, though shrubby fenceline vegetation provides some potential nesting cover for birds. No wetlands, streams, or other aquatic features were observed within the project boundary.

4.2.1 General Study Area Habitat

The 2.5-acre Study Area is relatively flat, with elevations ranging from 92 to 100 feet above sea level. It is functionally divided into two portions:

- **Parcel A (~1.5 acres, developed):** Contains an existing single-family residence, detached garage, domestic well, septic system, and shed. Surrounding vegetation reflects residential landscaping and ruderal assemblages, including meadow foxtail (*Alopecurus pratensis*), tall fescue (*Festuca arundinacea* / *Schedonorus arundinaceus*), ripgut brome (*Bromus diandrus*), Yorkshire fog (*Holcus lanatus*), teasel (*Dipsacus fullonum*), buttercup (*Ranunculus* spp.), greater periwinkle (*Vinca major*), and scattered trees such as bigleaf maple (*Acer macrophyllum*), California bay (*Umbellularia californica*), and cultivated fruit trees. (Photo 1 & 2)
- **Parcel B (~1.0 acre, undeveloped pasture):** Actively grazed by horses and dominated by nonnative pasture grasses and forbs. Common species include sweet vernal grass (*Anthoxanthum odoratum*), English plantain (*Plantago lanceolata*), white clover (*Trifolium repens*), curly dock (*Rumex crispus*), sheep sorrel (*Rumex acetosella*), tall fescue (*Festuca arundinacea* / *Schedonorus arundinaceus*), lawn daisy (*Bellis perennis*), cutleaf geranium (*Geranium dissectum*), yellow glandweed (*Parentucellia viscosa*), bull thistle (*Cirsium vulgare*), subterranean clover (*Trifolium subterraneum*), and field mustard (*Brassica rapa*). Along the eastern fence line, Himalayan blackberry (*Rubus armeniacus*) forms dense thickets, intermixed with thimbleberry (*Rubus parviflorus*), honeysuckle (*Lonicera* spp.), and oso berry (*Oemleria cerasiformis*). This feature provides the highest structural habitat value on-site, supporting potential nesting habitat for passerine birds. (Photo 3 – 6)

Wildlife observed during the April 2025 survey included red-winged blackbird (*Agelaius phoeniceus*), house sparrow (*Passer domesticus*), red-tailed hawk (*Buteo jamaicensis*), great blue heron (*Ardea herodias*), turkey vulture (*Cathartes aura*), Eurasian collared-dove (*Streptopelia decaocto*), black phoebe (*Sayornis nigricans*), American crow (*Corvus brachyrhynchos*), Steller's jay (*Cyanocitta stelleri*), and acorn woodpecker (*Melanerpes formicivorus*). All species are common and regionally abundant.

4.2.2 Wetlands and Aquatic Resources

Desktop review of U.S. Fish and Wildlife Service National Wetlands Inventory (NWI) data did not identify any mapped wetland features within the parcel. Field verification confirmed that the Study Area does not contain streams, swales, depressional wetlands, or other aquatic resources. No surface water, wetland vegetation, or hydric soil indicators were observed during the April 2025 survey.

Although the parcel itself does not support aquatic resources, the Mad River forms a major hydrologic feature immediately east of the property, outside of the project boundary. This river strongly influences local groundwater and floodplain conditions but does not extend into the Study Area.

4.2.3 Study Area Soils

According to the NRCS Web Soil Survey, the parcel is mapped as Ferndale, 0 to 2 percent slopes (Map Unit 220). Ferndale soils occur on floodplain steps and low terraces, derived from alluvium of mixed sources. They are nearly level and deep, with a typical profile of silt loam to 50 inches underlain by fine sandy loam. Restrictive features occur below 80 inches, and soils are classified as well-drained with a

high available water capacity (~10.6 inches in the upper 60 inches). Permeability is moderately high to high (0.20–2.00 in/hr), and the water table typically lies 48–60 inches below the surface. Flooding is rare, and ponding does not occur.

Ferndale soils are designated Prime Farmland if irrigated and belong to Hydrologic Soil Group B. They are not hydric soils. However, the map unit may include small proportions of hydric inclusions such as Worswick (4%), Swainslough (4%), and Arlynda (2%) soils, which occur in depressions, backswamps, or meander scars. These inclusions were not observed within the Study Area during the April 2025 field survey.

The soil conditions are consistent with field observations of flat, well-drained pastureland dominated by nonnative grasses and forbs, with no evidence of wetland hydrology or vegetation. Detailed soil reports for all these units are provided in Appendix A.

4.5 Special-Status Species

Using CNDDDB, USFWS IPaC, and the CNPS Rare Plant Inventory, the records review for the Korbel 9-quad and adjacent quadrangles identified 77 special-status animal taxa—5 amphibians, 33 birds, 16 fishes, 7 insects, 11 mammals, 4 mollusks, and 1 reptile—summarized in Table 2, and 67 special-status plant species which are summarized in Table 3. Map 6 depicts CNDDDB-mapped occurrences within and around the Study Area.

Potential of Occurrence rankings in Tables 2–3 were assigned using regional records and the following site-specific filters: (1) elevation overlap (~92–100 ft); (2) site setting—rural-residential parcel with grazed horse pasture, blackberry-dominated fenceline, and scattered ornamental trees; (3) soils—Ferndale series (non-hydric, non-serpentine); (4) hydrology—no perennial surface water, riparian woodland, or vernal pools/seasonal depressions onsite; (5) current condition—long-term grazing and residential disturbance with ruderal cover and compacted soils; (6) proximity to mapped occurrences in the Blue Lake/Mad River corridor; and (7) survey timing/phenology—reconnaissance survey conducted April 24, 2025, during the spring bloom period, under normal antecedent precipitation.

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 a few disturbance-tolerant plants) 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 on Parcel B. 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 and recommended avoidance/minimization measures are provided in Tables 2–3.

Table 2. Special-Status Animal Species generated from the Korbel 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							
<i>Ascaphus truei</i>	Pacific tailed frog	None	None	SSC	Cold, fast, perennial streams with cobble/boulder substrate in shaded conifer/mixed forest; larvae require year-round flow with high dissolved oxygen.	None – No perennial rocky stream habitat occurs within the parcel; low-elevation pasture setting is unsuitable.	No Effect. Absent required stream microhabitat; the action involves no in-channel work and no ground disturbance.
<i>Plethodon elongatus</i>	Del Norte salamander	None	None	WL	Moist, shaded late-seral redwood/conifer forest with rock/talus and coarse woody debris; lungless salamander of talus/duff.	None to Low – Lacks shaded talus/rock outcrops or intact conifer forest microhabitats; pasture and yard dominate.	No Effect. Microhabitat elements (talus, deep duff, down wood) are absent in managed pasture/residential areas.
<i>Rana aurora</i>	northern red-legged frog	None	None	SSC	Ponds, marshes, off-channel pools, and slow streams with emergent vegetation; uses moist riparian corridors.	Low – No breeding habitat within parcel; proximity to the Mad River may allow occasional dispersal along the fenceline.	No Effect. No in-channel work or ground disturbance is proposed; absent onsite aquatic habitat, effects are discountable. If future development is proposed on Parcel B, conduct nesting/breeding-season checks near any seasonal ponding that may form after heavy rains.
<i>Rana boylei</i> pop. 1	foothill yellow-legged frog - north coast DPS	None	None	SSC	Shallow, rocky riffles of perennial rivers/streams with stable spring/summer hydrographs; eggs deposited on cobble.	None onsite – potential limited to the Mad River corridor off-parcel.	No Effect. The parcel contains no suitable rocky riffle habitat and no work is proposed in or near the river.
<i>Rhyacotriton variegatus</i>	southern torrent salamander	None	None	SSC	Cold perennial seeps/spring runs and saturated headwaters in shaded conifer forest;	None to Low – While Ferndale soils can host wet inclusions regionally, no seeps/springs were	No Effect. No perennial seep/headwater habitat onsite; subdivision is administrative with no soil or canopy disturbance.

					requires cool, saturated substrates.	observed within parcel and the site lacks shaded conifer cover.	
Birds							
<i>Accipiter cooperii</i>	Cooper's hawk	None	None	WL	Nests in riparian woodlands and mature forests; forages in open habitats and edges.	Low – Few mature trees onsite; limited foraging in pasture.	May Affect, But Not Likely to Adversely Affect. Potential limited to occasional foraging; nesting habitat is absent.
<i>Accipiter striatus</i>	Sharp-shinned hawk	None	None	WL	Nests in dense forests; forages along forest edges.	Low – Possible transient forager; no nesting habitat onsite.	No Effect. Parcel lacks dense forest nesting structure.
<i>Aquila chrysaetos</i>	Golden eagle	None	None	FP WL	Cliffs and open grasslands for nesting and foraging.	None – No cliffs or expansive open habitat onsite.	No Effect. Habitat requirements not present.
<i>Circus hudsonius</i>	Northern harrier	None	None	SSC	Forages over open grasslands and marshes; nests on ground in dense cover near wetlands.	Low – Pasture may support occasional foraging; nesting habitat absent.	May Affect, But Not Likely to Adversely Affect. Use limited to transient foraging.
<i>Elanus leucurus</i>	White-tailed kite	None	None	FP	Forages over open grasslands and fields; nests in tall trees near habitat.	Low – Pasture may provide foraging; limited tree nesting opportunities.	May Affect, But Not Likely to Adversely Affect. Pre-construction nesting surveys recommended if future development occurs.
<i>Haliaeetus leucocephalus</i>	Bald eagle	Delisted	Endangered	FP	Large waterbodies with fish; nests in tall trees near aquatic habitats.	None – Parcel lacks aquatic foraging habitat and nest trees.	No Effect. While the Mad River may provide regional foraging, the parcel itself is unsuitable.
<i>Brachyramphus marmoratus</i>	Marbled murrelet	Threatened	Endangered	-	Old-growth conifer forests for nesting; marine waters for foraging.	None – Parcel contains pasture and rural development only.	No Effect. Habitat type absent.
<i>Ardea herodias</i>	Great blue heron	None	None	-	Wetlands, rivers, lakes for foraging; rookeries in tall trees near water.	Low – Mad River provides regional habitat; parcel unsuitable.	No Effect. No aquatic or rookery habitat onsite.
<i>Botaurus lentiginosus</i>	American bittern	None	None	-	Freshwater marshes with emergent vegetation.	None – No marsh habitat onsite.	No Effect. Habitat requirements not present.

<i>Nycticorax nycticorax</i>	Black-crowned night heron	None	None	-	Wetlands, lakes, and rivers; roosts in trees near water.	Low – Mad River provides habitat regionally, not onsite.	No Effect. While the Mad River may provide regional foraging, the parcel itself is unsuitable.
<i>Charadrius montanus</i>	Mountain plover	None	None	SSC	Shortgrass prairies and plains.	None – Habitat absent from parcel and region.	No Effect. Habitat requirements not present
<i>Charadrius nivosus nivosus</i>	Western snowy plover	Threatened	None	SSC	Coastal beaches and flats.	None – No coastal habitat onsite.	No Effect. Habitat requirements not present
<i>Falco peregrinus anatum</i>	American peregrine falcon	Delisted	Delisted	-	Cliffs or tall structures; forages widely.	Low – May occasionally forage overhead.	No Effect. No nesting structures present.
<i>Antigone canadensis canadensis</i>	Lesser sandhill crane	None	None	SSC	Wet meadows and marshes; forages in fields.	Low – Could forage opportunistically during migration.	No Effect. No wetland habitat onsite.
<i>Antigone canadensis tabida</i>	Greater sandhill crane	None	Threatened	FP	Wet meadows and marshes; forages in fields.	Low – Could forage opportunistically during migration.	No Effect. No wetland habitat onsite.
<i>Riparia riparia</i>	Bank swallow	None	Threatened	-	Nests in vertical cut banks near water.	None – No cut banks onsite.	No Effect. Habitat requirements not present
<i>Icteria virens</i>	Yellow-breasted chat	None	None	SSC	Dense riparian thickets near water.	None – Habitat absent.	No Effect. Habitat requirements not present
<i>Thalasseus elegans</i>	Elegant tern	None	None	WL	Coastal estuaries; nests on sandy beaches.	None – No coastal habitat.	No Effect. Habitat requirements not present
<i>Pandion haliaetus</i>	Osprey	None	None	WL	Large waterbodies with fish; nests in tall snags or structures near water.	Low – Mad River provides foraging regionally; parcel unsuitable.	No Effect. While the Mad River may provide regional foraging, the parcel itself is unsuitable.
<i>Poecile atricapillus</i>	Black-capped chickadee	None	None	WL	Forests with tree cavities for nesting.	Low – Possible in surrounding forested areas; parcel unsuitable.	May Affect, But Not Likely to Adversely Affect. Pre-construction nesting surveys recommended if future development occurs.

<i>Ammodramus savannarum</i>	Grasshopper sparrow	None	None	SSC	Open grasslands with sparse vegetation.	Low – Pasture may provide marginal nesting/foraging.	May Affect, But Not Likely to Adversely Affect. Avoid breeding-season disturbance if developed.
<i>Passerculus sandwichensis alaudinus</i>	Bryant's savannah sparrow	None	None	SSC	Coastal marshes and saltgrass meadows.	None – Habitat absent onsite.	No Effect. Habitat requirements not present
<i>Pelecanus occidentalis californicus</i>	California brown pelican	Delisted	Delisted	-	Marine/estuarine habitats.	None – No marine habitat onsite.	No Effect. Habitat requirements not present
<i>Nannopterum auritum</i>	Double-crested cormorant	None	None	WL	Lakes, rivers, estuaries; nests colonially.	Low – Mad River provides regional habitat; parcel unsuitable.	No Effect. Habitat requirements not present
<i>Coturnicops noveboracensis</i>	Yellow rail	None	None	SSC	Wet meadows and marshes.	None – No wet meadow onsite.	No Effect. Habitat requirements not present
<i>Numenius americanus</i>	Long-billed curlew	None	None	WL	Forages in open fields; nests in grasslands.	Low – May forage in pasture; unlikely breeder.	May Affect, But Not Likely to Adversely Affect. Effects limited to transient foraging.
<i>Asio flammeus</i>	Short-eared owl	None	None	SSC	Marshes and tall grasslands.	None – Habitat absent.	No Effect. Habitat requirements not present
<i>Asio otus</i>	Long-eared owl	None	None	SSC	Dense riparian or conifer forests.	None – Habitat absent.	No Effect. Habitat requirements not present
<i>Athene cunicularia</i>	Burrowing owl	None	Candidate Endangered	SSC	Grasslands/ag fields with burrows for nesting.	Low – Pasture may provide marginal burrow habitat.	May Affect, But Not Likely to Adversely Affect. Pre-construction surveys recommended.
<i>Strix nebulosa</i>	Great gray owl	None	Endangered	-	Dense conifer forests and meadows.	None – Habitat absent.	No Effect. Habitat requirements not present
<i>Strix occidentalis caurina</i>	Northern Spotted Owl	Threatened	Threatened	-	Old-growth conifer forests.	None – Habitat absent.	No Effect. Habitat requirements not present

