Biological Habitat Assessment
For
Northcoast Highway Solar Project
(UPDATED October 24, 2022)

(APN #'s: 204-171-047-000, 204-081-007-000,
204-081-004-000, & 204-081-002-000)
Hydesville 7.5 Minute Quadrangle,
Section 19, Township 2 N, Range 1 E
Humboldt, California

Prepared for

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Table of Contents

Executive Summary:

At the request of Borrego Solar (Borrego), Phoenix Biological Consulting (Phoenix) initiated a biological habitat assessment on March 22, 2020 on the approximately 86.9-acre property which included whole or in part assessor's parcel numbers (APN) 204-171-047-000, 204-081-007-000, 204-081-004-000, & 204-081-002-000, of which on 12.1 acres, Borrego is developing an approximately 2.0-megawatt (MWac) photovoltaic (PV) solar energy generation facility, an access road, and associated power line connections (project). This report represents an update to the aforementioned report conducted in March of 2020. This update includes the results of reconnaissance level botanical and wildlife surveys conducted on October 15, 2022 by biologist Kristiaan Stuart.

The proposed project site is located on an open, cultivated clover field approximately 0.8-mile west of Hydesville, Humboldt County, California, adjacent to and south of state Highway 36 and west of River Bar Road. The survey area consists primarily of active agricultural cropland (white clover and corn), coastal willow shrub and mixed riparian areas. Representative photographs and maps of the site are included in this report.

This updated report was completed following site visits by biologist Kristiaan Stuart on March 22, 2020 and October 15, 2022. The entire survey area was evaluated for potential impacts from the proposed project, including reconnaissance level sensitive plant and animal species as well as potential state and federal waters and wetlands that could be affected by the project.

The conclusions of this report are summarized as follows:

- Due to the surrounding land usage, the areas around the solar array footprint and parcel boundary are considered potential and suitable habitat for nesting birds. All potential bird species should be included in a preconstruction nesting bird survey, conducted within 30 days of ground disturbance, if the project occurs during the nesting season.
- Based on the habitat assessment, burrowing owls are not expected to be present within the development area. Nonetheless, a preconstruction survey should include burrowing owl surveys.
- The CNDDB search indicated the presence of 47 special-status plant and wildlife species within nine quadrangle search radius. Seven (7) of the thirty-two (32) special-status plant species and five (5) of the fifteen (15) special status wildlife species have a potential to occur on site due to existing environmental and management conditions. A comprehensive botanical survey of the entire project area will not be required as there is no potential for special status plant species to

occur in previously cultivated areas (Exhibit 4). However, floristic level botanical surveys in all other native habitat and ruderal areas are required prior to any vegetation clearing or ground disturbing activities.

- Wolverton Gulch located on the eastern survey boundary is known (documented) habitat for the coastal cutthroat trout, a state species of special concern (SSC), the results of this survey show this species currently occupies Wolveton Gulch. This habitat area should be avoided due to environmental constraints associated with this sensitive habitat and species.

Recommended mitigation measures based on the results of this habitat assessment are provided at the end of this report.

Introduction and Purpose:

At the request of Borrego Solar (Borrego), Phoenix Biological Consulting (Phoenix) initiated a biological habitat assessment on the approximately 86.9-acre property, Humboldt County assessor's parcel numbers (APN) 204-171-047-000, 204-081-007-000, 204-081-004-000, & 204-081-002-000, of which on 15.3-acres, Borrego is developing an approximately 2.0-megawatt (MWac) photovoltaic (PV) solar energy generation facility and associated power line connections (the Project).

The site is located on open pasture and cropland approximately 0.8 miles west of Hydesville, Humboldt County, California, adjacent to and south of Hwy 36 and west of Goose Haven Road. The site consists primarily of open pasture and cropland. Representative photographs and maps of the site are included in this report.

Per the California Environmental Quality Act (CEQA), the lead agency requires a project proponent to initiate a habitat assessment to identify sensitive biological resources that may have the potential to occur within a site. A habitat assessment report was completed following a site visit by biologist Kristiaan Stuart on March 22nd, 2020. The entire site was evaluated for potential impacts from the proposed project, including sensitive plant and animal species as well as potential state and federal waters and wetlands that could be affected by the project. This report is an update to the March 2020 habitat assessment report. Species accounts and CNDDB assessment tables have been updated to include additional species observations and assessments during the October 15, 2022 surveys. Species tables 5 and 6 are inclusive of the results from both the March 2020 and October 2022 surveys.

Several sensitive species that are known to occur within a nine-quadrangle search of the area were identified through the California Natural Diversity Database (CNDDB) literature/database

search. The results of the habitat assessment indicate that portions of the site have potential habitat for nesting birds and fish species.

Project Description:

Borrego Solar is proposing to develop an approximately 2.0-MWac photovoltaic solar energy generation facility and associated power line (project) on approximately 12.1-acres of a 86.9-acre series of parcels, identified as APN: 204-171-047-000, 204-081-007-000, 204-081-004-000, & 204-081-002-000, located near Hydesville, Humboldt County, CA (Exhibit 6).

Location:

The site is located on open pasture and cropland approximately 0.8 miles west of Hydesville, Humboldt County, California, adjacent to and south of Hwy 36 and west of Goose Haven Road within the Hydesville, CA USGS 7.5-minute quadrangle topographic map (Exhibit 1). The legal description of the project area is, Township 2 N, Range 1 E, Section 19 NW (Hydesville, CA, USGS 7.5 Minute Quadrangle). The Project's approximate center GPS coordinates are: 40.543145, -124.116441 (WGS 84).

Habitat and Land Use:

The parcels are situated at an elevation ranging from 71 feet ABSL in the south, at the southern property line, to 118 feet ABSL (22 to 36 meters ABSL, respectively) near the northern property line at Hwy 36. Two large areas, an active pasture and mustard crop, comprise the majority of the survey area. Currently, the proposed project area is located in the upper pasture area (solar panel layout, APN 204-081-002-000) and extends northward to Hwy 36 (access route, APN's 204-081-004-000, 204-081-007-000 and 204-171-047-000) where it bisects a historic railway (APN 204-081-004-000) and crosses through fallow pastureland.

Currently, two actively managed areas including cultivated corn (*Zea mays*) and cultivated white clover (*Trifolium repens*) crops, are separated by a topographical break (a small cliff) of approximately 23 vertical feet. A fence line at the top of this slope delineates the cultivated white clover area from a lower cultivated corn crop (Exhibit 4). Exhibit 3, an illustration of National Wetland Inventory (NWI) spatial data, shows this topographical break as two separate wetland types: Freshwater Forested/Shrub Wetland to the west and Freshwater Emergent Wetland to the west. However, this data is erroneous. As found during the field survey, this topographical break area is a relic of the upper limits of the Van Duzen River floodplain and does not contain wetland habitat. In the southwest corner of this area is a small and dense stand of willows that could be utilized by passerine and small raptor bird species as nesting and

foraging habitat. The remainder of this area, extending to the east, is mostly dominated by ruderal herbaceous plant species.

The historic railway right of way (APN 204-081-004-000), which separates a corn field near Hwy 36 and the cultivated white clover field (APN 204-081-002-000) is now dominated by a dense willow scrub shrub habitat. Dominant species include coastal willow (*Salix hookeriana*), poison oak (*Toxicodendron diversilobum*), red elderberry (*Sambucus racemosa*) and California blackberry (*Rubus ursinus*), that is utilized by several passerine bird species for hiding, foraging, and breeding habitat. Due to access rights, this area was surveyed externally only.

A blue line stream, known as Wolverton Gulch, is located on the eastern margin of the survey area. This small, low gradient and narrow stream flows from north to south and is dominated by an open canopy of red alder (*Alnus rubra*), coastal willow (*Salix hookeriana*), arroyo willow (*Salix lasiolepis*) and sandbar willow (*Salix exigua*). The narrow riparian corridor is immediately adjacent to a cultivated corn field to the west and dense grassland (fallow hay field) to the east. The stream channel of Wolverton Gulch within the survey area, is dominated by fine substrates such as silt and fine sands. Small gravel areas occur in small riffles as well as a small number of small cobbles in isolated areas along the stream banks. Water depth varies from a few inches at the end of a pool-tail-crest to a few feet in its deepest pool habitats. The margins of the stream are in places dominated by dense patches of aquatic vegetation (*Ludwigia sp.*) and obligate wetland species such as rushes (*Juncus sp*.) and sedges (*Cyperus sp*.).

Field Survey:

A pedestrian reconnaissance-level survey was conducted by Kristiaan Stuart on March 22, 2020 between the hours of 0930 and 1630 and again on October 15, 2022 between the hours of 0900 and 1330 to evaluate the project site for biological resources, including on-site vegetation communities, potentially jurisdictional waters of the U.S., and to assess the potential for occurrence of special-status plant and wildlife species within the project site. Vegetation communities and other biological resources were noted on an aerial photograph of the project site. Photographs were taken within the project during the reconnaissance-level survey (Exhibit 8, October 2022). All species observed in both surveys within and adjacent to the project site were noted in a field notebook and are included in Tables 5 and 6. Special attention was directed to portions of the survey area that may contain native vegetation, suitable habitat for sensitive plant and wildlife species, and potential waters and wetlands subject to regulatory agency jurisdiction. The undeveloped land surrounding the project was visually surveyed in order to confirm the adjacent vegetation community/land cover types, and account for any potential indirect impacts associated with the project.