<i>Contopus cooperi</i>	Olive-sided flycatcher	None	None	SSC	Breeds in conifer forests and edges.	Low – May pass through during migration.	No Effect. Habitat requirements not present
<i>Empidonax traillii</i>	Willow flycatcher	None	Endangered	-	Dense riparian thickets with willow/alder.	None – Riparian habitat absent.	No Effect. Habitat requirements not present
Fishes							
<i>Acipenser medirostris</i> pop. 1	Green sturgeon – southern DPS	Threatened	None	SSC	Anadromous; spawns in deep, fast-flowing rivers with gravel/cobble substrates. Juveniles use estuaries and marine habitats.	None – No streams or riverine habitat onsite.	No Effect. No aquatic habitat occurs within the parcel; Mad River habitat outside the boundary will not be affected.
<i>Acipenser medirostris</i> pop. 2	Green sturgeon – northern DPS	None	None	SSC	Same requirements as southern DPS.	None – No aquatic habitat onsite.	No Effect. Parcel is upland pasture; subdivision has no pathway to affect riverine populations.
<i>Cottus asper</i> ssp.	Clear Lake prickly sculpin	None	None	SSC	Benthic species of lakes, rivers, and reservoirs with sandy or rocky substrates.	None – No aquatic features onsite.	No Effect. No suitable lacustrine or fluvial habitat present within parcel.
<i>Eucyclogobius newberryi</i>	Tidewater goby	Endangered	None	SSC	Brackish lagoons, estuaries, and coastal streams with sand substrate.	None – No estuarine or lagoon habitat onsite.	No Effect. Habitat absent; parcel disconnected from estuarine environments.
<i>Spirinchus thaleichthys</i>	Longfin smelt	None	Threatened	–	Anadromous; spawns in freshwater streams, juveniles rear in estuaries.	None – No streams onsite.	No Effect. No aquatic habitat occurs within parcel.
<i>Thaleichthys pacificus</i>	Eulachon	Threatened	None	SSC	Anadromous; spawns in large rivers with sand or gravel substrates.	None – No streams onsite.	No Effect. Mad River habitat is outside project boundary and unaffected.
<i>Entosphenus tridentatus</i>	Pacific lamprey	None	None	SSC	Anadromous; spawns in streams with gravel beds; larvae burrow in soft sediments.	None – No streams onsite.	No Effect. Parcel lacks aquatic features.
<i>Lampetra richardsoni</i>	Western brook lamprey	None	None	SSC	Resident lamprey of small streams with fine sediments and riffle habitat.	None – No streams onsite.	No Effect. Habitat absent within parcel.
<i>Oncorhynchus clarkii</i>	Coast cutthroat trout	None	None	SSC	Coastal streams and estuaries; spawns in	None – No streams onsite.	No Effect. No aquatic features present.

					small, gravel-bottom streams.		
<i>Oncorhynchus gorbusha</i>	Pink salmon	None	None	–	Anadromous; spawns in large coastal rivers and streams.	None – No streams onsite.	No Effect. Parcel contains no aquatic habitat.
<i>Oncorhynchus keta</i>	Chum salmon	None	None	–	Anadromous; requires lower river reaches with gravel/cobble bars.	None – No streams onsite.	No Effect. No habitat present.
<i>Oncorhynchus kisutch</i> pop. 2	Coho salmon – southern Oregon / northern California ESU	Threatened	Threatened	–	Anadromous; spawns in cold, perennial streams with clean gravel.	None – No perennial stream habitat onsite.	No Effect. Parcel lacks aquatic features; subdivision will not affect regional salmon habitat in the Mad River.
<i>Oncorhynchus mykiss irideus</i> pop. 48	Steelhead – northern California DPS summer-run	Threatened	Endangered	–	Anadromous; requires perennial streams with gravel spawning beds and ocean connectivity.	None – No streams onsite.	No Effect. No aquatic habitat within parcel; no impact pathway to Mad River steelhead populations.
<i>Oncorhynchus mykiss irideus</i> pop. 49	Steelhead – northern California DPS winter-run	Threatened	None	SSC	Same requirements as summer-run DPS.	None – No aquatic habitat onsite.	No Effect. Project does not affect riverine or anadromous habitat.
<i>Oncorhynchus tshawytscha</i> pop. 17	Chinook salmon – California coastal ESU	Threatened	None	SSC	Anadromous; spawns in large rivers with gravel riffles.	None – No streams onsite.	No Effect. Parcel contains no streams; no impact pathway.
<i>Oncorhynchus tshawytscha</i> pop. 30	Chinook salmon – upper Klamath and Trinity Rivers ESU	Candidate	Threatened	SSC	Anadromous; spawns in Klamath and Trinity River basins.	None – No aquatic habitat onsite.	No Effect. Study Area outside ESU range and lacks aquatic habitat.
Insects							
<i>Bombus caliginosus</i>	Obscure bumble bee	None	None	–	Coastal grasslands, scrub, and meadows with abundant flowering plants; nests in underground cavities.	Low – Pasture provides limited foraging resources; nesting unlikely.	No Effect. Foraging habitat is marginal and nesting substrates are absent; subdivision will not alter habitat availability.
<i>Bombus crotchii</i>	Crotch's bumble bee	None	Candidate Endangered	–	Grasslands and scrub habitats with diverse flowering plants; nests underground or in cavities.	Low – Pasture may provide some floral resources, but nesting unlikely.	No Effect. Parcel habitat is marginal; no direct or indirect effects anticipated.
<i>Bombus occidentalis</i>	Western bumble bee	None	Candidate Endangered	–	Open meadows, grasslands, and agricultural areas with	Low – Pasture provides some	No Effect. Habitat quality is poor and no ground disturbance is proposed.

					abundant flowering plants; nests in abandoned rodent burrows.	nectar sources; nesting unlikely.	
<i>Cicindela hirticollis gravida</i>	Sandy beach tiger beetle	None	None	–	Restricted to sandy coastal beaches and lakeshores with open substrate for burrowing.	None – No sandy beach habitat onsite.	No Effect. Habitat absent; species not expected to occur.
<i>Scaphinotus behrensi</i>	Behrens snail-eating beetle	None	None	–	Moist coastal forests, often in association with native snail populations.	None – No coastal forest habitat onsite.	No Effect. Habitat absent from Study Area.
<i>Cleptes humboldti</i>	Humboldt cuckoo wasp	None	None	–	Rare wasp associated with sandy or gravelly soils, often parasitizing other insects.	None – No specialized soil or host insect habitat onsite.	No Effect. Habitat absent.
<i>Atractelmis wawona</i>	Wawona riffle beetle	None	None	–	Aquatic beetle requiring clean, perennial riffles in streams and rivers.	None – No perennial streams or riffle habitat onsite.	No Effect. No aquatic habitat present within the parcel.
Mammals							
<i>Aplodontia rufa humboldtiana</i>	Humboldt mountain beaver	None	None	–	Dense, moist coastal forests with perennial water and deep soils.	None – No dense forest or perennial water onsite.	No Effect. Parcel lacks required moist forest habitat.
<i>Arborimus albipes</i>	White-footed vole	None	None	SSC	Moist riparian hardwood/conifer forests with understory cover.	None – Habitat absent onsite.	No Effect. Parcel contains no riparian forest.
<i>Arborimus pomo</i>	Sonoma tree vole	None	None	SSC	Old-growth Douglas-fir and conifer forests; nests in canopy.	None – No conifer forest onsite.	No Effect. Habitat absent; species not expected.
<i>Erethizon dorsatum</i>	North American porcupine	None	None	–	Forests and mixed woodland–shrubland with denning cavities.	Low – May occur in region but habitat onsite is marginal.	No Effect. Parcel provides no denning habitat; incidental use unlikely to be impacted.
<i>Martes caurina humboldtensis</i>	Humboldt marten	Threatened	Endangered	SSC	Late-seral coastal conifer forests with dense shrub cover.	None – No suitable forest onsite.	No Effect. Habitat absent; species not expected.
<i>Pekania pennanti</i>	Fisher	None	None	SSC	Mid- to late-seral conifer and mixed forests with cavities and large snags.	None – No forest habitat onsite.	No Effect. Parcel unsuitable for denning or foraging.
<i>Taxidea taxus</i>	American badger	None	None	SSC	Open grasslands and pastures with friable soils for burrowing.	Low – Pasture soils may provide marginal burrowing habitat.	May Affect, But Not Likely to Adversely Affect. If present, avoidance surveys before disturbance would prevent impacts.

<i>Bassariscus astutus raptor</i>	Northern California ringtail	None	None	FP	Forested riparian corridors with rocky outcrops and hollow trees.	None – No riparian forest onsite.	No Effect. Required habitat absent.
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	None	None	SSC	Roosts in caves, mines, and abandoned structures; forages over open habitats.	Low – Potential for roosting in nearby structures; foraging possible over pasture.	May Affect, But Not Likely to Adversely Affect. No roosting habitat identified onsite; pre-construction checks of structures recommended.
<i>Lasiurus cinereus</i>	Hoary bat	None	None	–	Solitary tree-roosting bat using forests and riparian zones; forages widely.	Low – Scattered trees may provide marginal roosting habitat.	May Affect, But Not Likely to Adversely Affect. Pre-construction roost surveys would avoid disturbance.
<i>Myotis evotis</i>	Long-eared myotis	None	None	–	Roosts in tree cavities, snags, and buildings; forages in riparian/forest areas.	Low – Scattered trees and structures may provide marginal roosting opportunities.	May Affect, But Not Likely to Adversely Affect. No direct roosts identified, but precautionary surveys warranted for future development.
Mollusks							
<i>Littorina subrotundata</i>	Newcomb's littorine snail	None	None	–	Marine gastropod restricted to intertidal rocky shores.	None – No marine habitat onsite.	No Effect. Parcel is inland and lacks intertidal habitat.
<i>Margaritifera falcata</i>	Western pearlshell	None	None	–	Freshwater mussel inhabiting cold, clean streams and rivers with coarse substrates.	None – No perennial streams onsite.	No Effect. Aquatic habitat absent; Mad River outside project boundary not impacted.
<i>Juga orickensis</i>	Redwood juga	None	None	–	Freshwater snail inhabiting streams with gravel/cobble substrates and cool, well-oxygenated water.	None – No aquatic habitat onsite.	No Effect. Parcel contains no stream features.
<i>Anodonta californiensis</i>	California floater	None	None	–	Freshwater mussel of ponds, lakes, and slow streams with soft sediments.	None – No ponds or streams onsite.	No Effect. Aquatic habitat absent within parcel.
Reptiles							
<i>Actinemys marmorata</i>	Northwestern pond turtle	Proposed Threatened	None	SSC	Freshwater ponds, rivers, and slow-moving streams with basking sites and adjacent uplands for nesting.	None – No ponds, streams, or aquatic habitat occur onsite.	No Effect. Although the Mad River provides suitable aquatic habitat regionally, it lies outside the project boundary. The subdivision will not affect riverine or nesting habitat.

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.

Table 3. Special-Status Plant Species generated from the Korbel 9 quad search and their Potential of Occurrence within the Study Area, as well as the Rationale / Impact Considerations for each species. California Rare Plant Rank and Threat Rank definitions provided below the table.

Scientific Name	Common Name	Federal Status	State Status	CA Rare Plant Rank	General Habitat	Micro Habitat	Elevation (ft)	Bloom Period	Potential of Occurrence (Study Area)	Rationale / Impact Considerations
<i>Abronia umbellata</i> var. <i>breviflora</i>	pink sand-verbena	None	None	1B.1	Coastal dunes	NA	0-35	Jun-Oct	None	**No Effect.** pink sand-verbena is associated with Coastal dunes at 0-35 ft. The Study Area lacks this habitat.
<i>Angelica lucida</i>	sea-watch	None	None	4.2	Coastal bluff scrub, Coastal dunes, Coastal scrub, Marshes and swamps (coastal salt)	NA	0-490	Apr-Sep	None	**No Effect.** sea-watch is associated with Coastal bluff scrub, Coastal dunes, Coastal scrub, Marshes and swamps (coastal salt) at 0-490 ft. The Study Area lacks this habitat.
<i>Antennaria suffrutescens</i>	evergreen everlasting	None	None	4.3	Lower montane coniferous forest (serpentinite)	NA	1640-5250	Jan-Jul	None	**No Effect.** evergreen everlasting is associated with Lower montane coniferous forest (serpentinite) at 1640-5250 ft. The Study Area (92–100 ft, disturbed pasture/residential) lacks this habitat.
<i>Astragalus rattanii</i> var. <i>rattanii</i>	Rattan's milk-vetch	None	None	4.3	Chaparral, Cismontane woodland, Lower montane coniferous forest	Gravelly, Streambanks	100-2705	Apr-Jul	None	**No Effect.** Rattan's milk-vetch is associated with Chaparral, Cismontane woodland, Lower montane coniferous forest at 100-2705 ft. The Study Area (92–100 ft, disturbed pasture/residential) lacks this habitat.
<i>Astragalus umbraticus</i>	Bald Mountain milk-vetch	None	None	2B.2	Cismontane woodland, Lower montane coniferous forest	Roadsides (sometimes)	490-4100	May-Aug	None	**No Effect.** Bald Mountain milk-vetch is associated with Cismontane woodland, Lower montane coniferous forest at 490-4100 ft. The Study Area (92–100 ft, disturbed pasture/residential) lacks this habitat.
<i>Bensoniella oregona</i>	bensoniella	None	CR	1B.1	Bogs and fens, Lower montane coniferous forest (openings), Meadows and seeps	Mesic	2955-4595	May-Jul	None	**No Effect.** bensoniella is associated with Bogs and fens, Lower montane coniferous forest (openings), Meadows and seeps at 2955-4595 ft. The Study Area (92–100 ft, disturbed

										pasture/residential) lacks this habitat.
<i>Calochortus uniflorus</i>	pink star-tulip	None	None	4.2	Coastal prairie, Coastal scrub, Meadows and seeps, North Coast coniferous forest	NA	35-3510	Apr-Jun	None	**No Effect.** pink star-tulip is associated with Coastal prairie, Coastal scrub, Meadows and seeps, North Coast coniferous forest at 35-3510 ft. The Study Area lacks this habitat.
<i>Cardamine angulata</i>	seaside bittercress	None	None	2B.2	Lower montane coniferous forest, North Coast coniferous forest	Streambanks	50-3000	(Jan)Mar-Jul	None	**No Effect.** seaside bittercress is associated with Lower montane coniferous forest, North Coast coniferous forest at 50-3000 ft. The Study Area lacks this habitat.
<i>Carex arcta</i>	northern clustered sedge	None	None	2B.2	Bogs and fens, North Coast coniferous forest (mesic)	NA	195-4595	Jun-Sep	None	**No Effect.** northern clustered sedge is associated with Bogs and fens, North Coast coniferous forest (mesic) at 195-4595 ft. The Study Area (92–100 ft, disturbed pasture/residential) lacks this habitat.
<i>Carex lyngbyei</i>	Lyngbye's sedge	None	None	2B.2	Marshes and swamps (brackish, freshwater)	NA	0-35	Apr-Aug	None	**No Effect.** Lyngbye's sedge is associated with Marshes and swamps (brackish, freshwater) at 0-35 ft. The Study Area (92–100 ft, disturbed pasture/residential) lacks this habitat.
<i>Carex praticola</i>	northern meadow sedge	None	None	2B.2	Meadows and seeps (mesic)	NA	0-10500	May-Jul	None	**No Effect.** northern meadow sedge is associated with Meadows and seeps (mesic) at 0-10500 ft. The Study Area lacks this habitat..
<i>Castilleja ambigua</i> var. <i>humboldtiensis</i>	Humboldt Bay owl's-clover	None	None	1B.2	Marshes and swamps (coastal salt)	NA	0-10	Apr-Aug	None	**No Effect.** Humboldt Bay owl's-clover is associated with Marshes and swamps (coastal salt) at 0-10 ft. The Study Area (92–100 ft, disturbed pasture/residential) lacks this habitat.
<i>Chloropyron maritimum</i> ssp. <i>palustre</i>	Point Reyes salty bird's-beak	None	None	1B.2	Marshes and swamps (coastal salt)	NA	0-35	Jun-Oct	None	**No Effect.** Point Reyes salty bird's-beak is associated with Marshes and swamps (coastal salt) at 0-35 ft. The Study Area (92–100 ft, disturbed

										pasture/residential) lacks this habitat.
<i>Chrysosplenium glechomifolium</i>	Pacific golden saxifrage	None	None	4.3	North Coast coniferous forest, Riparian forest	Roadsides (sometimes), Seeps (sometimes), Streambanks	35-1770	Feb-Jun	None	**No Effect.** Pacific golden saxifrage is associated with North Coast coniferous forest, Riparian forest at 35-1770 ft. The Study Area lacks this habitat.
<i>Collomia tracyi</i>	Tracy's collomia	None	None	4.3	Broadleafed upland forest, Lower montane coniferous forest	Rocky, Serpentine (sometimes)	985-6890	Jun-Jul	None	**No Effect.** Tracy's collomia is associated with Broadleafed upland forest, Lower montane coniferous forest at 985-6890 ft. The Study Area lacks this habitat.
<i>Coptis laciniata</i>	Oregon goldthread	None	None	4.2	Meadows and seeps, North Coast coniferous forest (streambanks)	Mesic	0-3280	(Feb)Mar - May(Sep -Nov)	None	**No Effect.** Oregon goldthread is associated with Meadows and seeps, North Coast coniferous forest (streambanks) at 0-3280 ft. The Study Area (92–100 ft, disturbed pasture/residential) lacks this habitat.
<i>Cornus unalaschensis</i>	bunchberry	None	None	2B.2	Bogs and fens, Meadows and seeps, North Coast coniferous forest	NA	195-6300	May-Jul	None	**No Effect.** bunchberry is associated with Bogs and fens, Meadows and seeps, North Coast coniferous forest at 195-6300 ft. The Study Area (92–100 ft, disturbed pasture/residential) lacks this habitat.
<i>Eleocharis parvula</i>	small spikerush	None	None	4.3	Marshes and swamps	NA	292-5714	(Apr)Jun-Aug(Sep)	None	**No Effect.** small spikerush is associated with Marshes and swamps at 292-5714 ft. The Study Area (92–100 ft, disturbed pasture/residential) lacks this habitat.
<i>Epilobium oreganum</i>	Oregon fireweed	None	None	1B.2	Bogs and fens, Lower montane coniferous forest, Meadows and seeps, Upper montane coniferous forest	Mesic	1640-7350	Jun-Sep	None	**No Effect.** Oregon fireweed is associated with Bogs and fens, Lower montane coniferous forest, Meadows and seeps, Upper montane coniferous forest at 1640-7350 ft. The Study Area (92–100 ft, disturbed pasture/residential) lacks this habitat.
<i>Epilobium septentrionale</i>	Humboldt County fuchsia	None	None	4.3	Broadleafed upland forest, North Coast coniferous forest	Rocky (sometimes),	150-5905	Jul-Sep	None	**No Effect.** Humboldt County fuchsia is associated with Broadleafed upland forest, North

						Sandy (sometimes)				Coast coniferous forest at 150-5905 ft. The Study Area (92–100 ft, disturbed pasture/residential) lacks this habitat.
<i>Erythronium oregonum</i>	giant fawn lily	None	None	2B.2	Cismontane woodland, Meadows and seeps	Openings, Rocky, Serpentine (sometimes)	330-3775	Mar-Jun(Jul)	None	**No Effect.** giant fawn lily is associated with Cismontane woodland, Meadows and seeps at 330-3775 ft. The Study Area (92–100 ft, disturbed pasture/residential) lacks this habitat.
<i>Erythronium revolutum</i>	coast fawn lily	None	None	2B.2	Bogs and fens, Broadleafed upland forest, North Coast coniferous forest	Mesic, Streambanks	0-5250	Mar-Jul(Aug)	None	**No Effect.** coast fawn lily is associated with Bogs and fens, Broadleafed upland forest, North Coast coniferous forest at 0-5250 ft. The Study Area lacks this habitat.
<i>Fissidens pauperculus</i>	minute pocket moss	None	None	1B.2	North Coast coniferous forest (damp coastal soil)	NA	35-3360	NA	None	**No Effect.** minute pocket moss is associated with North Coast coniferous forest (damp coastal soil) at 35-3360 ft. The Study Area lacks this habitat.
<i>Fritillaria purdyi</i>	Purdy's fritillary	None	None	4.3	Chaparral, Cismontane woodland, Lower montane coniferous forest	Serpentine (usually)	575-7400	Mar-Jun	None	**No Effect.** Purdy's fritillary is associated with Chaparral, Cismontane woodland, Lower montane coniferous forest at 575-7400 ft. The Study Area (92–100 ft, disturbed pasture/residential) lacks this habitat.
<i>Gilia capitata ssp. pacifica</i>	Pacific gilia	None	None	1B.2	Chaparral (openings), Coastal bluff scrub, Coastal prairie, Valley and foothill grassland	NA	15-5465	Apr-Aug	None	**No Effect.** Pacific gilia is associated with Chaparral (openings), Coastal bluff scrub, Coastal prairie, Valley and foothill grassland at 15-5465 ft. The Study Area lacks this habitat.
<i>Glehnia littoralis ssp. leiocarpa</i>	American glehnia	None	None	4.2	Coastal dunes	NA	0-65	May-Aug	None	**No Effect.** American glehnia is associated with Coastal dunes at 0-65 ft. The Study Area (92–100 ft, disturbed pasture/residential) lacks this habitat.
<i>Glyceria grandis</i>	American manna grass	None	None	2B.3	Bogs and fens, Marshes and swamps (lake margins,	NA	50-6495	Jun-Aug	None	**No Effect.** American manna grass is associated with Bogs and fens, Marshes and swamps (lake margins, streambanks), Meadows

					streambanks), Meadows and seeps					and seeps at 50-6495 ft. The Study Area lacks this habitat.
<i>Hemizonia congesta ssp. tracyi</i>	Tracy's tarplant	None	None	4.3	Coastal prairie, Lower montane coniferous forest, North Coast coniferous forest	Openings, Serpentine (sometimes)	395-3935	(Mar- Apr)May- Oct	None	**No Effect.** Tracy's tarplant is associated with Coastal prairie, Lower montane coniferous forest, North Coast coniferous forest at 395-3935 ft. The Study Area (92– 100 ft, disturbed pasture/residential) lacks this habitat.
<i>Hosackia gracilis</i>	harlequin lotus	None	None	4.2	Broadleafed upland forest, Cismontane woodland, Closed- cone coniferous forest, Coastal bluff scrub, Coastal prairie, Coastal scrub, Marshes and swamps, Meadows and seeps, North Coast coniferous forest, Valley and foothill grassland	Roadsides	0-2295	Mar-Jul	None	**No Effect.** harlequin lotus is associated with 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 at 0-2295 ft. The Study Area lacks this habitat.
<i>Iliamna bakeri</i>	Baker's globe mallow	None	None	4.2	Chaparral, Great Basin scrub, Lower montane coniferous forest (openings), Pinyon and juniper woodland	Burned areas (often), Volcanic	3280-8205	Jun-Sep	None	**No Effect.** Baker's globe mallow is associated with Chaparral, Great Basin scrub, Lower montane coniferous forest (openings), Pinyon and juniper woodland at 3280-8205 ft. The Study Area (92–100 ft, disturbed pasture/residential) lacks this habitat.
<i>Iliamna latibracteata</i>	California globe mallow	None	None	1B.2	Chaparral (montane), Lower montane coniferous forest, North Coast coniferous forest (mesic), Riparian scrub (streambanks)	Burned areas (often)	195-6560	Jun-Aug	None	**No Effect.** California globe mallow is associated with Chaparral (montane), Lower montane coniferous forest, North Coast coniferous forest (mesic), Riparian scrub (streambanks) at 195-6560 ft. The Study Area (92– 100 ft, disturbed pasture/residential) lacks this habitat.
<i>Lathyrus glandulosus</i>	sticky pea	None	None	4.3	Cismontane woodland	NA	985-2625	Apr-Jun	None	**No Effect.** sticky pea is associated with Cismontane

										woodland at 985-2625 ft. The Study Area (92–100 ft, disturbed pasture/residential) lacks this habitat.
<i>Lathyrus japonicus</i>	seaside pea	None	None	2B.1	Coastal dunes	NA	5-100	May-Aug	None	**No Effect.** seaside pea is associated with Coastal dunes at 5-100 ft. The Study Area lacks this habitat.
<i>Lewisia kelloggii</i> ssp. <i>kelloggii</i>	Kellogg's lewisia	None	None	3.2	Upper montane coniferous forest	Openings	4805-7760	(Apr)May-Aug	None	**No Effect.** Kellogg's lewisia is associated with Upper montane coniferous forest at 4805-7760 ft. The Study Area (92–100 ft, disturbed pasture/residential) lacks this habitat.
<i>Lilium kelloggii</i>	Kellogg's lily	None	None	4.3	Lower montane coniferous forest, North Coast coniferous forest	Openings, Roadsides	86-4074	(Feb)May-Aug	None	**No Effect.** Kellogg's lily is associated with Lower montane coniferous forest, North Coast coniferous forest at 86-4074 ft. The Study Area (92–100 ft, disturbed pasture/residential) lacks this habitat.
<i>Lilium occidentale</i>	western lily	FE	CE	1B.1	Bogs and fens, Coastal bluff scrub, Coastal prairie, Coastal scrub, Marshes and swamps (freshwater), North Coast coniferous forest (openings)	NA	5-605	Jun-Jul	None	**No Effect.** western lily is associated with Bogs and fens, Coastal bluff scrub, Coastal prairie, Coastal scrub, Marshes and swamps (freshwater), North Coast coniferous forest (openings) at 5-605 ft. The Study Area (92–100 ft, disturbed pasture/residential) lacks this habitat.
<i>Lilium rubescens</i>	redwood lily	None	None	4.2	Broadleafed upland forest, Chaparral, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest	Roadsides (sometimes), Serpentine (sometimes)	100-6265	(Mar)Apr-Aug(Sep)	None	**No Effect.** redwood lily is associated with Broadleafed upland forest, Chaparral, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest at 100-6265 ft. The Study Area (92–100 ft, disturbed pasture/residential) lacks this habitat.
<i>Lilium washingtonianum</i> ssp. <i>purpurascens</i>	purple-flowered Washington lily	None	None	4.3	Chaparral, Lower montane coniferous forest, Upper	Serpentine (often)	230-9025	Jun-Aug	None	**No Effect.** purple-flowered Washington lily is associated with Chaparral, Lower montane coniferous forest, Upper montane coniferous forest at 230-9025 ft.

					montane coniferous forest					The Study Area (92–100 ft, disturbed pasture/residential) lacks this habitat.
<i>Listera cordata</i>	heart-leaved twayblade	None	None	4.2	Bogs and fens, Lower montane coniferous forest, North Coast coniferous forest	NA	15-4495	Feb-Jul	None	**No Effect.** heart-leaved twayblade is associated with Bogs and fens, Lower montane coniferous forest, North Coast coniferous forest at 15-4495 ft. The Study Area lacks this habitat.
<i>Lycopodium clavatum</i>	running-pine	None	None	4.1	Lower montane coniferous forest (mesic), Marshes and swamps, North Coast coniferous forest (mesic)	Edges (often), Openings, Roadsides	150-4020	Jun-Aug(Sep)	None	**No Effect.** running-pine is associated with Lower montane coniferous forest (mesic), Marshes and swamps, North Coast coniferous forest (mesic) at 150-4020 ft. The Study Area (92–100 ft, disturbed pasture/residential) lacks this habitat.
<i>Microseris borealis</i>	northern microseris	None	None	2B.1	Bogs and fens, Lower montane coniferous forest, Meadows and seeps	Mesic	3280-6560	Jun-Sep	None	**No Effect.** northern microseris is associated with Bogs and fens, Lower montane coniferous forest, Meadows and seeps at 3280-6560 ft. The Study Area (92–100 ft, disturbed pasture/residential) lacks this habitat.
<i>Mitellastrum caulescens</i>	leafy-stemmed mitrewort	None	None	4.2	Broadleafed upland forest, Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest	Mesic, Roadsides (sometimes)	15-5580	(Mar)Apr-Oct	None	**No Effect.** leafy-stemmed mitrewort is associated with Broadleafed upland forest, Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest at 15-5580 ft. The Study Area lacks this habitat.
<i>Monotropa uniflora</i>	ghost-pipe	None	None	2B.2	Broadleafed upland forest, North Coast coniferous forest	NA	35-1805	Jun-Aug(Sep)	None	**No Effect.** ghost-pipe is associated with Broadleafed upland forest, North Coast coniferous forest at 35-1805 ft. The Study Area lacks this habitat.
<i>Montia howellii</i>	Howell's montia	None	None	2B.2	Meadows and seeps, North Coast coniferous forest, Vernal pools	Roadsides (sometimes), Vernal Mesic	0-2740	(Feb)Mar-May	None	**No Effect.** Howell's montia is associated with Meadows and seeps, North Coast coniferous forest, Vernal pools at 0-2740 ft. The Study Area lacks this habitat.

<i>Noccaea fendleri</i> ssp. <i>californica</i>	Kneeland Prairie pennycress	FE	None	1B.1	Coastal prairie (serpentinite)	NA	2495-2675	May-Jun	None	**No Effect** Kneeland Prairie pennycress can occur in Coastal prairie (serpentinite) at 2495-2675 ft. The Study Area (92–100 ft, disturbed pasture/residential) lacks this habitat.
<i>Oenothera wolfii</i>	Wolf's evening-primrose	None	None	1B.1	Coastal bluff scrub, Coastal dunes, Coastal prairie, Lower montane coniferous forest	Mesic (usually), Sandy	26-5076	May-Oct	None	**No Effect.** Wolf's evening-primrose is associated with Coastal bluff scrub, Coastal dunes, Coastal prairie, Lower montane coniferous forest at 26-5076 ft. The Study Area (92–100 ft, disturbed pasture/residential) lacks this habitat.
<i>Packera bolanderi</i> var. <i>bolanderi</i>	seacoast ragwort	None	None	2B.2	Coastal scrub, North Coast coniferous forest	Roadsides (sometimes)	100-2135	(Jan-Apr)May-Jul(Aug)	None	**No Effect.** seacoast ragwort is associated with Coastal scrub, North Coast coniferous forest at 100-2135 ft. The Study Area (92–100 ft, disturbed pasture/residential) lacks this habitat.
<i>Piperia candida</i>	white-flowered rein orchid	None	None	1B.2	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest	Serpentine (sometimes)	100-4300	(Mar-Apr)May-Sep	None	**No Effect.** white-flowered rein orchid is associated with Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest at 100-4300 ft. The Study Area (92–100 ft, disturbed pasture/residential) lacks this habitat.
<i>Pityopus californicus</i>	California pinefoot	None	None	4.2	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest	Mesic	50-7300	(Mar-Apr)May-Aug	None	**No Effect.** California pinefoot is associated with Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest at 50-7300 ft. The Study Area lacks this habitat.
<i>Platanthera stricta</i>	slender bog-orchid	None	None	4.2	Lower montane coniferous forest, Meadows and seeps	Mesic	3280-7545	May-Aug	None	**No Effect.** slender bog-orchid is associated with Lower montane coniferous forest, Meadows and seeps at 3280-7545 ft. The Study Area (92–100 ft, disturbed pasture/residential) lacks this habitat.

<i>Platismatia lacunosa</i>	crinkled rag lichen	None	None	2B.3	North Coast coniferous forest, Riparian woodland	NA	65-6560	NA	None	**No Effect.** crinkled rag lichen is associated with North Coast coniferous forest, Riparian woodland at 65-6560 ft. The Study Area lacks this habitat.
<i>Pleuropogon refractus</i>	nodding semaphore grass	None	None	4.2	Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest, Riparian forest	Mesic	0-5250	(Feb-Mar)Apr-Aug	None	**No Effect.** nodding semaphore grass is associated with Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest, Riparian forest at 0-5250 ft. The Study Area lacks this habitat.
<i>Ribes laxiflorum</i>	trailing black currant	None	None	4.3	North Coast coniferous forest	Roadsides (sometimes)	15-4575	Mar-Jul(Aug)	None	**No Effect.** trailing black currant is associated with North Coast coniferous forest at 15-4575 ft. The Study Area (disturbed pasture/residential) lacks this habitat.
<i>Sanguisorba officinalis</i>	great burnet	None	None	2B.2	Bogs and fens, Broadleafed upland forest, Marshes and swamps, Meadows and seeps, North Coast coniferous forest, Riparian forest	Serpentine (often)	195-4595	Jul-Oct	None	**No Effect.** great burnet is associated with Bogs and fens, Broadleafed upland forest, Marshes and swamps, Meadows and seeps, North Coast coniferous forest, Riparian forest at 195-4595 ft. The Study Area (92-100 ft, disturbed pasture/residential) lacks this habitat.
<i>Sanicula tracyi</i>	Tracy's sanicle	None	None	4.2	Cismontane woodland, Lower montane coniferous forest, Upper montane coniferous forest	Openings	330-5200	Apr-Jul	None	**No Effect.** Tracy's sanicle is associated with Cismontane woodland, Lower montane coniferous forest, Upper montane coniferous forest at 330-5200 ft. The Study Area (92-100 ft, disturbed pasture/residential) lacks this habitat.
<i>Sedum flavidum</i>	pale yellow stonecrop	None	None	4.3	Broadleafed upland forest, Chaparral, Lower montane coniferous forest, Upper montane coniferous forest	Openings, Rocky, Serpentine, Talus, Volcanic	1165-7070	May-Jul	None	**No Effect.** pale yellow stonecrop is associated with Broadleafed upland forest, Chaparral, Lower montane coniferous forest, Upper montane coniferous forest at 1165-7070 ft. The Study Area (92-100 ft, disturbed pasture/residential) lacks this habitat.