CNDDB Rarefind Database, IPAC and Literature Review Results:

A thorough review of the California Natural Diversity Database (CNDDB) and the US Fish and Wildlife Service's Information for Planning and Consultation (IPaC) web-based database was conducted to determine which species occur within an adjoining nine quadrangle area of the site (Tables 1, 2, and 3 of Appendix A). Forty-seven (47) sensitive species and two (2) sensitive habitat types were detected within the search radius. Multiple habitat types fall within the nine-quadrangle search radius: annual/ruderal grassland, willow scrub, pasture, cropland, and mixed riparian woodland. Therefore, several species fall out of range/habitat limits given the specific characteristics of the site (See Tables 1 & 2 for habitat potential for all sensitive species).

Twelve (12) special-status species have the potential to occur in the project's survey area. No sensitive habitat types are known to occur within the project area.

Table 1: CNDDB Results for Special-status Plant Species

Scientific Name **Common Name**	**USFWS**	**CDFW**	**CNPS**	**Life & Habitat Description**	**Potential to Occur**
Abronia umbellata var. breviflora pink sand-verbena	----	----	1B.1	Perennial herb. Coastal dune habitat. Bloom period: June-October 0-10m	No potential to occur. No suitable habitat in or near project area.
Cardamine angulata seaside bittercress	----	----	2B.1	Perennial herb. Occurs in mesic areas and streambanks in coniferous forest. Blooming period: March-July 25-915m	No potential to occur. No suitable habitat in or near project area.
Carex arcta northern clustered sedge	----	----	2B.2	Perennial herb. Occurs in hydric areas in coniferous forest. Blooming period: March-July 60-1400m	No potential to occur. No suitable habitat in or near project area.
Carex leptalea bristle-stalked sedge	----	----	2B.2	Perennial herb. Occurs in hydric areas incl. meadows, seeps, marshes and bogs. Bloom period: March-July 0-700m	No potential to occur. No suitable habitat in or near project area.
Carex lyngbyei Lyngbye's sedge	----	----	2B.2	Perennial herb. Occurs in hydric areas incl. marshes and swamps. Bloom period: April-August 0-10m	No potential to occur. No suitable habitat in or near project area.

Castilleja ambigua var. humboldtiensis Humboldt Bay owl's-clover	----	----	1B.2	Annual herb. Occurs in saline marshes and swamps. Blooming period: April-August 0-3m	No potential to occur. No suitable habitat in or near project area.
Castilleja litoralis Oregon coast paintbrush	----	----	2B.2	Perennial herb. Occurs in coastal dune and scrub habitats. Blooming period: June-July 15-100m	No potential to occur. No suitable habitat in or near project area.
Chloropyron maritimum ssp. palustre Point Reyes salty bird's-beak	----	----	1B.2	Annual herb. Occurs in coastal saline marshes and swamps. Blooming period: June-Oct. 0-10m	No potential to occur. No suitable habitat in or near project area.
Clarkia amoena ssp. whitneyi Whitney's farewell-to-spring	----	----	1B.1	Annual herb. Occurs in coastal bluff and scrub habitats. Blooming period: June-August 10-100m	No potential to occur. No suitable habitat in or near project area.
Coptis laciniata Oregon goldthread	----	----	4.2	Perennial herb. Occurs in mesic meadows, seeps and streambanks in coniferous forest. Blooming period: March-May 0-1000m	No potential to occur. No suitable habitat in or near project area.
Erysimum menziesii Menzies' wallflower	FE	SE	1B.1	Perennial herb. Coastal dune habitat. Bloom period: March-Sept. 0-35m	No potential to occur. No suitable habitat in or near project area.
Erythronium oregonum giant fawn lily	----	----	2B.2	Perennial herb. Rocky, serpentine, openings in meadows and seeps of cismontane woodlands. Blooming period: March-June 100-1150m	No potential to occur. No suitable habitat in or near project area.
Erythronium revolutum coast fawn lily	----	----	2B.2	Perennial herb. Mesic habitats within streambanks, bogs, fens of broadleaf and north coast coniferous forests. Blooming period: March-July 0-1600m	Low potential to occur. Marginal habitat may occur in the margins of the agricultural fields and immediate area around Wolverton Gulch.
Fissidens pauperculus minute pocket moss	----	----	1B.2	Moss. Mesic conditions in north coast coniferous forest. Blooming period: NA 10-1024m	No potential to occur. No suitable habitat in or near project area.

Gilia capitata ssp. pacifica Pacific gilia	----	----	1B.2	Annual herb. Occurs in coastal bluff scrub, chaparral, prairie and valley and foothill grassland habitats. Blooming period: April-Aug. 5-1665m	Low potential to occur. Marginal habitat may occur in the margins of the agricultural fields and immediate area around Wolverton Gulch.
Gilia millefoliata dark-eyed gilia	----	----	1B.2	Annual herb. Coastal dune habitat. Bloom period: April-July 2-30m	No potential to occur. No suitable habitat in or near project area.
Hesperevax sparsiflora var. brevifolia short-leaved evax	----	----	1B.2	Annual herb. Coastal dune, bluff scrub and prairie habitats. Bloom period: March-June 0-215m	No potential to occur. No suitable habitat in or near project area.
Lathyrus japonicus seaside pea	----	----	2B.1	Perennial herb. Coastal dune habitat. Bloom period: May-Aug. 1-30m	No potential to occur. No suitable habitat in or near project area.
Lathyrus palustris marsh pea	----	----	2B.2	Perennial herb. Mesic sites in marshes, swamps, lower montane and north coast coniferous forests. Bloom period: March-Aug. 1-100m	No potential to occur. No suitable habitat in or near project area.
Layia carnosa beach layia	FE	SE	1B.1	Annual herb. Coastal dune and scrub habitat. Bloom period: March-July 0-60m	No potential to occur. No suitable habitat in or near project area.
Lycopodium clavatum running-pine	----	----	4.1	Perennial herb. Mesic areas of openings and roadsides of lower montane and north coast coniferous forest and marshes and swamps. Blooming period: June-Aug. 45-1225m	No potential to occur. No suitable habitat in or near project area.
Mitellastra caulescens leafy-stemmed mitrewort	----	----	4.2	Perennial herb. Mesic areas, broadleaf upland forests, lower montane and north coast coniferous forest and marshes and swamps. Blooming period: April-Oct. 5-1700m	No potential to occur. No suitable habitat in or near project area.
Montia howellii Howell's montia	----	----	2B.2	Annual herb. Vernally mesic: vernal pool, meadow and seep and north coast coniferous forest habitats. Bloom period: March-May 0-835m	No potential to occur. No suitable habitat in or near project area.

Noccaea fendleri ssp. californica Kneeland Prairie pennycress	FE	----	1B.1	Annual herb. Coastal prairie habitat. Bloom period: May-June 760-815m	No potential to occur. No suitable habitat in or near project area. Outside of known elevation range.
Packera bolanderi var. bolanderi seacoast ragwort	----	----	2B.2	Perennial herb. Coastal scrub and north coast coniferous forest. Blooming period: May-July 30-650m	Low potential to occur. Marginal habitat may occur in the margins of the agricultural fields and immediate area around Wolverton Gulch.
Piperia candida white-flowered rein orchid	----	----	1B.2	Perennial herb. Broadleaf upland forests, lower montane and north coast coniferous forest and marshes and swamps. Blooming period: May-Sept. 30-1310m	No potential to occur. No suitable habitat in or near project area.
Polemonium carneum Oregon polemonium	----	----	2B.2	Perennial herb. Coastal prairie and scrub, and lower montane coniferous forest habitats. Bloom period: April-Sept. 0-1830m	Low potential to occur. Marginal habitat may occur in the margins of the agricultural fields and immediate area around Wolverton Gulch.
Sidalcea malachroides maple-leaved checkerbloom	----	----	4.2	Perennial herb. Broadleaf upland forest, coastal prairie and scrub, north coast coniferous forest and riparian woodland. Blooming period: April-Aug. 0-730m	Low potential to occur. Marginal habitat may occur in the margins of the agricultural fields and immediate area around Wolverton Gulch.
Sidalcea malviflora ssp. patula Siskiyou checkerbloom	----	----	1B.2	Perennial herb. Coastal prairie and bluff scrub, north coast coniferous forest. Blooming period: May-Aug. 15-880m	Low potential to occur. Marginal habitat may occur in the margins of the agricultural fields and immediate area around Wolverton Gulch.
Sidalcea oregana ssp. eximia coast checkerbloom	----	----	1B.2	Perennial herb. Meadows and seeps, lower montane and north coast coniferous forest. Blooming period: June-Aug. 5-1340m	Low potential to occur. Marginal habitat may occur in areas between the upper grazing and lower agricultural fields.
Spergularia canadensis var. occidentalis western sand-spurrey	----	----	2B.1	Annual herb. Coastal saline march and swamp habitat. Bloom period: June-Aug. 0-3m	No potential to occur. No suitable habitat in or near project area. Outside of known elevation range.
Usnea longissima Methuselah's beard lichen	----	----	4.2	Lichen. Broadleaf upland and north coast coniferous forest. Blooming period: NA 50-1460m	No potential to occur. No suitable habitat in or near project area. Outside of known elevation range.