<i>Sedum laxum</i> <i>ssp. heckneri</i>	Heckner's stonecrop	None	None	4.3	Lower montane coniferous forest, Upper montane coniferous forest	Gabbroic (sometimes), Serpentine (sometimes)	330-6890	Jun-Jul	None	**No Effect.** Heckner's stonecrop is associated with Lower montane coniferous forest, Upper montane coniferous forest at 330-6890 ft. The Study Area (92–100 ft, disturbed pasture/residential) lacks this habitat.
<i>Sidalcea</i> <i>malachroides</i>	maple-leaved checkerbloom	None	None	4.2	Broadleafed upland forest, Coastal prairie, Coastal scrub, North Coast coniferous forest, Riparian woodland	Disturbed areas (often)	0-2395	(Mar)Apr- Aug	Low	** May Affect, But Not Likely to Adversely Affect.** maple-leaved checkerbloom is associated with Broadleafed upland forest, Coastal prairie, Coastal scrub, North Coast coniferous forest, Riparian woodland often in disturbed area, at 0-2395 ft. Marginal conditions may be present along disturbed edges and pasture. If future development is proposed, focused surveys should occur.
<i>Sidalcea</i> <i>malviflora ssp.</i> <i>patula</i>	Siskiyou checkerbloom	None	None	1B.2	Coastal bluff scrub, Coastal prairie, North Coast coniferous forest	Roadsides (often)	50-4035	(Mar- Apr)May- Aug	None	**No Effect.** Siskiyou checkerbloom is associated with Coastal bluff scrub, Coastal prairie, North Coast coniferous forest at 50-4035 ft. The Study Area (92–100 ft, disturbed pasture/residential) lacks this habitat.
<i>Sidalcea</i> <i>oregana ssp.</i> <i>eximia</i>	coast checkerbloom	None	None	1B.2	Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest	NA	15-4395	Jun-Aug	Low	** May Affect, But Not Likely to Adversely Affect.** coast checkerbloom is associated with Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest at 15-4395 ft. Marginal conditions may be present along disturbed edges and pasture. If future development is proposed, focused surveys should occur.
<i>Spergularia</i> <i>canadensis var.</i> <i>occidentalis</i>	western sand-spurrey	None	None	2B.1	Marshes and swamps (coastal salt)	NA	0-10	Jun-Aug	None	**No Effect.** western sand- spurrey is associated with Marshes and swamps (coastal salt) at 0-10 ft. The Study Area (92–100 ft, disturbed

										pasture/residential) lacks this habitat.
<i>Thermopsis robusta</i>	robust false lupine	None	None	1B.2	Broadleafed upland forest, North Coast coniferous forest	NA	490-4920	May-Jul	None	**No Effect.** robust false lupine is associated with Broadleafed upland forest, North Coast coniferous forest at 490-4920 ft. The Study Area (92–100 ft, disturbed pasture/residential) lacks this habitat.
<i>Tiarella trifoliata</i> var. <i>trifoliata</i>	trifoliolate laceflower	None	None	3.2	Lower montane coniferous forest, North Coast coniferous forest	Edges, Streambanks	560-4920	(May)Jun-Aug	None	**No Effect.** trifoliolate laceflower is associated with Lower montane coniferous forest, North Coast coniferous forest at 560-4920 ft. The Study Area (92–100 ft, disturbed pasture/residential) lacks this habitat.
<i>Trichodon cylindricus</i>	cylindrical trichodon	None	None	2B.2	Broadleafed upland forest, Meadows and seeps, Upper montane coniferous forest	Roadsides, Sandy	165-6570		None	**No Effect.** cylindrical trichodon is associated with Broadleafed upland forest, Meadows and seeps, Upper montane coniferous forest at 165-6570 ft. The Study Area (92–100 ft, disturbed pasture/residential) lacks this habitat.
<i>Usnea longissima</i>	Methuselah's beard lichen	None	None	4.2	Broadleafed upland forest, North Coast coniferous forest	NA	165-4790	NA	None	**No Effect.** Methuselah's beard lichen is associated with Broadleafed upland forest, North Coast coniferous forest at 165-4790 ft. The Study Area (92–100 ft, disturbed pasture/residential) lacks this habitat.
<i>Viola palustris</i>	alpine marsh violet	None	None	2B.2	Bogs and fens (coastal), Coastal scrub (mesic)	NA	0-490	Mar-Aug	None	**No Effect.** alpine marsh violet is associated with Bogs and fens (coastal), Coastal scrub (mesic) at 0-490 ft. The Study Area lacks this habitat.
<i>Wyethia longicaulis</i>	Humboldt County wyethia	None	None	4.3	Broadleafed upland forest, Coastal prairie, Lower montane coniferous forest	Roadsides (sometimes)	2460-5005	May-Jul	None	**No Effect.** Humboldt County wyethia is associated with Broadleafed upland forest, Coastal prairie, Lower montane coniferous forest at 2460-5005 ft. The Study Area (92–100 ft, disturbed pasture/residential) lacks this habitat.

Special-status plant species include those that are listed under the Endangered Species Act (ESA) and/or the California Endangered Species Act (CESA), as well as species that meet the definition of rare or endangered under the California Environmental Quality Act (CEQA).

- **FE** – Federally Endangered (ESA)
- **FT** – Federally Threatened (ESA)
- **CE** – California Endangered (CESA)
- **CT** – California Threatened (CESA)
- **CR** – California Rare (legacy designation under the Native Plant Protection Act and early CESA; no longer an active category, but still shown in CNPS and CNDDDB databases for historical consistency)

CDFW recommends that plant species ranked under the California Rare Plant Rank (CRPR) system be considered during CEQA review of proposed projects, particularly those classified as 1A, 1B, 2A, and 2B, as well as other species of local or biological significance.

Plants in CRPR Ranks 3 and 4, which are under review or on the watch list, are also evaluated by Naiad Biological Consulting. These species may require CEQA consideration if potential or cumulative impacts pose a risk to their populations.

California Rare Plant Ranks (CRPR):

1A: Plants with a California Rare Plant Rank of 1A are presumed extirpated or extinct because they have not been seen or collected in the wild in California for many years.

1B: Plants with a California Rare Plant Rank of 1B are rare throughout their range with many of them endemic to California.

2A: Plants with a California Rare Plant Rank of 2A are presumed extirpated because they have not been observed or documented in California for many years.

2B: Except for being common beyond the boundaries of California, plants with a California Rare Plant Rank of 2B would have been ranked 1B.

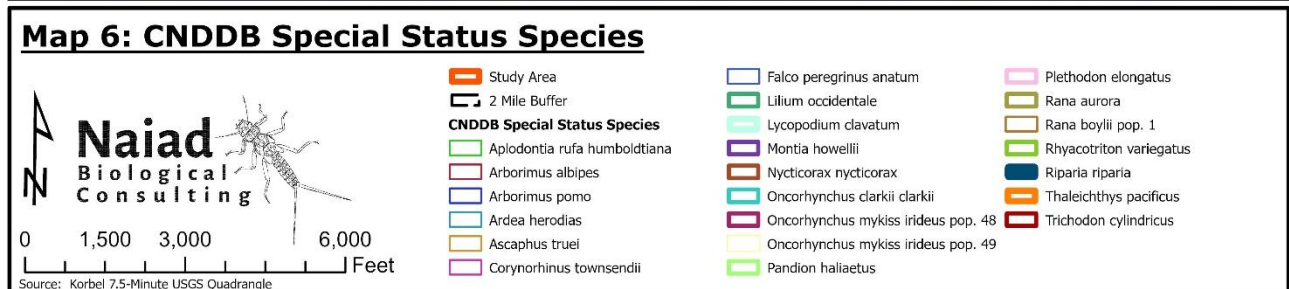
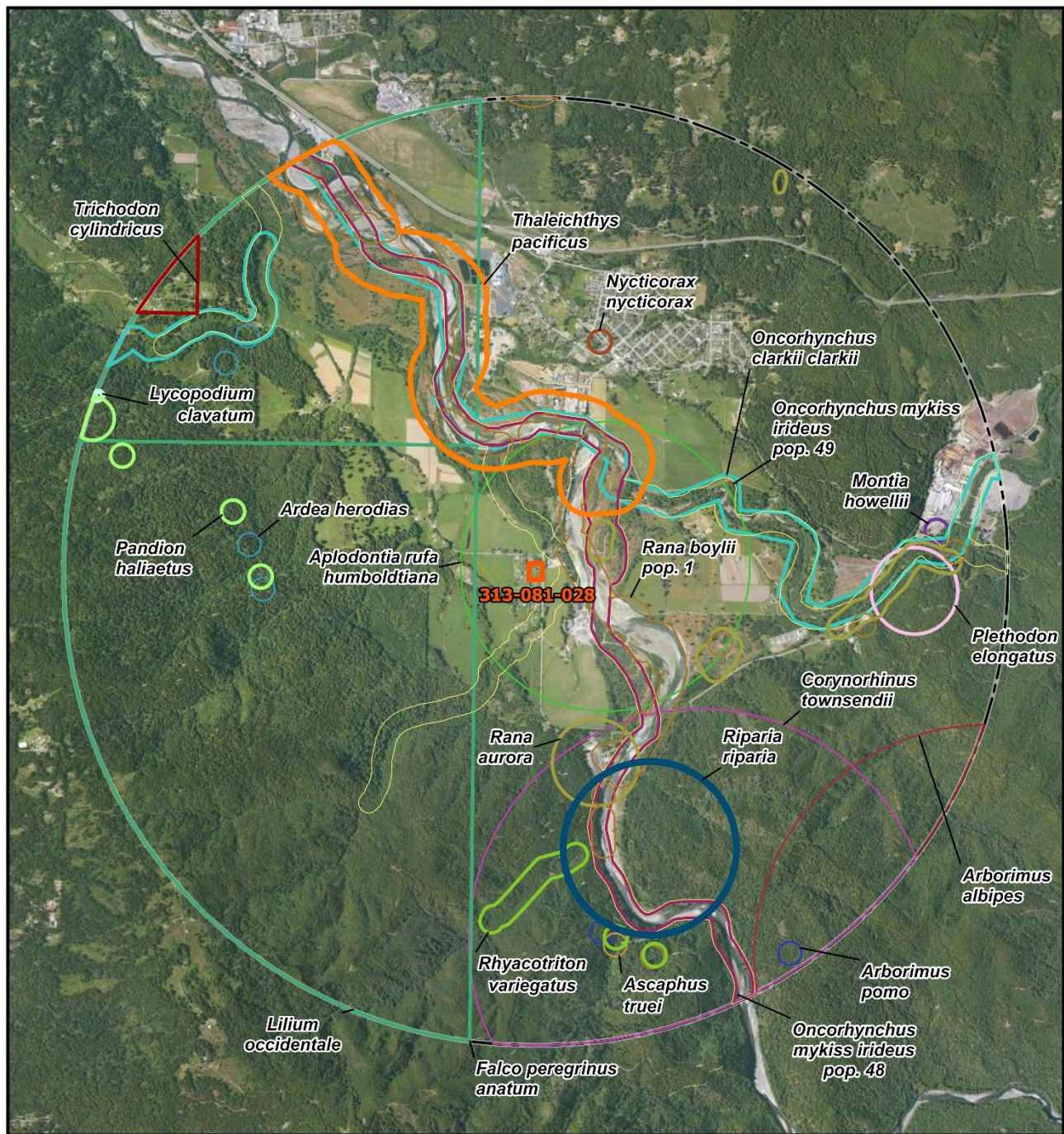
3: Plants with a California Rare Plant Rank of 3 are united by one common theme – we lack the necessary information to assign them to one of the other ranks or to reject them.

4: Plants with a California Rare Plant Rank of 4 are of limited distribution or infrequent throughout a broader area in California, and their status should be monitored regularly.

Threat Ranks:

Ranks at each level also include a threat rank (e.g., CRPR 4.3) and are determined as follows:

- **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% 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)



Map 6. This map displays California Natural Diversity Database (CNDDDB) records, showing known occurrences of special-status species within a 2-mile radius of the Study Area.

4.5.1 Special-Status Animal Species

This section synthesizes the records review and the potential for special-status wildlife to occur within the 2.5-acre Study Area, as well as the avoidance/minimization measures (AMMs) that would apply if later construction is proposed on Parcel B. Likelihood of occurrence determinations follow Table 2.

4.5.1.1 Records Review (CNDDDB / Regional Context)

A CNDDDB query returned one mapped occurrence overlapping the Study Area for Humboldt mountain beaver (*Aplodontia rufa humboldtiana*), based on museum collections from 1951–1955 attributed to the Mad River / “1 mile south of Blue Lake” locale (Map 6; Appendix C: Occurrence Report 1). The polygon carries coarse spatial accuracy ($\approx 3/5$ mile), explaining the overlap (Occurrence #10; last observed 1955). Given the age of the record, the buffered mapping, and the lack of required dense, moist forest/understory habitat on the parcel (present conditions are developed yard/pasture), the species is not expected to occur on-site.

For Northern Spotted Owl (*Strix occidentalis caurina*), the nearest Activity Center (AC HUM0318) is located approximately 0.92 miles west-southwest of the Study Area (Map 7; Appendix C: Occurrence Report 2). The Study Area itself supports only disturbed pasture and residential landscaping and does not provide suitable nesting, roosting, or foraging habitat for NSO. No activities associated with the current subdivision, nor reasonably foreseeable future development of Parcel B, would be expected to impact NSOs or their habitat.

No other CNDDDB occurrences fall within the parcel boundary; regional listings (amphibians, raptors, bats, invertebrates, anadromous fishes) are associated with habitats absent from the site (streams, riparian forest, marsh).

4.5.1.2 Potential for Occurrence and Rationale / Impact Considerations

Amphibians. Special-status amphibians such as northern red-legged frog (*Rana aurora*), foothill yellow-legged frog (*Rana boylei*), southern torrent salamander (*Rhyacotriton variegatus*), and Pacific tailed frog (*Ascaphus truei*) require perennial aquatic habitats or moist, shaded headwaters. The Study Area lacks ponds, streams, or saturated forested microhabitats. Potential for occurrence is None to Low, and the subdivision will have No Effect on these species.

Birds. Raptors and grassland-associated birds (e.g., northern harrier, white-tailed kite, grasshopper sparrow, long-billed curlew) may occasionally forage over the pasture or roost in nearby trees. The blackberry thicket along the fence line offers limited passerine nesting opportunities. Burrowing owl (*Athene cunicularia*), although assigned “Low” potential in Table 2, is extremely unlikely to occur due to the parcel’s small size, compacted soils, and lack of ground squirrel colonies. Overall potential is Low, with a determination of No Effect under subdivision; if future construction overlaps the nesting season, impacts would be May Affect, But Not Likely to Adversely Affect with implementation of BIO-1.

- **Northern Spotted Owl (NSO).** The nearest documented NSO activity center (AC HUM0318) lies approximately 0.92 miles west-southwest of the Study Area (Map 7). The parcel itself consists of pasture and residential landscaping and lacks the late-seral coniferous habitat required for nesting, roosting, or foraging. Potential for occurrence is None, and the subdivision and any foreseeable future residential development on Parcel B will have No Effect on NSO.

Fishes. Anadromous salmonids and other special-status fishes documented in the Mad River (e.g., coho salmon, steelhead, green sturgeon) require perennial streams with gravel substrates. The Study Area is entirely upland with no aquatic features. Potential for occurrence is None, and the subdivision will have No Effect on special-status fishes.

Insects. Special-status bumble bees (e.g., obscure, Crotch's, and western bumble bees) may forage opportunistically on seasonal nectar resources within the pasture. However, disturbed soils and lack of native forbs limit nesting potential. Potential for occurrence is Low, with a determination of No Effect under subdivision; if future development involves vegetation removal or herbicide use, implementation of BIO-5 would be appropriate.

Mammals.

- **Mountain beaver (*Aplodontia rufa humboldtiana*):** A historical CNDDDB record occurs in the Blue Lake area, but required moist coastal forest habitat is absent. Potential for occurrence is **None**, and the subdivision will have No Effect.
- **American badger (*Taxidea taxus*):** Friable soils and open grasslands are required for denning. The parcel's small size, compacted/grazed soils, and urban setting make denning highly unlikely, though transient use is possible. Potential is Low; future construction would warrant avoidance surveys (BIO-3).
- **North American porcupine (*Erethizon dorsatum*):** Present regionally but dependent on forest cover and denning cavities. The parcel lacks these elements, making occurrence Low. Subdivision will have No Effect.
- **Bats (Townsend's big-eared bat, hoary bat, long-eared myotis):** The parcel provides limited roosting opportunities in scattered yard trees and structures, but foraging may occur overhead. Potential for occurrence is Low; subdivision will have No Effect. If trees or structures are modified in the future, BIO-4 roost checks would be warranted.

Mollusks. Freshwater mussels and snails such as western pearlshell (*Margaritifera falcata*) require perennial streams with coarse substrates. No aquatic features occur within the parcel. Potential for occurrence is None, and the subdivision will have No Effect.

Reptiles. Special-status reptiles such as northwestern pond turtle (*Actinemys marmorata*) and coast horned lizard (*Phrynosoma blainvillii*) require aquatic features or undisturbed open scrub habitats. Neither is present within the parcel. Common disturbance-tolerant species may occur, but potential for special-status reptiles is Low. Determination: No Effect for subdivision; if future ground disturbance occurs, BIO-2 should be implemented.

4.5.1.3 Wildlife Movement and Connectivity

The Study Area is small (2.5 acres), previously disturbed, and surrounded by residential development and county-maintained roads. It provides only local-scale habitat functions (foraging, common passerine nesting in blackberry thickets) and does not function as a regional corridor, pinch point, or stepping stone. No streams, ravines, or riparian corridors occur on-site.

4.5.1.4 Avoidance and Minimization Measures (AMMs)

Because the subdivision does not involve ground disturbance or vegetation removal, no AMMs are triggered at this time. If a future project on Parcel B proposes construction or vegetation removal, the following trigger-based AMMs would apply:

- **BIO-1 (Nesting Birds and Raptors):** Avoid Feb–Aug vegetation clearing; conduct surveys if unavoidable.
- **BIO-2 (Reptiles and Small Vertebrates):** Clearance checks; wildlife-safe trenching.
- **BIO-3 (Burrowing Mammals - including badger/ground squirrels):** Avoidance surveys if ground disturbance is proposed.
- **BIO-4 (Bat Roost Protection):** Pre-disturbance roost checks if tree/structure removal is proposed.
- **BIO-5 (Pollinator Protection):** Protect floral resources; reseed edges with pollinator-friendly mix.
- **BIO-6 (Limits of Disturbance):** Fence and stake construction limits.
- **BIO-7 (Worker Environmental Awareness):** Training on species, buffers, and encounter protocols.
- **BIO-8 (BMPs – Erosion/Spill Controls):** While BMPs are generally recommended where construction occurs adjacent to aquatic habitats to prevent sedimentation and runoff, in this case the Study Area is flat, bordered by county-maintained roads, and surrounded by residential development, with no direct pathway to nearby aquatic features (e.g., the Mad River). Thus, BMPs are not considered a concern for this subdivision, though standard good housekeeping practices would remain advisable for any future construction.

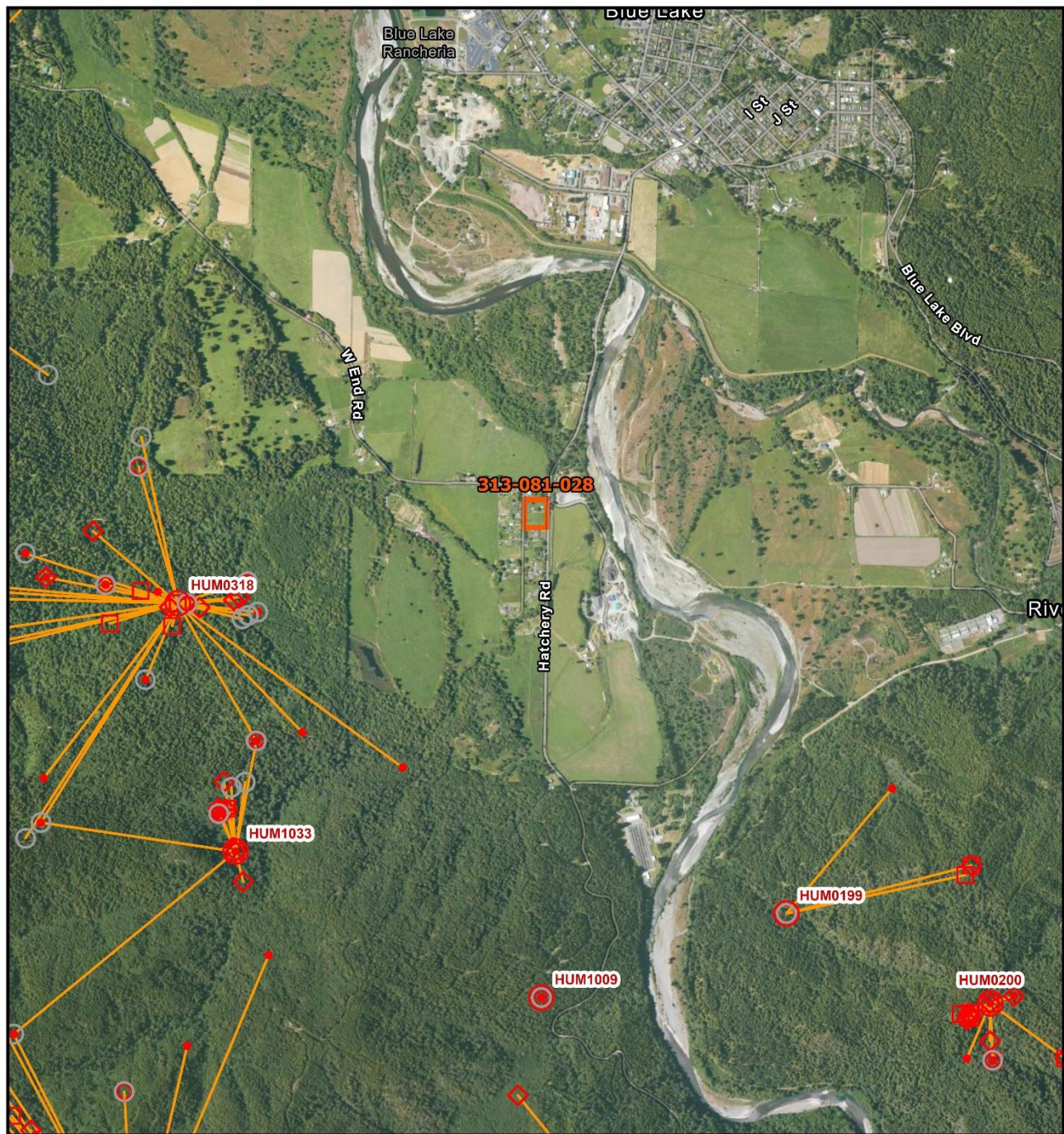
Impact finding for the subdivision action: With no ground-disturbing activities proposed, no significant impacts to special-status wildlife (including NSO) would occur. If/when Parcel B development is proposed, implementing the AMMs above would reduce potential impacts to less than significant.

4.5.1.5 Critical Habitat Context

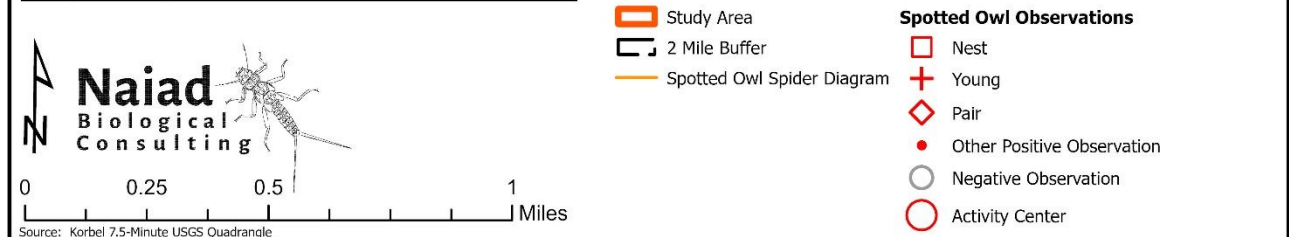
No USFWS-designated critical habitat occurs within or immediately adjacent to the Study Area. The nearest designated critical habitat units (e.g., for northern spotted owl and anadromous fishes) are associated with forested habitats and riverine corridors outside the project boundary. The Study Area itself consists of developed residential land and disturbed pasture and does not provide the vegetation structure or hydrology necessary to support listed species or their designated habitats.

Accordingly, the proposed subdivision 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), and to address potential nesting by common passerines or raptors, any future proposed projects should implement BIO-1 (pre-construction nesting bird surveys and avoidance buffers) if future vegetation removal or ground disturbance occurs during the February–August nesting season.



Map 7: Spotted Owl Observations



Map 7. Map showing the Study Area and all nearby NSO observations and Activity Centers.

4.5.2 Special-Status Plant Species and Natural Communities

4.5.2.1 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 (CNDDDB), 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.

Table 4. The plant species identified during the April 24th, 2025 survey. This list documents general species observed, and does not represent a complete floristic inventory of the Study Area.

Habit	Scientific Name	Common Name	Native Status
Tree	<i>Acer macrophyllum</i>	Bigleaf maple	Native
Tree	<i>Umbellularia californica</i>	California bay	Native
Tree	<i>Malus domestica</i>	Apple (fruit tree)	Non-native/cultivated
Shrub	<i>Rubus armeniacus</i>	Himalayan blackberry	Non-native/invasive
Shrub	<i>Rubus parviflorus</i>	Thimbleberry	Native
Shrub / Vine	<i>Lonicera spp.</i>	Honeysuckle	Mixed
Shrub	<i>Oemleria cerasiformis</i>	Oso berry	Native
Forb / Herb	<i>Ranunculus spp.</i>	Buttercup	Mixed (mostly non-native)
Forb / Herb	<i>Dipsacus fullonum</i>	Teasel	Non-native/invasive
Forb / Herb	<i>Parentucellia viscosa</i>	Yellow glandweed	Non-native/invasive
Forb / Herb	<i>Plantago lanceolata</i>	English plantain	Non-native
Forb / Herb	<i>Geranium dissectum</i>	Cutleaf geranium	Non-native
Forb / Herb	<i>Brassica rapa</i>	Field mustard	Non-native
Forb / Herb	<i>Trifolium repens</i>	White clover	Non-native
Forb / Herb	<i>Trifolium subterraneum</i>	Subterranean clover	Non-native
Forb / Herb	<i>Rumex crispus</i>	Curly dock	Non-native/invasive
Forb / Herb	<i>Rumex acetosella</i>	Sheep sorrel	Non-native/invasive
Forb / Herb	<i>Bellis perennis</i>	Lawn daisy	Non-native
Grass	<i>Alopecurus pratensis</i>	Meadow foxtail	Non-native
Grass	<i>Festuca arundinacea</i>	Tall fescue	Non-native
Grass	<i>Bromus diandrus</i>	Ripgut brome	Non-native/invasive
Grass	<i>Holcus lanatus</i>	Yorkshire fog	Non-native
Grass	<i>Anthoxanthum odoratum</i>	Sweet vernal grass	Non-native

4.5.2.2 Existing Site Conditions

The 2.5-acre Study Area includes Parcel A (~1.5 acres, developed residential) with ornamental landscaping, ruderal grasses/forbs, and scattered yard and fruit trees, and Parcel B (~1.0 acre, *grazed pasture*) dominated by naturalized forage grasses and weedy forbs (Photo 1 – 4). A dense thicket of Himalayan blackberry (*Rubus armeniacus*) along the eastern fence line provides the most structurally complex cover (Photo 5 & 6). Soils are mapped as Ferndale silty clay loam, a non-serpentine substrate typical of the Blue Lake Valley lowlands. The site is relatively flat (92–100 ft) and lacks wetlands, riparian zones, vernal pools, or specialized substrates such as serpentine, gabbro, or carbonate.

4.5.2.3 Special-Status Plants—Results of Habitat Screening

Records Review. Queries of CNDDDB, USFWS IPaC, and the CNPS Rare Plant Inventory for the Korbel 9-quadrant and surrounding quadrangles identified numerous CNPS-ranked taxa. Nearly all are tied to habitats not present within the Study Area, including coastal dunes and salt marsh (e.g., *Abronia umbellata* var. *breviflora*, *Castilleja ambigua* var. *humboldtiensis*), bogs/fens, meadows/seeps, riparian corridors (e.g., *Bensoniella oregana*, *Glyceria grandis*), or serpentine/coniferous systems at higher elevations (e.g., *Antennaria suffrutescens*, *Fritillaria purdyi*, *Sedum flavidum*).

Potential to Occur (per Table 3).

- **None.** Nearly all CNPS- and ESA-listed plants in Table 3 have No potential because required habitat or elevation is lacking. Examples include wetland/vernal-pool obligates (e.g., *Carex lyngbyei*, *Montia howellii*), coastal dune and saltmarsh taxa (e.g., *Glehnia littoralis* ssp. *leiocarpa*, *Spergularia canadensis* var. *occidentalis*), forest/serpentine specialists (e.g., *Piperia candida*, *Lilium rubescens*), and the Kneeland Prairie pennycress (*Noccaea fendleri* ssp. *californica*), which is restricted to serpentine coastal prairie at elevations >2,400 ft and is outside the habitat and elevation range of the Study Area.
- **Low.** A very limited subset retains Low potential where disturbed edges or open microsites may occur:
 - *Sidalcea malachroides* (maple-leaved checkerbloom; CRPR 4.2) — occurs in disturbed edges within coastal prairie/scrub and mixed forest from 0–2,395 ft; Low potential along ruderal boundaries; May Affect, But Not Likely to Adversely Affect (MABNLAA) only if future vegetation removal occurs without checks.
 - *Sidalcea oregana* ssp. *eximia* (coast checkerbloom; CRPR 1B.2) — associated with meadows/seeps and coniferous forest from 15–4,395 ft; Low potential is limited to marginal disturbed edges; MABNLAA if future work proceeds without verification.

Conclusion. No special-status plant populations are expected within the subdivision footprint, and a protocol-level botanical survey is not warranted for the administrative subdivision (no ground disturbance). If a future development is proposed on Parcel B, an optional, phenology-timed reconnaissance focused on the Low-potential taxa above would be prudent to confirm absence prior to vegetation removal or ground disturbance.

4.5.2.4 Sensitive Natural Communities

No S-ranked sensitive natural communities (as defined by CDFW/MCV) occur within the Study Area. Vegetation is best described as Ruderal Pasture/Annual Grassland, with localized blackberry thicket

edge. Sensitive alliances such as riparian scrub, willow thickets, alkali seep, or vernal pool complexes are absent due to the lack of hydrology and intact native vegetation. Accordingly, no impacts to sensitive natural communities are anticipated.