Table Key

— = No listing
FE = Listed as Endangered under the Endangered Species Act
FT = Listed as Threatened under the Endangered Species Act
FC = Candidate for listing (Threatened or Endangered) under Endangered Species Act
FD = Delisted in accordance with the Endangered Species Act

SE = Listed as Endangered under the California Endangered Species Act
ST = Listed as Threatened under the California Endangered Species Act
SSC = Species of Special Concern as identified by CDFW
FP = Listed as Fully Protected under California FGC
SR = Species identified as Rare by CDFW

CNPS - California Rare Plant Rank (CRPR)
1A - Presumed Extinct in California
1B - Rare, Threatened, or Endangered in California and elsewhere
2A - Plants Presumed Extirpated in California, but common elsewhere
2B - Rare, Threatened, or Endangered in California, but more common elsewhere
3 - Need more information (a Review List)
4 - Plants of Limited Distribution (a Watch List)

CRPR Threat Code Extension
.1 - Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 - Fairly endangered in California (20-80% occurrences threatened)
.3 - Not very endangered in California (<20% of occurrences threatened)

Table 2: CNDDB Results for Special-status Wildlife Species

Scientific Name	Common Name	USFWS	CDFW	Habitat Potential
Amphibians/Reptiles				
Emys marmorata	western pond turtle	----	SSC	Marginal habitat is present in and adjacent to Wolverton Gulch. Upland habitat to the west of Wolverton Gulch is absent due to active agricultural practices, marginal upland habitat is present to the east of Wolverton Gulch as a narrow grassland habitat adjacent to River Bar Rd. Wolverton Gulch is presumed to be a perennial stream due to historic reports and observed fish species in the wetted channel. However, the low flow and minimal depth conditions of Wolveton Gulch in the project area does not provide adequate hiding cover for this species. Wolverton Gulch within the project area, if utilized, would likely be limited to a dispersal corridor.
Rana aurora	northern red-legged frog	----	SSC	Marginal habitat is present in and adjacent to Wolverton Gulch. Wolverton Gulch is a channelized low gradient stream with few vegetated low flow areas adjacent to the channel that could be utilized as breeding habitat.
Rana boylii	foothill yellow-legged frog	----	SSC	Suitable habitat for this species is absent in or near the project area. Wolverton Gulch is a channelized low gradient stream with a mostly embedded small particle substrate (silt, sand and fine gravel) and is effectively absent of larger cobble sized wetted substrate utilized by the foothill yellow-legged frog for breeding substrate.
Birds				
Accipiter cooperii	Cooper's hawk	----	WL	Marginal foraging habitat is present along the willow scrub habitat areas where songbirds are most numerous. Marginal nesting habitat is present but more suitable nesting habitat is plentiful in the project's vicinity.
Accipiter striatus	sharp-shinned hawk	----	WL	Suitable foraging habitat is present along the willow scrub habitat areas where songbirds are most numerous. Suitable nesting habitat is not present in or near the project area.
Agelaius tricolor	tricolored blackbird	----	SSC	Suitable habitat for this species is absent in or near the project area. This species is a colonial nester found almost exclusively in bulrush and cattail dominated wetlands.

Athene cuncicularia	Burrowing owl	----	SSC	There are limited records of this species in Humboldt County. Marginal habitat is present along the project edges and along the berm on site. Since the majority of the site is actively plowed habitat potential is low.
Brachyramphus marmoratus	marbled murrelet	FT	SE	Suitable habitat for this species is absent in or near the project area. This species is an oceanic bird that nests in mature old-growth forest of norther California and southern Oregon. Nest trees will have a minimum diameter at breast height of 36-inches. Nest tree species include Douglas fir and coastal redwoods.
Pandion haliaetus	osprey	----	WL	Suitable habitat for this species is absent in or near the project area. This species may traverse the project area while taking prey from the Van Duzen or Eel Rivers to potential nesting sites north of the project area.
Riparia riparia	bank swallow	----	ST	Suitable habitat for this species is absent in or near the project area. A colonial nester found exclusively in riparian cliff habitats along streams, rivers and lakes.
Fish				
Oncorhynchus clarkii clarkii	coast cutthroat trout	----	SSC	Present. Wolverton Gulch is known occupied habitat for the coast cutthroat trout. Several small salmonid fish (≤ 7.5cm) were observed in the stream during the reconnaissance survey.
Spirinchus thaleichthys	longfin smelt	FC	ST/SSC	Suitable habitat for this species is absent in Wolverton Gulch. Closest recorded observation was at the mouth of the Van Duzen River recorded in 1956 (CNDDB).
Mammals				
Arborimus pomo	Sonoma tree vole	----	SSC	Suitable habitat for this species is absent in the project area. Occupies Douglas fir dominated forest habitats.
Corynorhinus townsendii	Townsend's big-eared bat	----	SCT/ SSC	Suitable habitat for this species is absent in the project area. Requires caves, mines, or manmade structures with little to no disturbance.
Martes caurina humboldtensis	Humboldt marten	----	SCE/ SSC	Project is outside of this species known current range. Only two occurrences were recorded within the 9-quadrangle CNDDB query and with observation dates of 1913 and 1927.
Pekania pennanti	fisher - West Coast DPS	FPT	SCT/ SSC	Suitable habitat for this species is absent in the project area. Known only to occupy low to mid-elevation coniferous or mixed conifer and hardwood forests. Prefers these habitats with a high degree of seral heterogeneity.

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FD = Delisted in accordance with the Endangered Species Act
FPT = Federally Proposed Threatened

SE = Listed as Endangered under the California Endangered Species Act
ST = Listed as Threatened under the California Endangered Species Act
SSC = Species of Special Concern as identified by CDFW
WL = Watch List
FP = Listed as Fully Protected under California Fish and Game Code
SR = Species identified as Rare by CDFW
SCT = State Candidate Threatened
SCE = State Candidate Endangered

Table 3: CNDDB Results for Sensitive Habitat Types

Sensitive Habitat Type	Habitat Description	Rarity (CA/Global)	Potential to Occur
Northern Coastal Salt Marsh (52110)*	Salt-tolerant herbaceous and woody stemmed species forming moderate to dense stands up to 3 feet tall. Typically found along protected inland margins of bays, lagoons and estuaries. Soils are hydric and subject to regular tidal inundation by salt water. Representative species may include: salt grass (*Distichlis spicata*), dwarf spikerush (*Eleocharis parvula*), frankenia (*Frankenia sp.*), dune rush (*Juncus lescurii*), and glass wort (*Salicornia pacifica*).	G3/S3.2	This habitat type is not present in the Project area.
Upland Douglas Fir Forest (82420)*	A tall mixed aged forest dominated by Douglas fir (*Pseudotsuga menziesii*). Sites are sub-mesic to sub-xeric on moderately deep, well drained soils. Range extends from Mendocino County north to British Columbia in elevations up to 6,000 feet. Annual precipitation ranges from 23 to 120 inches.	G4/S3.1	This habitat type is not present in the Project area.

G-Rank/S-Rank = Global Rank and State Rank as per NatureServe and CDFW's CNDDB RareFind 5.
G1 or S1 - Critically Imperiled Globally or Subnationally (state)
G2 or S2 - Imperiled Globally or Subnationally (state)
G3 or S3 - Vulnerable to extirpation or extinction Globally or Subnationally (state)
G4 or S4 - Apparently secure Globally or Subnationally (state)
G5 or S5 - Secure Globally or Subnationally (state)

* - community codes per Holland (1986) as used in the CNDDB.

Target Sensitive Species

Special-status Plants

The project has the low potential to support 7 different special-status plant species that are known to occupy one of two different vegetation communities: coastal willow scrub and mixed riparian. Table 1 summarizes the potential for occurrence and rationale for each special-status plant species occurring in or near the project, based on the CNDDB database search, the field survey results and expert knowledge of the species themselves.

Special-status Wildlife

The project has the potential to support, either seasonally or year-round, 5 special-status wildlife species. Table 2 summarizes the potential for occurrence and rationale for each special-status wildlife species occurring in the vicinity of the project, based on the CNDDB records search. The section below is a discussion of each potential target species' natural history.

Amphibians

Northern red-legged frog

The northern red-legged frog (*Rana aurora*) is a reddish brown medium sized frog with long legs and prominent dorsolateral ridges. The lower abdomen, legs and forearms are red with a speckled white abdomen on its ventral surface. During the non-breeding season, the northern red-legged frog is a habitat generalist and may venture far (>300 m) from standing water (Evelyn and Sweet, 2018). Breeding habitat is more specific with stagnant to low flow water with ample emergent vegetation on the margins of ponds, wetlands, rivers and streams. Seasonal water sources must hold water long enough during the breeding and maturation season for larvae to complete metamorphosis. Breeding season extends from January through March. Maturity, from the time of egg deposition to complete metamorphosis, may take up to 20 weeks. Eggs are laid in dense and sturdy vegetation such as cattails, rush and dense willow stands.

Reptiles

Western pond turtle

The western pond turtle (*Emys marmorata*) is a medium sized turtle that is somewhat common throughout most of California in suitable aquatic habitats. This species prefers perennial waters with adequate basking sites that may include mats of floating vegetation, partially submerged logs and boulders and stream banks that allow for quick escape to water. The western pond turtle is omnivorous. Female pond turtle may migrate up to 100 meters from a water source during its breeding season, March through August, to deposit its eggs in an earthen nest.

Birds

Cooper's hawk

The Cooper's hawk (*Accipiter cooperii*) is a medium sized hawk with lighter under parts and darker wings and cape. This species prefers riparian habitats with dense tree stands adjacent to open fields or shrubby habitats that have a higher density of song birds which are selected by the Cooper's hawk as prey. Nesting occurs in deciduous and conifer trees from 10 to 80 feet above ground level. The Cooper's hawk is typically a year round resident but may migrate to lower elevations during winter months and return in the spring. This species breeds March through August.