4.5.2.5 Avoidance and Minimization Measures (AMMs)

Although no special-status plants or sensitive natural communities are expected onsite, the following measures are recommended if future development is proposed on Parcel B:

- **BIO-6 (Limits of Disturbance):** Clearly fence and flag construction boundaries to avoid inadvertent impacts to vegetation outside the work area.
- **BIO-5 (Pollinator Protection):** Retain or reseed flowering species where practicable to support pollinators, and avoid herbicide drift into adjacent habitats.
- **BIO-8 (BMPs – Erosion/Spill Controls):** Implement weed-free materials, clean-in/clean-out protocols, and standard BMPs to prevent sediment transport or invasive spread.
- **BIO-9 (Restoration/Seeding):** Stabilize disturbed areas post-construction with a locally appropriate native seed mix to promote revegetation and discourage invasive weeds.
- **Optional Verification:** If requested by regulatory agencies, conduct a brief, phenology-timed botanical reconnaissance prior to construction on Parcel B to confirm the absence of low-potential taxa.

Given the small parcel size, prior disturbance, lack of special substrates, and absence of aquatic features, no special-status plants or sensitive natural communities are expected within the Study Area. A small number of grassland-edge taxa retain Low potential, but occurrence is unlikely at ecologically meaningful levels. With adherence to the AMMs above, the Project will have No Effect on special-status plants or natural communities; if low-potential taxa are present, effects would be May Affect, But Not Likely to Adversely Affect (MABNLAA).

Section 5 Conclusion

5.1 Potential Impacts and Recommended Mitigation

5.1.1 Potential Direct Impacts

Direct impacts result from immediate interactions between project activities and on-site resources. For this subdivision, no grading, vegetation removal, or construction is proposed; the action is administrative in nature, creating two parcels without physical disturbance. As such, no direct impacts to sensitive habitats or special-status species will occur at the time of subdivision.

If future development occurs on Parcel B, potential direct impacts could include:

- **Nesting Birds/Raptors.** Vegetation trimming or removal during February–August could affect common passerines or raptors nesting in yard trees or blackberry thickets (addressed through BIO-1).
- **Small Mammals/Reptiles.** Ground disturbance could affect disturbance-tolerant species (e.g., American badger, reptiles, or other small vertebrates) in pasture soils (BIO-2, BIO-3).
- **Bats.** Tree removal or structure modification could affect roosting bats; this would be avoided through pre-removal roost checks (BIO-4).

With the AMMs outlined in Table 5, no significant direct impacts are anticipated

5.1.2 Potential Indirect Impacts

Indirect impacts are secondary effects that occur outside the immediate work footprint. For the subdivision action itself, no indirect impacts are expected because there will be no ground disturbance, vegetation removal, or site alteration.

For future development on Parcel B, potential indirect impacts could include:

- **Erosion and Runoff.** Standard erosion and spill BMPs (BIO-8) are generally recommended near aquatic features; however, the site is flat, bordered by county-maintained roads, and surrounded by residential development, with no direct pathway to the Mad River or other aquatic habitats. As such, runoff-related concerns are minimal.
- **Invasive Weed Spread.** Disturbed edges could be colonized by invasive species if not stabilized; this can be addressed through BIO-9 (native reseeding and edge stabilization).
- **Noise/Lighting.** Construction during sensitive seasons could disturb nesting birds or foraging bats; managed through BIO-1 and BIO-4.

Applying BMPs, fencing limits of disturbance (BIO-6), and worker training (BIO-7) will ensure that any indirect effects remain less than significant.

5.1.3 Recommendations and Proposed Avoidance and Minimization Measures

The following trigger-based AMMs would apply only if future construction or vegetation removal occurs on Parcel B:

Table 5. 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/noise work during Feb–Aug	Pre-construction nest surveys (≤ 14 days prior); establish species-appropriate buffers (50–500+ ft); phase/noise-manage; monitor until fledging.
BIO-2 Reptiles & Small Vertebrates	Small vertebrates, reptiles	Ground disturbance in pasture/soils	Day-of clearance; wildlife-safe trenching (cover/escape ramps, daily checks); relocate if encountered.
BIO-3 Burrowing Mammals	American badger, ground squirrels	If suitable burrows detected	Pre-construction survey; establish buffers; passive relocation if necessary (outside breeding season).
BIO-4 Bat Roost Protection	Tree/structure-roosting bats	Tree trimming or structure removal	Visual/dusk checks; phased limb removal; avoid May–Aug maternity period where feasible.
BIO-5 Pollinator Protection	Bumble bees, pollinators	Removal of flowering patches or herbicide use	Retain nectar resources; avoid chemical drift; reseed with pollinator-friendly native mix.
BIO-6 Limits of Disturbance (LOD)	All habitats	Construction footprint	Fence/flag LOD; no equipment staging outside fenced area.
BIO-7 Worker Environmental Awareness (WEAP)	All crews	Prior to mobilization	Training on sensitive resources, buffers, stop-work/encounter protocols, spill response.
BIO-8 BMPs – Erosion/Spill Controls	General site work	Ground disturbance, fueling, staging	Implement spill kits, secondary containment, housekeeping; avoid fueling near edges; daily inspection.
BIO-9 Restoration & Stabilization	Disturbed edges	Post-construction	Stabilize with native seed mix; monitor Year 1–2 for invasive regrowth.

Additional Recommendations (non-AMM items):

- **Optional Pre-Construction Floristic Reconnaissance.** If requested by agencies, a brief spring reconnaissance could confirm absence of Low-potential taxa (*Sidalcea malachroides*, *Sidalcea oregana* ssp. *eximia*). Not required under current site conditions.
- **Invasive Weed Monitoring.** Spot check disturbed areas in Years 1–2 for invasive species (e.g., mustard, thistle), with hand removal or treatment as needed.

- **Lighting Design.** If permanent lighting is part of future development, adopt dark-sky practices (fully shielded fixtures ≤ 3000 K, motion sensors/curfews) to reduce wildlife disturbance.

5.2 Summary of Findings

The Study Area consists of previously disturbed residential and pasture land with no wetlands, riparian areas, or sensitive natural communities. Most special-status species were determined to have No potential to occur; a small subset of disturbance-tolerant taxa has Low potential. Because the current subdivision creates a legal parcel without physical disturbance, the action will have No Effect on biological resources.

If Parcel B is developed in the future, the trigger-based AMMs described above will ensure that potential impacts to wildlife, plants, and habitats remain less than significant under CEQA and consistent with applicable state and federal protections.

5.3 Statement of Limitation

The analyses and conclusions in this Biological Resources Assessment reflect conditions observed during a single reconnaissance-level site visit on April 24, 2025, combined with a review of the best available data at the time of study. Unlike protocol-level botanical or wildlife surveys, this assessment provides a general evaluation of existing habitat conditions, the potential for occurrence of special-status species, and avoidance/minimization measures appropriate to the proposed subdivision.

Limitations and Qualifications:

- **Seasonality & Detectability.** The site visit was conducted outside the full spring bloom window and during an actively grazed period in Parcel B. Many special-status plant species and some wildlife exhibit seasonal or cryptic detectability; therefore, this report should not be interpreted as a complete floristic or wildlife inventory. Pre-construction nesting bird surveys and, if warranted by agency request, targeted botanical reconnaissance remain necessary to meet state and federal requirements.
- **Mapped Boundaries & Spatial Data.** Parcel boundaries and mapped features used in figures are derived from assessor/GIS datasets and field GPS points, which are approximate and not a legal boundary survey. Positional errors or updated source datasets could affect acreages, buffers, or mapped feature locations.
- **Aquatic Features.** The Study Area is relatively flat, underlain by Ferndale silty clay loam, and field verification confirmed that no wetlands, streams, or riparian features occur within the property. No formal jurisdictional determination has been requested from or issued by USACE, RWQCB, or CDFW. If future project design involves ground disturbance near potential aquatic resources, agency verification is recommended.
- **Scope of Assessment.** This report is intended to inform CEQA review under Humboldt County standards. It is not an exhaustive survey of all taxa generated from database queries; rather, it evaluates the likelihood of occurrence, potential impact pathways, and avoidance/minimization strategies appropriate to the disturbed pasture/residential setting of the Study Area.
- **Pre-Construction Verifications.** Many protections in this BRA rely on trigger-based AMMs (e.g., BIO-1 through BIO-9). If these measures—particularly pre-construction surveys, seasonal timing

restrictions, and buffers—are not implemented, the conclusions regarding impact severity and regulatory compliance may not hold.

- **Non-Biological Constraints.** Buffers and setbacks described herein address biological resources only. Cultural, historical, tribal, geotechnical, or land-use constraints may impose additional requirements that could modify or restrict development envelopes.

Reliance and Assumptions:

The opinions and recommendations provided herein are based on client-supplied information, publicly available datasets, and conditions observable during the April 2025 site visit. Because this assessment is reconnaissance-level in scope, Naiad Biological Consulting disclaims responsibility for errors or omissions arising from incorrect assumptions, data supplied by others, or changes in site conditions after the survey. Future agency coordination, optional phenology-timed botanical reconnaissance, and required pre-construction verifications should be used to refine and confirm these findings prior to any development activity on Parcel B.

Section 6 Regulatory Framework

6.1 Regulatory Framework Guidelines

The following framework explains 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: The Study Area contains no wetlands, riparian zones, or designated critical habitat, and no federally listed species are expected onsite. Federally listed species occur regionally in the Mad River watershed but are absent from the parcel’s disturbed upland habitats. If a federal nexus arises in future development of Parcel B (e.g., through federal permitting), consultation with USFWS may be required. The AMMs identified in this report (e.g., BIO-1, BIO-4, 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 species are expected within the Study Area. Several SSCs (e.g., raptors, American badger, certain bats and reptiles) 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 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 review standards. With implementation of the AMMs in Section 5, potential impacts would be reduced to less-than-significant.

6.1.4 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 Study Area contains no wetlands, streams, or other aquatic features; therefore, no USACE authorization is anticipated. If future development introduces fill into Waters of the U.S., a §404 permit and corresponding §401 certification would be required.

6.1.5 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 review confirmed that no streams, riparian zones, or wetland indicators occur within the parcel. Although the Mad River is located nearby, it is separated from the property by county roads and intervening residential development. RWQCB and CDFW authorizations are therefore not anticipated. AMMs such as BIO-8 (erosion/spill controls) and BIO-6 (limits of disturbance) remain consistent with regulatory expectations.

6.1.6 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 disturbed residential and pasture land with no sensitive natural communities. Potential effects are limited to common nesting birds and a small number of special-status taxa with Low potential. This BRA incorporates AMMs consistent with County policies, including pre-construction nesting bird surveys (BIO-1), erosion and spill controls (BIO-8), and reseeding/edge stabilization (BIO-9) to ensure compliance.

Section 7 References

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Photo Documentation



Photo 1. The residence within the Study Area located at Proposed Parcel A. Photo taken from Proposed Parcel B facing Parcel A.



Photo 2. The residence within the Study Area located within Proposed Parcel A. No alterations to this parcel are proposed post minor subdivision approval.

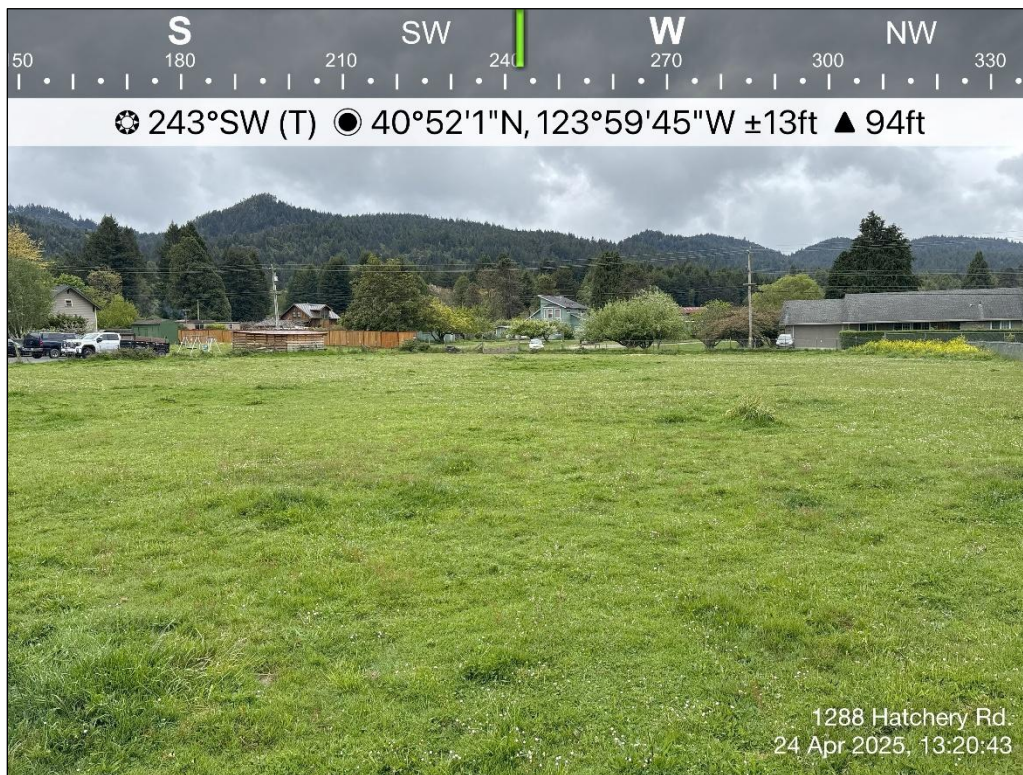


Photo 3. Grazed pasture habitat within Proposed Parcel B. Photo taken on the north eastern section of Parcel B facing south west.

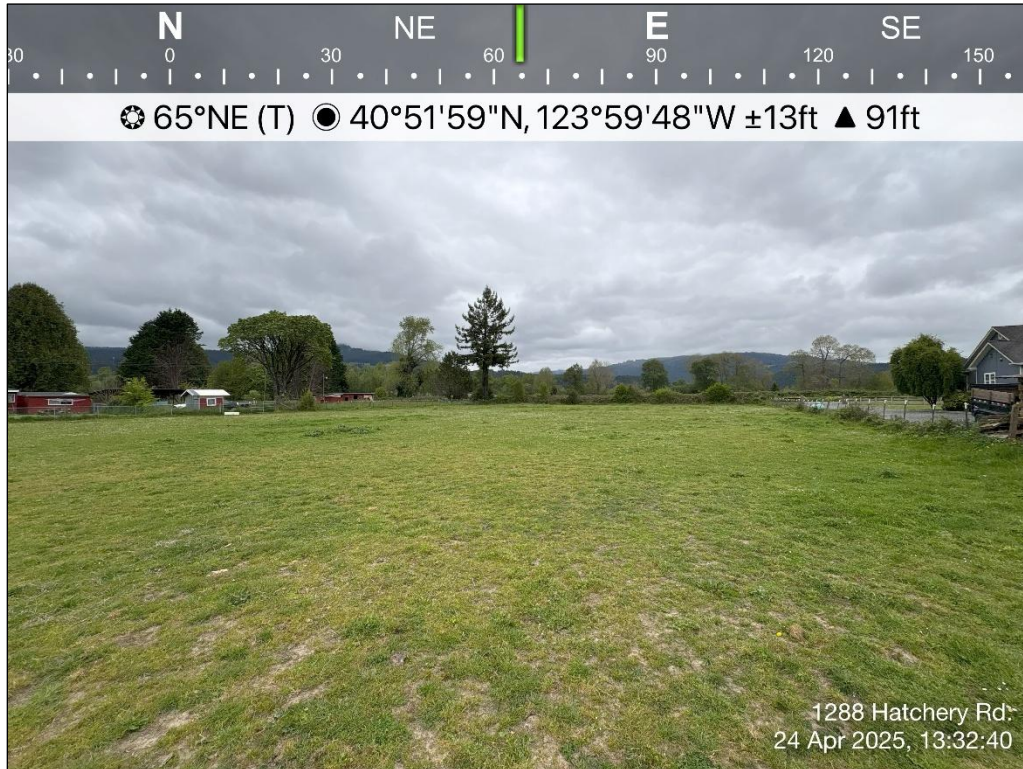


Photo 4. Grazed Pasture habitat within Proposed Parcel B. Photo taken on the south west section of Parcel B facing north east.