Sharp-shinned hawk

The sharp-shinned hawk (*Accipiter striatus*) is a small, long tailed hawk with curved wings and a slight build. Like the Cooper's hawk, the sharp-shinned hawk primarily feeds on smaller birds yet will also prey upon small rodents, and insects and prefers dense forest habitats where it uses ambush tactics from tree to tree to capture prey. The sharp-shinned hawk is a year round resident of north coastal California. Nest are usually found in small stands of conifers near water at 6 to 80 feet above ground level. Breeds from April through August.

Fish

Coast cutthroat trout

The coastal cutthroat trout (*Oncorhynchus clarkii clarkii*) is unique among salmonid species in that it is plastic in its life strategies, taking on amphidromous, anadromous, potadromous and lacustrine behaviors. Their freshwater habitats include gravelly streams, in cool well-oxygenated waters with access to deep pools for hiding cover. Streams with large woody debris and undercut banks are preferred habitats also. Natal streams are typically small and have low velocities with dense overhead canopies and cool summer temperatures. The Wolverton Gulch is a documented natal stream for the coastal cutthroat trout (CDFG 2013).

Sensitive Habitats

A pedestrian survey was performed to evaluate the current environmental setting of the project area. Weather conditions during the survey were sunny with temperatures of 58.5 degrees Fahrenheit with winds at 0-2 mph.

The project occurs within portions of five vegetation community types: ruderal, pasture, cropland, willow scrub and willow-alder riparian. The active pasture and cropland communities are co-dominant plant communities in the project area. The pasture areas are on the upper terrace of the survey area and north of the cropland. Whereas the cropland, currently planted as a mustard (*Brassica sp.*) crop, is located below the pasture areas on the relict Van Duzen

River floodplain. The willow scrub habitat is located within the historic railway parcel that extends from east to west through the survey area. The dominant species is the coastal willow (*Salix hookeriana*) with subdominant species including red elderberry (*Sambucus racemosa*) and blackberry (*Rubus sp.*). The willow-alder riparian vegetation community follows and comprises the riparian corridor of the Wolverton Gulch and is dominated by red alder (*Alnus rubra*), arroyo willow (*Salix lasiolepis*) and sandbar willow (*Salix exigua*). The ruderal vegetation type occurred in disturbed areas along Hwy 36 and the along the topographic break between the pasture and cropland areas. Of these five different plant communities there were no signs of either the Northern Coastal Salt Marsh or Upland Douglas Fir Forest communities. Riparian communities in California, however, they are a protected habitat type under Section 1600 *et seq.* of the California Fish and Game Code.

Wildlife Corridors

Wolverton Gulch provides adequate cover and habitat areas within the project area to be utilized as a wildlife corridor for the migration of fish, reptiles, amphibian and mammal species.

Proximity to Conservation Areas:

There is no designated critical habitat within the project area or in the vicinity of the project area. There are no other known conservation areas within the vicinity of the project area.

Jurisdictional Drainages:

The U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and California Department of Fish and Wildlife (CDFW) collectively regulate jurisdictional waters of the U.S. and state. Overton Gulch is a blue line stream that flows from north to south along the eastern margin of the survey area. This natural stream is a tributary of the Van Duzen and Eel Rivers. Overton Gulch is within the jurisdiction sections 401 and 404 of the US Clean Water Act and its channel and riparian area from outer drip line to outer drip line is under the jurisdiction of Section 1600 *et seq*. of the California Fish and Game Code.

Habitat Assessment Results:

The results of the habitat assessment indicate that the site is situated within two farmed areas i.e. an active pasture and an active mustard crop area. Native but degraded habitats surround these areas to the north and east but based on the present layout plan these areas can largely be avoided.

The habitat assessment determined the potential for rare plants to exist on site within the non-cultivated, native communities and ruderal areas (Exhibit 4). A floristic level botanical survey is

required to determine presence/absence of sensitive plant species, prior to any ground disturbing activities, in the non-cultivated, native communities and ruderal areas found within the project area.

There is some nesting habitat on the site and foraging habitat may exist for passerine and raptor species. All nesting birds are covered under the Migratory Bird Treaty Act (MBTA). All potential bird species should be included in a pre-construction nesting bird survey, conducted within 30 days of ground disturbance, if the project occurs during the spring.

The reconnaissance level survey suggested that perennial waters of the US are located within the project area. A jurisdiction delineation survey has been conducted and will be available with this habitat assessment report.

Table 4: Survey Recommendations:

Below are survey recommendations based on the results of the habitat assessment.

Species	Federal Status	State Status	Survey Requirements	Legal Authority
Nesting Birds	Migratory Bird Treaty Act (MBTA)	CESA, CA FGC	No ground disturbance to occur during nesting season (between February and August) without a clearance survey by a qualified biologist, conducted within 30 days of ground disturbance, to ensure that no nesting birds are impacted.	MBTA, CA FGC, CEQA
Wildlife	FESA	CESA	None	FESA/CESA
Plants	FESA	CESA	A general floristic botanical inventory in non-cultivated, native communities and ruderal areas prior to ground disturbing activities.	FESA/CESA
State and Federally Jurisdictional Waters and Wetlands	Section 401/404 Clean Water Act (CWA)	Porter-Cologne Water Quality Control Act	Jurisdictional delineation	CWA, Porter-Cologne

Table 5: Mitigation Measures:

Mitigation Measures	Survey Description	Requirements
BIO-1	Floristic plant survey is required during the appropriate time of year, typically spring blooming period (April-June) in non-cultivated, native communities and ruderal areas found within the project area.	If the presence of rare plants is detected the project proponent will need to address avoidance measures with the lead agency. These may include avoidance, top soil preservation and/or off-site mitigation.
BIO-2	30 Day Preconstruction survey	If nesting birds are observed, the location of the nest shall be marked with 100 foot offset flagging. The nest shall be monitored bi-weekly until the nest has fledged.

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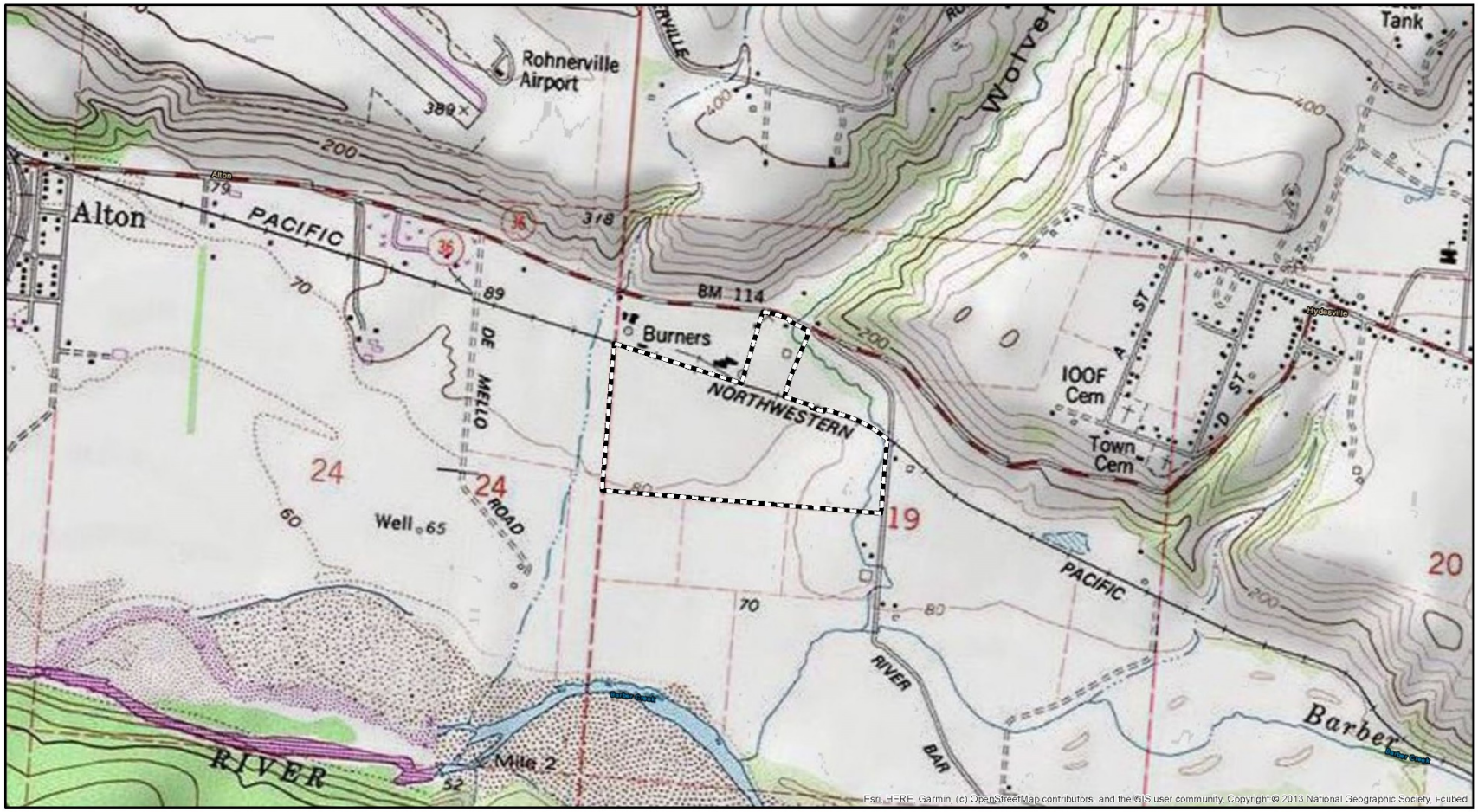
Exhibit 1: Topographic View



Legend

2023-0504-NC Project Area

Topographic Map: Northcoast Solar Project Survey Area

0 1,000 2,000 4,000 6,000 Feet

Source: ESRI ArcGIS, EPD Solutions, CNDDB, March, 2020

PHOENIX BIOLOGICAL CONSULTING

Exhibit 2: Regional View

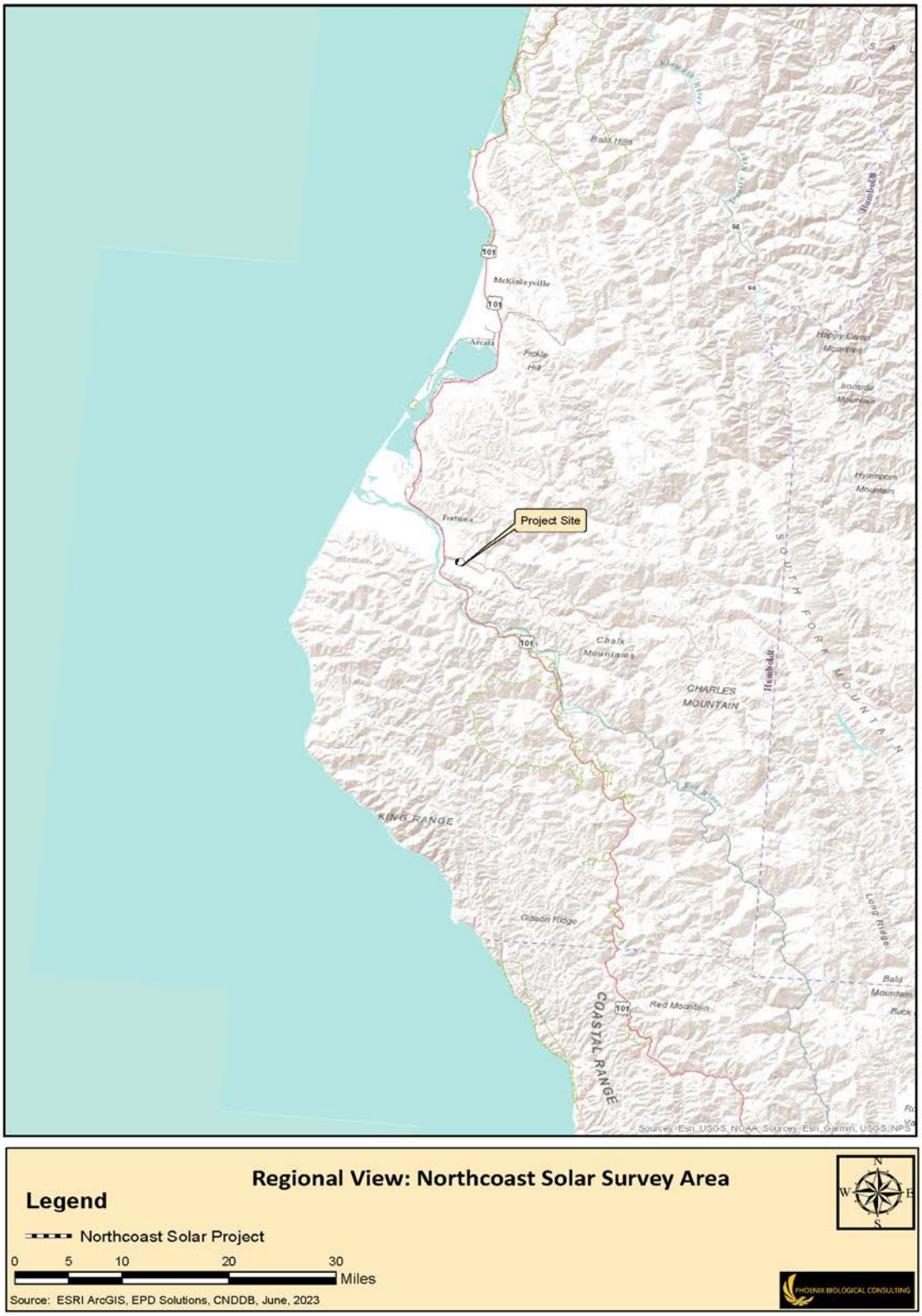


Exhibit 3: Aerial View – USFWS Drainage Database

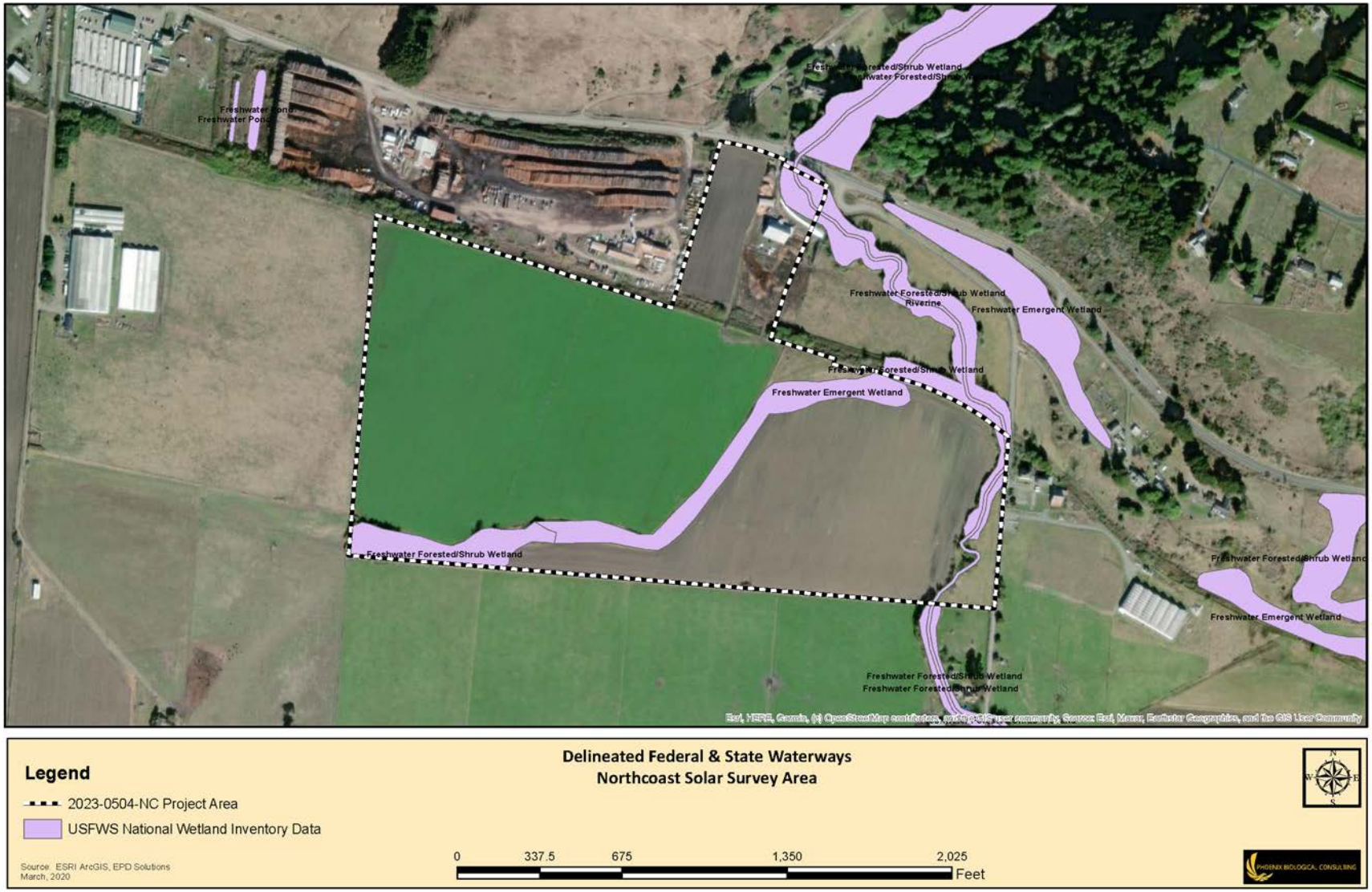


Exhibit 4: Plant Communities

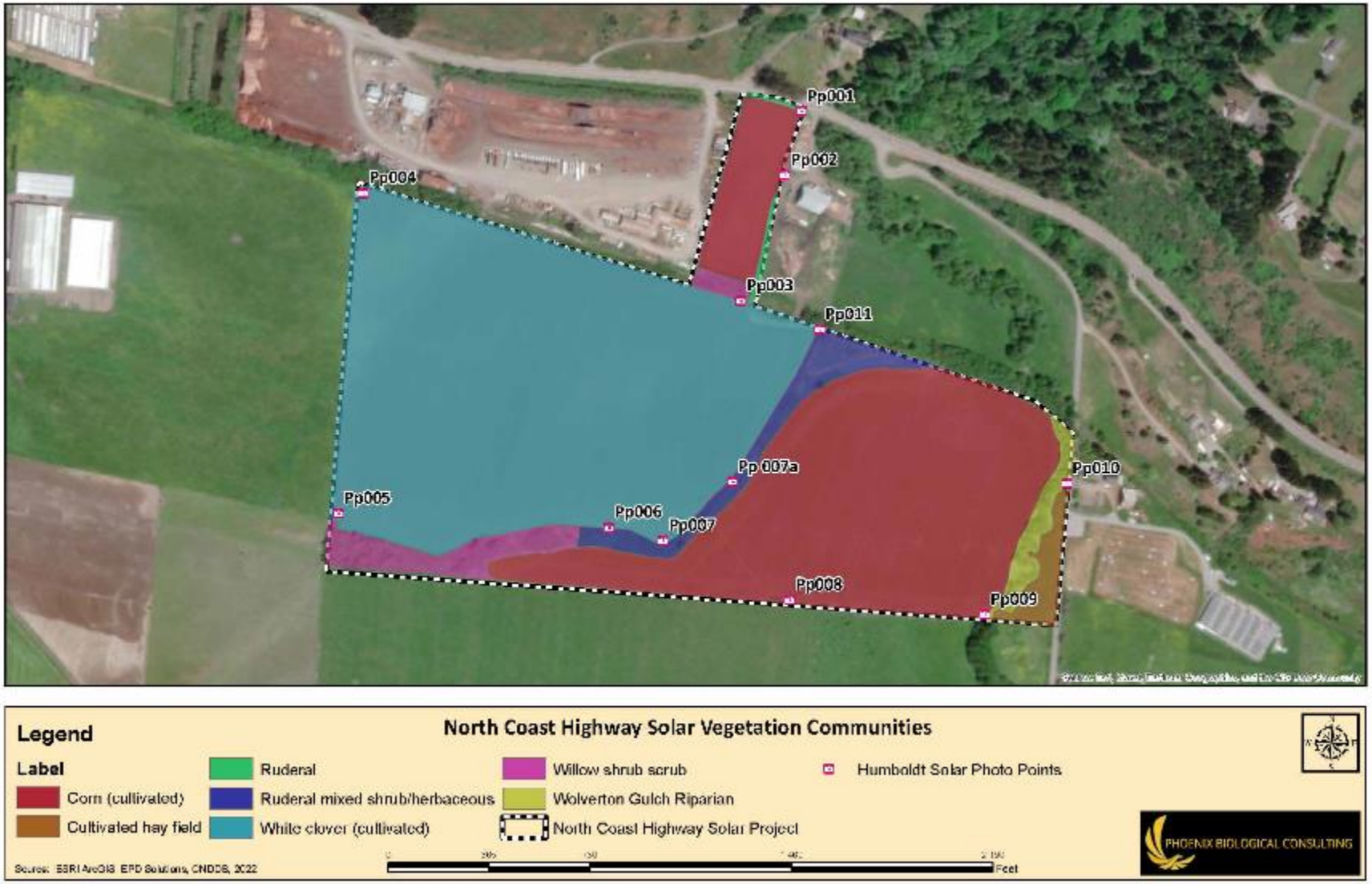


Exhibit 5: CNDDB Records

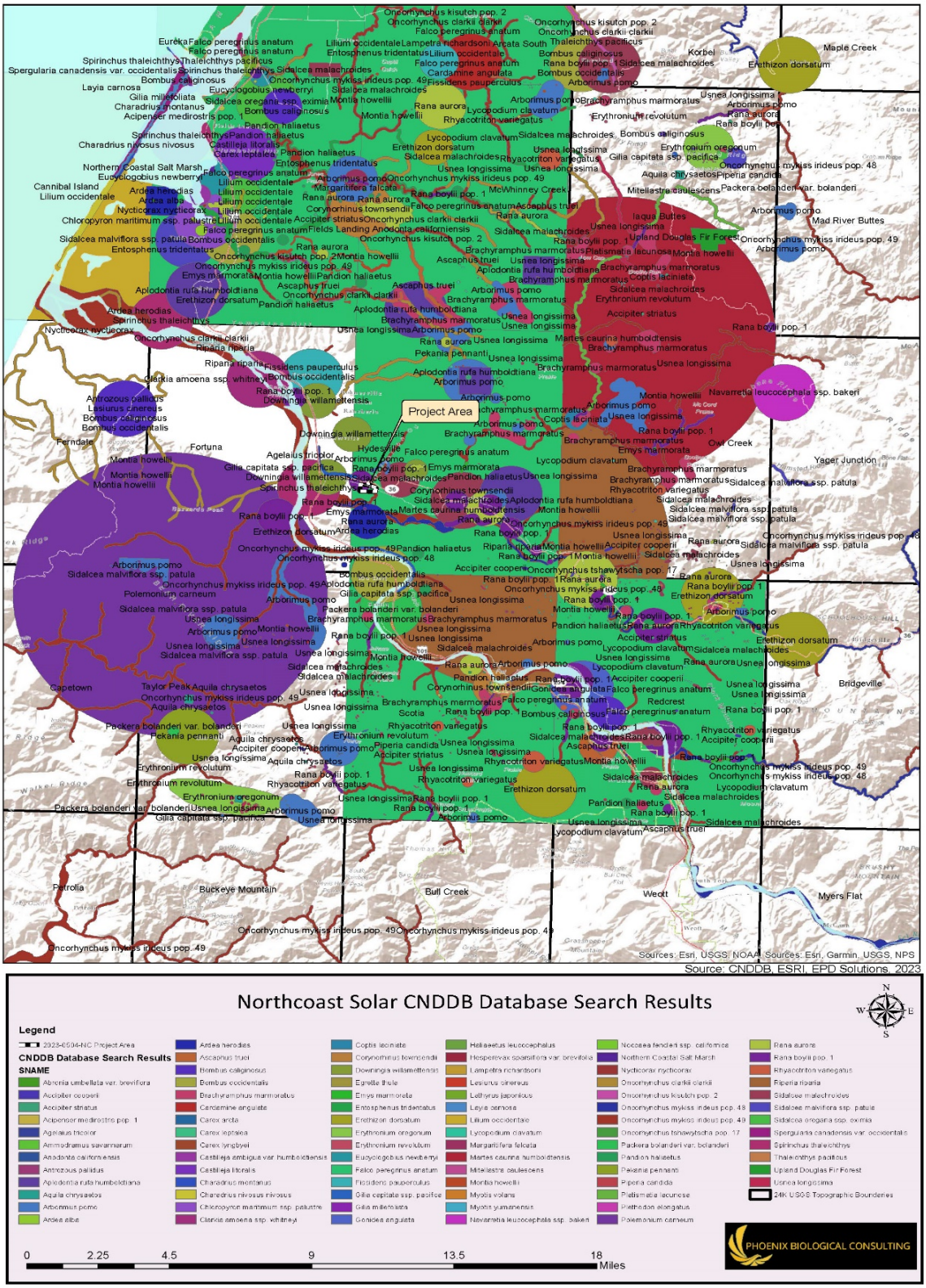


Exhibit 6: Preliminary Site Plan

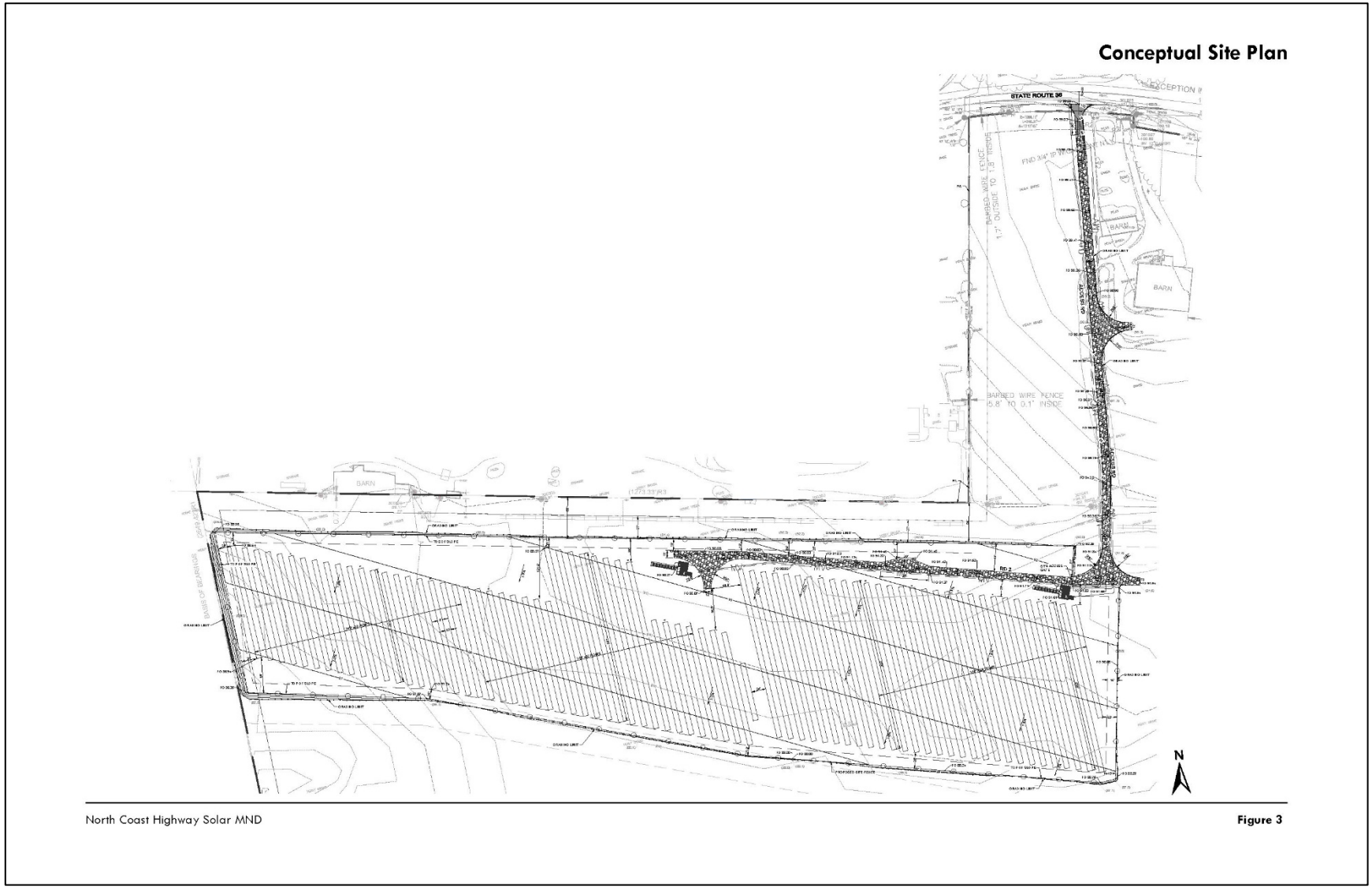


Exhibit 7: Site Photos

	**Property entrance. Facing south across Hwy 36.**

	**Photo Point 1 – At property entrance looking west.**

	**Photo Point 1 – At property entrance looking south.**

	**Photo Point 1 – At property entrance looking east. Hwy 36 far left.**

	**Photo Point 2 – View south of cultivated corn field and access road.**

	**Photo Point 2 – View west of cultivated corn field.**

	**View south of access road from upper corn field to upper white clover field. Coastal willow, Himalayan blackberry, poison oak and poison hemlock in foreground.**

	**Photo Point 3 – View west of cultivated white clover field and fence line. White clover, poison oak, poison hemlock and spike bentgrass in view.**

	**Photo Point 3 – View south of cultivated white clover field.**

	**Photo Point 3 – View east of cultivated white clover field, access road and fence line. White clover, poison hemlock and Himalayan blackberry in view.**

	**Photo Point 4 – View south of adjacent property at fence line. Coastal willow and poison hemlock in view.**

	**Photo Point 4 – View west of white clover field and adjacent property at fence line.**

	**Photo Point 4 – View east of hidden fence line and white clover field. Coastal willow and white clover in view.**

	**Photo Point 5 – View north of adjacent property (left) and white clover field.**

	**Photo Point 5 – View west of adjacent property corner at fence line. Poison hemlock and Himalayan blackberry in view.**

	**Photo Point 5 – View southeast of upper property corner. Coastal willow and Himalayan blackberry in view.**

	**Photo Point 5 – View east of white clover field and upper fence line (far right).**

	**Photo Point 6 – View west of upper fence line and white clover field (right).**

	**Photo Point 6 – View south of fence line, lower corn field and adjacent property.**

	**Photo Point 6 – View east of fence line, white clover field (left), lower corn field and adjacent property.**