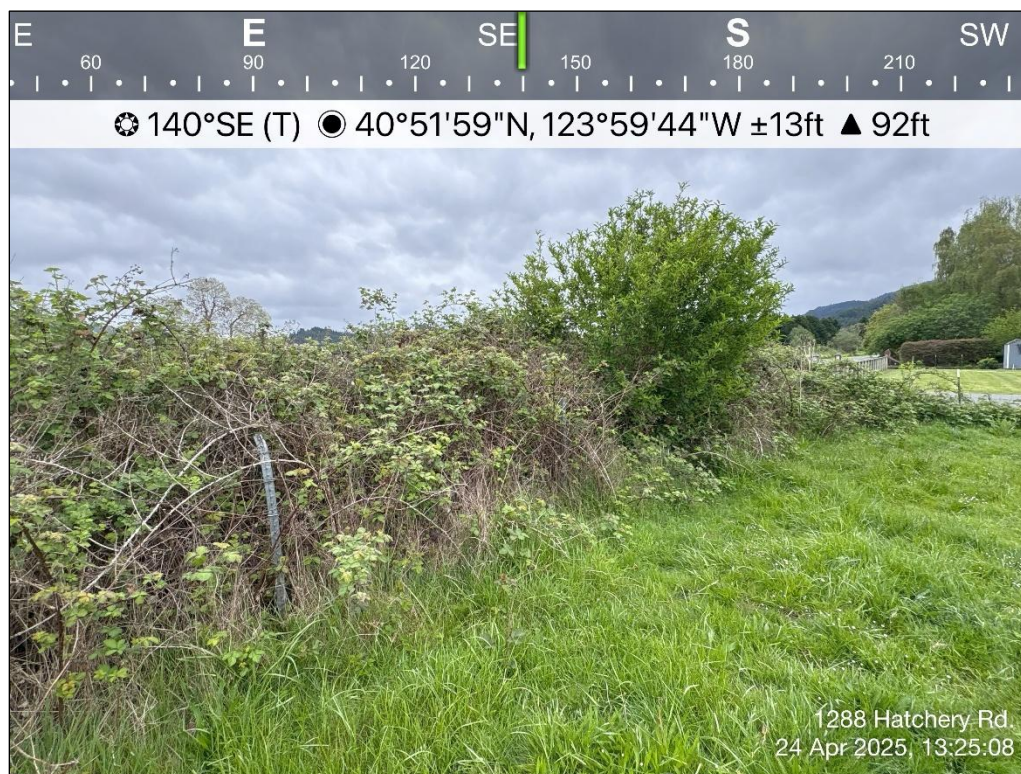


Photo 5. The dense Himalayan blackberry (*Rubus armeniacus*) thicket along the eastern fenceline of Parcel B.

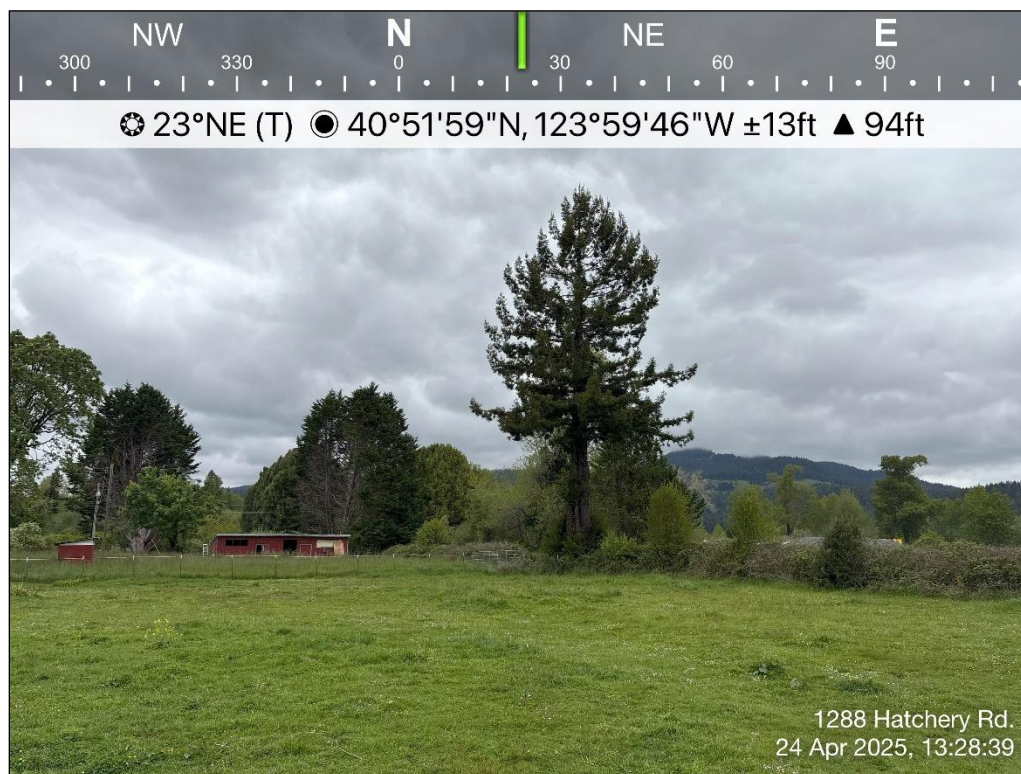


Photo 6. The dense Himalayan blackberry (*Rubus armeniacus*) thicket along the eastern fence line, and the single mature coast redwood (*Sequoia sempervirens*) which occurs in the northeast corner of Parcel B.

Appendix A

Web Soil Survey Reports

BIOLOGICAL RESOURCES ASSESSMENT

Minor Subdivision

Assessor's Parcel Number (APN): 313-081-028-000

1288 Hatchery Rd.

Blue Lake, Humboldt County, California 95525

September 2025



Humboldt County, Central Part, California

220—Ferndale, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 21l2t

Elevation: 10 to 160 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: Prime farmland if irrigated

Map Unit Composition

Ferndale and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ferndale

Setting

Landform: Flood-plain steps

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Alluvium derived from mixed sources

Typical profile

Ap - 0 to 11 inches: silt loam

C1 - 11 to 16 inches: silt loam

C2 - 16 to 21 inches: silt loam

C3 - 21 to 50 inches: silt loam

C4 - 50 to 60 inches: fine sandy loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water

(Ksat): Moderately high to high (0.20 to 2.00 in/hr)

Depth to water table: About 48 to 60 inches

Frequency of flooding: Rare

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: High (about 10.6 inches)

Interpretive groups

Land capability classification (irrigated): 1

Land capability classification (nonirrigated): 2s

Hydrologic Soil Group: B

Ecological site: F004BI100CA - Fluventic, salt-affected, rarely
flooded, alluvial floodplains

Hydric soil rating: No

Minor Components

Worswick

Percent of map unit: 4 percent

Landform: Flood-plain steps, natural levees

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: Yes

Swainslough

Percent of map unit: 4 percent

Landform: Salt marshes, flood-plain steps, depressions,
backswamps

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Tread, talf

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: Yes

Russ

Percent of map unit: 3 percent

Landform: Natural levees

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Tread

Down-slope shape: Convex

Across-slope shape: Linear

Hydric soil rating: No

Madriver

Percent of map unit: 2 percent

Landform: Natural levees

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: No

Arlynda

Percent of map unit: 2 percent

Landform: Flood-plain steps, depressions, backswamps, meander
scars

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Tread

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: Yes

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

BIOLOGICAL RESOURCES ASSESSMENT

Minor Subdivision

Assessor's Parcel Number (APN): 313-081-028-000

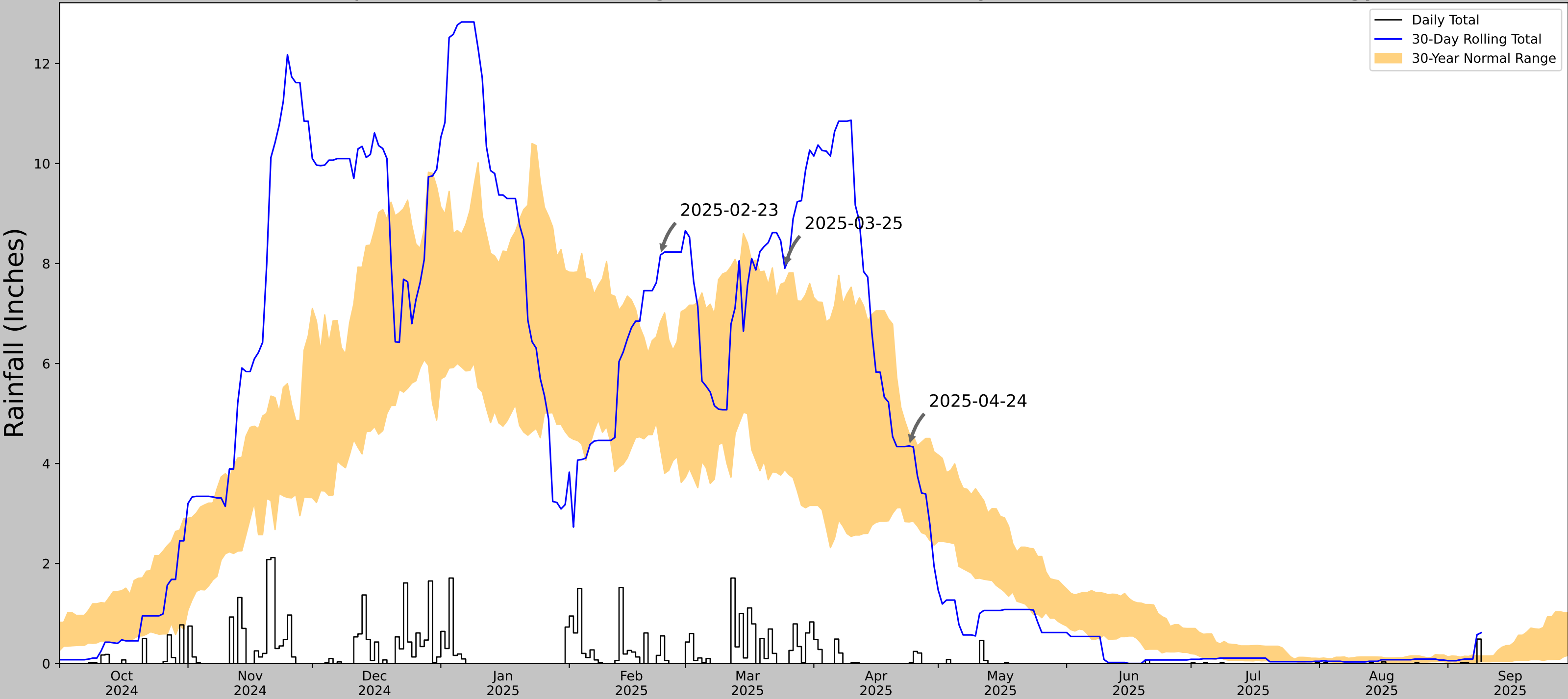
1288 Hatchery Rd.

Blue Lake, Humboldt County, California 95525

September 2025



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



Coordinates	40.86703, -123.99628
Observation Date	2025-04-24
Elevation (ft)	101.136
Drought Index (PDSI)	Incipient drought
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2025-04-24	2.830709	4.599213	4.350394	Normal	2	3	6
2025-03-25	3.87441	7.619292	7.905512	Wet	3	2	6
2025-02-23	4.288977	6.832677	8.169292	Wet	3	1	3
Result							Wetter than Normal - 15



US Army Corps
of Engineers.



Figures and tables made by the
Antecedent Precipitation Tool
Version 3.0

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	9.445	81.123	5.016	11353	90

Appendix C

Occurrence Reports

BIOLOGICAL RESOURCES ASSESSMENT

Minor Subdivision

Assessor's Parcel Number (APN): 313-081-028-000

1288 Hatchery Rd.

Blue Lake, Humboldt County, California 95525

September 2025





Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Species> IS <(*Aplodontia rufa humboldtiana*)

Map Index Number: A6244

Key Quad: Korbel (4012378)

Occurrence Number: 10

EO Index: 108003

Element Code: AMAFA01017

Occurrence Last Updated: 2017-09-06

Scientific Name: *Aplodontia rufa humboldtiana*

Common Name: Humboldt mountain beaver

Listing Status: Federal: None

Rare Plant Rank:

State: None

Other Lists:

CNDDDB Element Ranks: Global: G5TNR

State: SNR

General Habitat:

COAST RANGE IN SOUTHWESTERN DEL NORTE COUNTY AND NORTHWESTERN HUMBOLDT COUNTY.

Micro Habitat:

VARIETY OF COASTAL HABITATS, INCLUDING COASTAL SCRUB, RIPARIAN FORESTS, TYPICALLY WITH OPEN CANOPY AND THICKLY VEGETATED UNDERSTORY.

Last Date Observed: 1955-03-25

Occurrence Type: Natural/Native occurrence

Last Survey Date: 1955-03-25

Occurrence Rank: Unknown

Owner/Manager: UNKNOWN

Trend: Unknown

Presence: Presumed Extant

Location:

1 MILE SOUTH OF THE CITY OF BLUE LAKE.

Detailed Location:

MAPPED BY CNDDDB BASED UPON A COLLECTION FROM "1 MILE S OF BLUE LAKE." COLLECTIONS WITH LOCALITIES GIVEN ONLY AS MAD RIVER ARE ALSO ATTRIBUTED HERE.

Ecological:

Threats:

General:

COLLECTIONS WERE MADE IN THIS VICINITY IN 1951, 1953, 1954, AND 1955.

PLSS: T06N, R02E, Sec. 31 (H)

Accuracy: 3/5 mile

Area (acres): 776

UTM: Zone-10 N4524509 E416529

Latitude/Longitude: 40.8674 / -123.99051

Elevation (feet): 80

County Summary:

Humboldt

Quad Summary:

Korbel (4012378), Blue Lake (4012388), Arcata South (4012471)

Sources:

COO53S0006 COOLEY, D. - HSU #436 COLLECTED FROM MAD RIVER 1953-05-09

HEN51S0002 HENNESAY, V. - HSU #98 COLLECTED 1 MI S OF BLUE LAKE 1951-02-12

JON55S0001 JONES, B. - HSU #123 COLLECTED FROM MAD RIVER 1955-03-25

POG54S0001 POGUE, W. - HSU #432 COLLECTED FROM MAD RIVER 1954-03-20

Data Version Date:
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Report #2 - Observations Reported

List of observations reported by site.