	**Photo Point 7 – View west of fence line, and clover field (right).**

	**Photo Point 7 – View north of fence line, and clover field (left).**

Photo Point 7a - Access road from upper white clover field to lower corn field.

	**Photo Point 8 - View west of previous well head site and corn field.**

	**Photo Point 8 - View east of southern fence line, corn field and adjacent property.**

	**Photo Point 9 - View east of Wolverton Gulch and access road to eastern field.**

	**Photo Point 9 - View north of west bank of Wolverton Gulch and adjacent corn field. Red alder riparian corridor in view.**

	**East of Photo Point 9 - View north of east bank of Wolverton Gulch.**

	**East of Photo Point 9 - View north of east riparian margin of Wolverton Gulch and adjacent field.**

	**Photo Point 10 - View north of fence line, River Bar Rd and adjacent property. Red alder, Himalayan blackberry in view.**

	**Photo Point 10 - View south of fence line, River Bar Rd, cultivated hay field and Wolverton Gulch riparian vegetation.**

	**Photo Point 11 - View south of fence line, lower corn fields (left) and upper white clover field.**

	**Photo Point 11 - View west of fence line and white clover field. Coastal willow and white clover in view.**

	**Photo Point 11 - View east of fence line (left), ruderal area and lower corn field.**

Table 5: Vertebrates Detected During Site Visit

Common Name	Scientific Name
Amphibians	
Sierran Treefrog	*Pseudacris sierra*
Birds	
American Crow	*Corvus brachyrhynchos*
American Robin	*Turdus migratorius*
Black Phoebe	*Sayornis nigricans*
Black-capped Chickadee	*Poecile atricapillus*
Bushtit	*Psaltriparus minimus*
California Towhee	*Melozone crissalis*
Canada goose	*Branta canadensis*
Cedar Waxwing	*Bombycilla cedrorum*
European Starling	*Sturnus vulgaris*
Mourning Dove	*Zenaida macroura*
Northern Flicker	*Colaptes auratus*
Northern Harrier	*Circus hudsonius*
Red-tailed Hawk	*Buteo jamaicensis*
Song Sparrow	*Melospiza melodia*
Tree Swallow	*Tachycineta bicolor*
White-crowned Sparrow	*Zonotrichia leucophrys*
Yellow Warbler	*Setophaga petechia*
Fish	
Juvenile fish	*Unkown*
Mammals	
Botta's Pocket Gopher	*Thomomys bottae*
Columbian Black-tailed Deer	*Odocoileus hemionus columbianus*
Coyote	*Canis latrans*

Table 6: Vascular Plants Detected During Site Visit

Scientific Name	Common Name
Achillea millefolium	Yarrow
Agrostis exarata	Spike bentgrass
Alnus rubra	Red alder
Amaranthus retroflexus	Rough pigweed
Anthriscus caucalis	Bur chervil
Athyrium filix-femina var. cyclosorum	Western lady fern
Avena fatua	Wild oat
Baccharis pilularis	Coyote brush
Brassica rapa	Common mustard
Bromus catharticus	Rescue grass
Bromus diandrus	Ripgut brome
Bromus sitchensis var. carinatus	California brome
Capsella bursa-pastoris	Shepherd's purse
Cardamine oligosperma	Bitter cress
Cerastium glomeratum	Large mouse ears
Cerastium glomeratum	Large mouse ears
Cicuta douglasii	Western water hemlock
Cirsium vulgare	Bull thistle
Conium maculatum	Poison hemlock
Conium maculatum	Poison hemlock
Convolvulus arvensis	Field bindweed
Cortaderia jubata	Andean pampas grass
Cyperus esculentus	Yellow nutgrass
Datura stramonium	Jimsonweed
Daucus carota	Queen Anne's lace
Dipsacus fullonum	Wild teasel
Dryopteris arguta	California wood fern
Echinochloa crus-galli	Barnyard grass
Elymus triticoides	Beardless wild rye
Epilobium brachycarpum	Tall annual willowherb
Epilobium ciliatum	Slender willow herb
Equisetum arvense	Common horsetail
Equisetum hyemale ssp. affine	Giant scouring rush
Erigeron canadensis	Canada horseweed
Erodium cicutarium	Red stemmed filaree

Euphorbia maculata	Spotted spurge
Festuca perennis	Italian rye grass
Galium porrigens var. porrigens	Climbing bedstraw
Geranium molle	Dovefoot geranium
Gnaphalium palustre	Lowland cudweed
Hedera helix	English ivy
Helminthotheca echioides	Bristly ox-tongue
Heuchera micrantha	Alumroot
Juncus bufonius var. bufonius	Toad rush
Juncus effusus ssp. pacificus	Pacific rush
Juncus xiphioides	Iris leaved rush
Kickxia elatine	Fluellin
Lamium amplexicaule	Henbit deadnettle
Lemna minor	Smaller duckweed
Leucanthemum vulgare	Oxeye daisy
Ludwigia peploides	Marsh purslane
Ludwigia sp.	Water primrose
Malva parviflora	Cheeseweed mallow
Marah oregana	Coast man-root
Matricaria discoidea	Pineapple weed
Mentha pulegium	Pennyroyal
Nasturtium officinale	Watercress
Plantago elongata	Coastal plantain
Plantago lanceolata	English plantain
Plantago major	Common plantain
Poa annua	Annual blue grass
Poa compressa	Canada blue grass
Polygonum austiniae	Rebecca Austin's knotweed
Polystichum munitum	Western swordfern
Potamogeton epihydrus	Creekgrass
Prunus avium	Sweet cherry
Ranunculus aquatilis	Whitewater crowfoot
Ranunculus muricatus	Buttercup
Ranunculus occidentalis	Western buttercup
Raphanus sativus	Jointed charlock
Rosa californica	California wild rose
Rubus armeniacus	Himalayan blackberry
Rubus parviflorus	Thimbleberry
Rubus ursinus	California blackberry