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

H_06N_02E Sections(30,31);

H_05N_01E Sections(01);

H_06N_01E Sections(25,36);

H_05N_02E Sections(06);

<i>Type</i>	<i>Date</i>	<i>Time</i>	<i>#Adults</i>	<i>Age/Sex</i>	<i>Pair</i>	<i>Nest</i>	<i>#Young</i>	<i>Latitude DD NAD83</i>	<i>Longitude DD NAD83</i>	<i>MTRS</i>	<i>Coordinate Source</i>
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

<i>Type</i>	<i>Date</i>	<i>Time</i>	<i>#Adults</i>	<i>Age/Sex</i>	<i>Pair</i>	<i>Nest</i>	<i>#Young</i>	<i>Latitude DD NAD83</i>	<i>Longitude DD NAD83</i>	<i>MTRS</i>	<i>Coordinate Source</i>
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

<i>Type</i>	<i>Date</i>	<i>Time</i>	<i>#Adults</i>	<i>Age/Sex</i>	<i>Pair</i>	<i>Nest</i>	<i>#Young</i>	<i>Latitude DD NAD83</i>	<i>Longitude DD NAD83</i>	<i>MTRS</i>	<i>Coordinate Source</i>
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

<i>Type</i>	<i>Date</i>	<i>Time</i>	<i>#Adults</i>	<i>Age/Sex</i>	<i>Pair</i>	<i>Nest</i>	<i>#Young</i>	<i>Latitude DD NAD83</i>	<i>Longitude DD NAD83</i>	<i>MTRS</i>	<i>Coordinate Source</i>
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

<i>Type</i>	<i>Date</i>	<i>Time</i>	<i>#Adults</i>	<i>Age/Sex</i>	<i>Pair</i>	<i>Nest</i>	<i>#Young</i>	<i>Latitude DD NAD83</i>	<i>Longitude DD NAD83</i>	<i>MTRS</i>	<i>Coordinate Source</i>
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: HUM0204 Subspecies: NORTHERN											
POS	1989		2	UMUF	Y			40.834841	-123.992798	H 05N 02E 07	Quarter-section centroid
POS	1990		2	AMUF	Y	N		40.840105	-123.988440	H 05N 02E 06	Contributor
POS	1990-03-06		1	UU				40.840882	-123.991133	H 05N 02E 06	Contributor
POS	1990-05-23		1	AF	Y			40.846085	-123.996750	H 05N 02E 06	Section centroid
POS	1991		2	UMUF	Y	N		40.838055	-123.988075	H 05N 02E 08	Contributor
POS	1992		2	UMUF	Y	N		40.840621	-123.988600	H 05N 02E 06	Contributor
POS	1992-05-07		2	UMUF	Y			40.842222	-123.992458	H 05N 02E 06	Quarter-section centroid
POS	1993		2	UMUF	Y	N		40.841803	-123.994946	H 05N 02E 06	Contributor
POS	1994		2	UMUF	Y	N		40.838697	-123.988505	H 05N 02E 06	Contributor
POS	1995		2	UMUF	Y	N		40.836210	-123.993117	H 05N 02E 07	Contributor
POS	1996		2	UMUF	Y	N		40.836130	-123.993322	H 05N 02E 07	Contributor
POS	1997		2	UMUF	Y	Y	1	40.836660	-123.993647	H 05N 02E 07	Contributor
POS	1998		2	AMAF	Y			40.836228	-123.992505	H 05N 02E 07	Contributor
POS	1999		2	UMUF	Y			40.836283	-123.992701	H 05N 02E 07	Contributor

<i>Type</i>	<i>Date</i>	<i>Time</i>	<i>#Adults</i>	<i>Age/Sex</i>	<i>Pair</i>	<i>Nest</i>	<i>#Young</i>	<i>Latitude DD NAD83</i>	<i>Longitude DD NAD83</i>	<i>MTRS</i>	<i>Coordinate Source</i>
NEG	2000		0					40.836283	-123.992701	H 05N 02E 07	Contributor
NEG	2001		0					40.836283	-123.992701	H 05N 02E 07	Contributor
NEG	2002		0					40.836283	-123.992701	H 05N 02E 07	Contributor
NEG	2003		0					40.836283	-123.992701	H 05N 02E 07	Contributor
NEG	2003-04-08	1950	0					40.827648	-124.001645	H 05N 02E 07	Quarter-section centroid
NEG	2004		0					40.836283	-123.992701	H 05N 02E 07	Contributor
POS	2005		2	UMUF	Y	N	0	40.835289	-123.993702	H 05N 02E 07	Contributor
POS	2006		2	UMUF	Y	Y	1	40.837669	-123.992466	H 05N 02E 07	Contributor
POS	2007		2	UMUF	Y			40.836354	-123.991853	H 05N 02E 07	Contributor
NEG	2008		0					40.836355	-123.991853	H 05N 02E 07	Contributor
POS	2009		2	UMUF	Y	Y	0	40.836978	-123.991222	H 05N 02E 07	Contributor
POS	2010		2	UMUF	Y	N		40.836977	-123.991222	H 05N 02E 07	Contributor
POS	2011		2	UMUF	Y			40.837025	-123.991875	H 05N 02E 07	Contributor
POS	2012		2	UMUF	Y			40.836977	-123.991222	H 05N 02E 07	Contributor
POS	2013		2	UMUF	Y	N	0	40.836978	-123.991222	H 05N 02E 07	Contributor
POS	2014-05-17		2	UMUF	Y	Y	0	40.837154	-123.990632	H 05N 02E 07	Contributor
POS	2014-06-27		2	UMUF	Y	Y	2	40.837154	-123.990632	H 05N 02E 07	Contributor

<i>Type</i>	<i>Date</i>	<i>Time</i>	<i>#Adults</i>	<i>Age/Sex</i>	<i>Pair</i>	<i>Nest</i>	<i>#Young</i>	<i>Latitude DD NAD83</i>	<i>Longitude DD NAD83</i>	<i>MTRS</i>	<i>Coordinate Source</i>
POS	2015-05-21		2	AMAF	Y	N	0	40.837154	-123.990632	H 05N 02E 07	Activity center
POS	2016		2	AMAF	Y	N	0	40.837154	-123.990632	H 05N 02E 07	Activity center
POS	2017		2	UMUF	Y		0	40.837154	-123.990632	H 05N 02E 07	Activity center
POS	2018		1	UM				40.837154	-123.990632	H 05N 02E 07	Activity center
NEG	2019		0					40.837154	-123.990632	H 05N 02E 07	Activity center
POS	2020		2	AMAF	Y	N	0	40.838298	-123.990649	H 05N 02E 07	Contributor
AC	2021		2	UMUF	Y	Y	2	40.838773	-123.988782	H 05N 02E 06	Contributor
POS	2022		2	UMUF	Y	N	0	40.838773	-123.988782	H 05N 02E 06	Activity center
POS	2023		2	UMUF	Y		0	40.838773	-123.988782	H 05N 02E 06	Activity center
POS	2024		2	UMUF	Y	N	0	40.838773	-123.988782	H 05N 02E 06	Activity center
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

<i>Type</i>	<i>Date</i>	<i>Time</i>	<i>#Adults</i>	<i>Age/Sex</i>	<i>Pair</i>	<i>Nest</i>	<i>#Young</i>	<i>Latitude DD NAD83</i>	<i>Longitude DD NAD83</i>	<i>MTRS</i>	<i>Coordinate Source</i>
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
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

<i>Type</i>	<i>Date</i>	<i>Time</i>	<i>#Adults</i>	<i>Age/Sex</i>	<i>Pair</i>	<i>Nest</i>	<i>#Young</i>	<i>Latitude DD NAD83</i>	<i>Longitude DD NAD83</i>	<i>MTRS</i>	<i>Coordinate Source</i>
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
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

<i>Type</i>	<i>Date</i>	<i>Time</i>	<i>#Adults</i>	<i>Age/Sex</i>	<i>Pair</i>	<i>Nest</i>	<i>#Young</i>	<i>Latitude DD NAD83</i>	<i>Longitude DD NAD83</i>	<i>MTRS</i>	<i>Coordinate Source</i>
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
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

<i>Type</i>	<i>Date</i>	<i>Time</i>	<i>#Adults</i>	<i>Age/Sex</i>	<i>Pair</i>	<i>Nest</i>	<i>#Young</i>	<i>Latitude DD NAD83</i>	<i>Longitude DD NAD83</i>	<i>MTRS</i>	<i>Coordinate Source</i>
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
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

<i>Type</i>	<i>Date</i>	<i>Time</i>	<i>#Adults</i>	<i>Age/Sex</i>	<i>Pair</i>	<i>Nest</i>	<i>#Young</i>	<i>Latitude DD NAD83</i>	<i>Longitude DD NAD83</i>	<i>MTRS</i>	<i>Coordinate Source</i>
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
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

<i>Type</i>	<i>Date</i>	<i>Time</i>	<i>#Adults</i>	<i>Age/Sex</i>	<i>Pair</i>	<i>Nest</i>	<i>#Young</i>	<i>Latitude DD NAD83</i>	<i>Longitude DD NAD83</i>	<i>MTRS</i>	<i>Coordinate Source</i>
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
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

<i>Type</i>	<i>Date</i>	<i>Time</i>	<i>#Adults</i>	<i>Age/Sex</i>	<i>Pair</i>	<i>Nest</i>	<i>#Young</i>	<i>Latitude DD NAD83</i>	<i>Longitude DD NAD83</i>	<i>MTRS</i>	<i>Coordinate Source</i>
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
Masterowl: HUM0586 Subspecies: NORTHERN											
POS	1992-03-06		2	UMUF	Y			40.875010	-124.033654	H 06N 01E 26	Contributor
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

<i>Type</i>	<i>Date</i>	<i>Time</i>	<i>#Adults</i>	<i>Age/Sex</i>	<i>Pair</i>	<i>Nest</i>	<i>#Young</i>	<i>Latitude DD NAD83</i>	<i>Longitude DD NAD83</i>	<i>MTRS</i>	<i>Coordinate Source</i>
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
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

<i>Type</i>	<i>Date</i>	<i>Time</i>	<i>#Adults</i>	<i>Age/Sex</i>	<i>Pair</i>	<i>Nest</i>	<i>#Young</i>	<i>Latitude DD NAD83</i>	<i>Longitude DD NAD83</i>	<i>MTRS</i>	<i>Coordinate Source</i>
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
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

<i>Type</i>	<i>Date</i>	<i>Time</i>	<i>#Adults</i>	<i>Age/Sex</i>	<i>Pair</i>	<i>Nest</i>	<i>#Young</i>	<i>Latitude DD NAD83</i>	<i>Longitude DD NAD83</i>	<i>MTRS</i>	<i>Coordinate Source</i>
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
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

<i>Type</i>	<i>Date</i>	<i>Time</i>	<i>#Adults</i>	<i>Age/Sex</i>	<i>Pair</i>	<i>Nest</i>	<i>#Young</i>	<i>Latitude DD NAD83</i>	<i>Longitude DD NAD83</i>	<i>MTRS</i>	<i>Coordinate Source</i>
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
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

<i>Type</i>	<i>Date</i>	<i>Time</i>	<i>#Adults</i>	<i>Age/Sex</i>	<i>Pair</i>	<i>Nest</i>	<i>#Young</i>	<i>Latitude DD NAD83</i>	<i>Longitude DD NAD83</i>	<i>MTRS</i>	<i>Coordinate Source</i>
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
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

<i>Type</i>	<i>Date</i>	<i>Time</i>	<i>#Adults</i>	<i>Age/Sex</i>	<i>Pair</i>	<i>Nest</i>	<i>#Young</i>	<i>Latitude DD NAD83</i>	<i>Longitude DD NAD83</i>	<i>MTRS</i>	<i>Coordinate Source</i>
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
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

<i>Type</i>	<i>Date</i>	<i>Time</i>	<i>#Adults</i>	<i>Age/Sex</i>	<i>Pair</i>	<i>Nest</i>	<i>#Young</i>	<i>Latitude DD NAD83</i>	<i>Longitude DD NAD83</i>	<i>MTRS</i>	<i>Coordinate Source</i>
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
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

<i>Type</i>	<i>Date</i>	<i>Time</i>	<i>#Adults</i>	<i>Age/Sex</i>	<i>Pair</i>	<i>Nest</i>	<i>#Young</i>	<i>Latitude DD NAD83</i>	<i>Longitude DD NAD83</i>	<i>MTRS</i>	<i>Coordinate Source</i>
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
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

<i>Type</i>	<i>Date</i>	<i>Time</i>	<i>#Adults</i>	<i>Age/Sex</i>	<i>Pair</i>	<i>Nest</i>	<i>#Young</i>	<i>Latitude DD NAD83</i>	<i>Longitude DD NAD83</i>	<i>MTRS</i>	<i>Coordinate Source</i>
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
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

<i>Type</i>	<i>Date</i>	<i>Time</i>	<i>#Adults</i>	<i>Age/Sex</i>	<i>Pair</i>	<i>Nest</i>	<i>#Young</i>	<i>Latitude DD NAD83</i>	<i>Longitude DD NAD83</i>	<i>MTRS</i>	<i>Coordinate Source</i>
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
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

<i>Type</i>	<i>Date</i>	<i>Time</i>	<i>#Adults</i>	<i>Age/Sex</i>	<i>Pair</i>	<i>Nest</i>	<i>#Young</i>	<i>Latitude DD NAD83</i>	<i>Longitude DD NAD83</i>	<i>MTRS</i>	<i>Coordinate Source</i>
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
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

<i>Type</i>	<i>Date</i>	<i>Time</i>	<i>#Adults</i>	<i>Age/Sex</i>	<i>Pair</i>	<i>Nest</i>	<i>#Young</i>	<i>Latitude DD NAD83</i>	<i>Longitude DD NAD83</i>	<i>MTRS</i>	<i>Coordinate Source</i>
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: HUM1009 Subspecies: NORTHERN											
POS	2005		1	UM				40.849614	-123.995681	H 05N 02E 06	Contributor
POS	2006		1	UM				40.849614	-123.995681	H 05N 02E 06	Contributor
POS	2007		1	UM				40.849614	-123.995681	H 05N 02E 06	Contributor
POS	2008		2	UMUF	Y	N	0	40.849614	-123.995681	H 05N 02E 06	Contributor
NEG	2009		0					40.849614	-123.995680	H 05N 02E 06	Contributor
AC	2010		2	UMUF	Y			40.849614	-123.995680	H 05N 02E 06	Contributor
NEG	2011		0					40.849614	-123.995680	H 05N 02E 06	Contributor
NEG	2012		0					40.849614	-123.995680	H 05N 02E 06	Contributor
POS	2013		1	UF				40.849614	-123.995681	H 05N 02E 06	Contributor
POS	2014		2	UMUF	Y		0	40.849614	-123.995681	H 05N 02E 06	Activity center
POS	2015		1	UU			0	40.849614	-123.995681	H 05N 02E 06	Activity center
POS	2016		1	UU				40.849614	-123.995681	H 05N 02E 06	Activity center

<i>Type</i>	<i>Date</i>	<i>Time</i>	<i>#Adults</i>	<i>Age/Sex</i>	<i>Pair</i>	<i>Nest</i>	<i>#Young</i>	<i>Latitude DD NAD83</i>	<i>Longitude DD NAD83</i>	<i>MTRS</i>	<i>Coordinate Source</i>
NEG	2017		0					40.849614	-123.995681	H 05N 02E 06	Activity center
NEG	2018		0					40.849614	-123.995681	H 05N 02E 06	Activity center
NEG	2019		0					40.849614	-123.995681	H 05N 02E 06	Activity center
NEG	2020		0					40.849614	-123.995681	H 05N 02E 06	Activity center
NEG	2021		0					40.849614	-123.995681	H 05N 02E 06	Activity center
NEG	2022		0					40.849614	-123.995681	H 05N 02E 06	Activity center
POS	2023		1	UU				40.849614	-123.995681	H 05N 02E 06	Activity center
NEG	2024		0					40.849614	-123.995681	H 05N 02E 06	Activity center
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

<i>Type</i>	<i>Date</i>	<i>Time</i>	<i>#Adults</i>	<i>Age/Sex</i>	<i>Pair</i>	<i>Nest</i>	<i>#Young</i>	<i>Latitude DD NAD83</i>	<i>Longitude DD NAD83</i>	<i>MTRS</i>	<i>Coordinate Source</i>
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
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

<i>Type</i>	<i>Date</i>	<i>Time</i>	<i>#Adults</i>	<i>Age/Sex</i>	<i>Pair</i>	<i>Nest</i>	<i>#Young</i>	<i>Latitude DD NAD83</i>	<i>Longitude DD NAD83</i>	<i>MTRS</i>	<i>Coordinate Source</i>
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
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

<i>Type</i>	<i>Date</i>	<i>Time</i>	<i>#Adults</i>	<i>Age/Sex</i>	<i>Pair</i>	<i>Nest</i>	<i>#Young</i>	<i>Latitude DD NAD83</i>	<i>Longitude DD NAD83</i>	<i>MTRS</i>	<i>Coordinate Source</i>
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