Rumex acetosella	Common sheep sorrel
Rumex crispus	Curly dock
Salix exigua	Sandbar willow
Salix hookeriana	Coastal willow
Salix lasiolepis	Arroyo willow
Sambucus racemosa var. racemosa	Pacific red elderberry
Silybum marianum	Milk thistle
Solanum americanum	White nightshade
Stachys ajugoides	Hedge nettle
Stachys mexicana	Mexican Hedge-nettle
Taraxacum officinale ssp. officinale	Common dandelion
Toxicodendron diversilobum	Poison oak
Trifolium dubium	Shamrock clover
Trifolium hirtum	Rose clover
Trifolium repens	White clover
Umbellularia californica	California bay
Urtica dioica	Stinging nettle
Veronica persica	Bird's eye speedwell
Vicia sativa	Spring vetch
Xanthium spinosum	Spiny cocklebur
Xanthium strumarium	Rough cockleburr
Zea mays	Cultivated corn

Appendix A: CNDDB Results

Scientific Name	Common Name	Occurrence Number	Key Quad Name	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank	CDFW Status
Abronia umbellata var. breviflora	pink sand-verbena	64	Fields Landing	None	None	G4 G5 T2	S2	1B.1	
Abronia umbellata var. breviflora	pink sand-verbena	38	Fields Landing	None	None	G4 G5 T2	S2	1B.1	
Abronia umbellata var. breviflora	pink sand-verbena	16	Fields Landing	None	None	G4 G5 T2	S2	1B.1	
Accipiter cooperii	Cooper's hawk	80	Owl Creek	None	None	G5	S4		WL
Accipiter cooperii	Cooper's hawk	83	Taylor Peak	None	None	G5	S4		WL
Accipiter cooperii	Cooper's hawk	76	Redcrest	None	None	G5	S4		WL
Accipiter cooperii	Cooper's hawk	74	Hydesville	None	None	G5	S4		WL
Accipiter cooperii	Cooper's hawk	79	Redcrest	None	None	G5	S4		WL
Accipiter cooperii	Cooper's hawk	77	Redcrest	None	None	G5	S4		WL
Accipiter striatus	sharp-shinned hawk	16	Hydesville	None	None	G5	S4		WL
Accipiter striatus	sharp-shinned hawk	17	Iaqua Buttes	None	None	G5	S4		WL
Accipiter striatus	sharp-shinned hawk	18	Fields Landing	None	None	G5	S4		WL
Accipiter striatus	sharp-shinned hawk	19	Fields Landing	None	None	G5	S4		WL
Accipiter striatus	sharp-shinned hawk	21	Scotia	None	None	G5	S4		WL
Accipiter striatus	sharp-shinned hawk	20	Scotia	None	None	G5	S4		WL
Accipiter striatus	sharp-shinned hawk	15	Redcrest	None	None	G5	S4		WL
Accipiter striatus	sharp-shinned hawk	8	Scotia	None	None	G5	S4		WL
Accipiter striatus	sharp-shinned hawk	7	Iaqua Buttes	None	None	G5	S4		WL
Accipiter striatus	sharp-shinned hawk	6	Iaqua Buttes	None	None	G5	S4		WL

Acipenser medirostris pop. 1	green sturgeon - southern DPS	13	Eureka	Threatened	None	G2T1	S1	
Agelaius tricolor	tricolored blackbird	247	Fortuna	None	Threatened	G1G2	S2	SSC
Ammodramus savannarum	grasshopper sparrow	26	Fortuna	None	None	G5	S3	SSC
Anodonta californiensis	California floater	4	Fields Landing	None	None	G3Q	S2?	
Antrozous pallidus	pallid bat	148	Ferndale	None	None	G4	S3	SSC
Aplodontia rufa humboldtiana	Humboldt mountain beaver	5	Scotia	None	None	G5TNR	SNR	
Aplodontia rufa humboldtiana	Humboldt mountain beaver	8	McWhinney Creek	None	None	G5TNR	SNR	
Aplodontia rufa humboldtiana	Humboldt mountain beaver	9	Fields Landing	None	None	G5TNR	SNR	
Aplodontia rufa humboldtiana	Humboldt mountain beaver	7	McWhinney Creek	None	None	G5TNR	SNR	
Aplodontia rufa humboldtiana	Humboldt mountain beaver	6	Hydesville	None	None	G5TNR	SNR	
Aplodontia rufa humboldtiana	Humboldt mountain beaver	1	Hydesville	None	None	G5TNR	SNR	
Aquila chrysaetos	golden eagle	130	Taylor Peak	None	None	G5	S3	FP; WL
Aquila chrysaetos	golden eagle	131	Taylor Peak	None	None	G5	S3	FP; WL
Aquila chrysaetos	golden eagle	128	Iaqua Buttes	None	None	G5	S3	FP; WL
Aquila chrysaetos	golden eagle	95	Taylor Peak	None	None	G5	S3	FP; WL
Aquila chrysaetos	golden eagle	88	Taylor Peak	None	None	G5	S3	FP; WL
Aquila chrysaetos	golden eagle	89	Taylor Peak	None	None	G5	S3	FP; WL
Aquila chrysaetos	golden eagle	92	Taylor Peak	None	None	G5	S3	FP; WL
Arborimus pomo	Sonoma tree vole	203	Redcrest	None	None	G3	S3	SSC
Arborimus pomo	Sonoma tree vole	190	Owl Creek	None	None	G3	S3	SSC

Arborimus pomo	Sonoma tree vole	84	Mad River Buttes	None	None	G3	S3	SSC
Arborimus pomo	Sonoma tree vole	83	Mad River Buttes	None	None	G3	S3	SSC
Arborimus pomo	Sonoma tree vole	85	Owl Creek	None	None	G3	S3	SSC
Arborimus pomo	Sonoma tree vole	69	Hydesville	None	None	G3	S3	SSC
Arborimus pomo	Sonoma tree vole	77	Scotia	None	None	G3	S3	SSC
Arborimus pomo	Sonoma tree vole	70	Hydesville	None	None	G3	S3	SSC
Arborimus pomo	Sonoma tree vole	72	Taylor Peak	None	None	G3	S3	SSC
Arborimus pomo	Sonoma tree vole	74	Taylor Peak	None	None	G3	S3	SSC
Arborimus pomo	Sonoma tree vole	73	Taylor Peak	None	None	G3	S3	SSC
Arborimus pomo	Sonoma tree vole	75	Taylor Peak	None	None	G3	S3	SSC
Arborimus pomo	Sonoma tree vole	71	Hydesville	None	None	G3	S3	SSC
Arborimus pomo	Sonoma tree vole	76	Scotia	None	None	G3	S3	SSC
Arborimus pomo	Sonoma tree vole	64	McWhinney Creek	None	None	G3	S3	SSC
Arborimus pomo	Sonoma tree vole	66	Hydesville	None	None	G3	S3	SSC
Arborimus pomo	Sonoma tree vole	67	Hydesville	None	None	G3	S3	SSC
Arborimus pomo	Sonoma tree vole	68	Hydesville	None	None	G3	S3	SSC
Arborimus pomo	Sonoma tree vole	61	Fields Landing	None	None	G3	S3	SSC
Arborimus pomo	Sonoma tree vole	62	McWhinney Creek	None	None	G3	S3	SSC
Arborimus pomo	Sonoma tree vole	63	McWhinney Creek	None	None	G3	S3	SSC
Arborimus pomo	Sonoma tree vole	50	Redcrest	None	None	G3	S3	SSC
Arborimus pomo	Sonoma tree vole	38	Fortuna	None	None	G3	S3	SSC
Arborimus pomo	Sonoma tree vole	37	Hydesville	None	None	G3	S3	SSC
Arborimus pomo	Sonoma tree vole	43	Korbel	None	None	G3	S3	SSC

Arborimus pomo	Sonoma tree vole	8	Iaqua Buttes	None	None	G3	S3	SSC
Ardea alba	great egret	22	Fields Landing	None	None	G5	S4	
Ardea alba	great egret	39	Fields Landing	None	None	G5	S4	
Ardea alba	great egret	21	Fields Landing	None	None	G5	S4	
Ardea herodias	great blue heron	144	Cannibal Island	None	None	G5	S4	
Ardea herodias	great blue heron	53	Fields Landing	None	None	G5	S4	
Ardea herodias	great blue heron	143	Fields Landing	None	None	G5	S4	
Ardea herodias	great blue heron	134	Fortuna	None	None	G5	S4	
Ardea herodias	great blue heron	56	Fortuna	None	None	G5	S4	
Ardea herodias	great blue heron	62	Hydesville	None	None	G5	S4	
Ardea herodias	great blue heron	52	Fields Landing	None	None	G5	S4	
Ascaphus truei	Pacific tailed frog	211	Redcrest	None	None	G4	S3 S4	SSC
Ascaphus truei	Pacific tailed frog	414	Weott	None	None	G4	S3 S4	SSC
Ascaphus truei	Pacific tailed frog	204	Arcata South	None	None	G4	S3 S4	SSC
Ascaphus truei	Pacific tailed frog	381	McWhinney Creek	None	None	G4	S3 S4	SSC
Ascaphus truei	Pacific tailed frog	382	McWhinney Creek	None	None	G4	S3 S4	SSC
Ascaphus truei	Pacific tailed frog	6	Fields Landing	None	None	G4	S3 S4	SSC
Ascaphus truei	Pacific tailed frog	190	McWhinney Creek	None	None	G4	S3 S4	SSC
Ascaphus truei	Pacific tailed frog	125	Scotia	None	None	G4	S3 S4	SSC
Bombus caliginosus	obscure bumble bee	30	Korbel	None	None	G2 G3	S1 S2	
Bombus caliginosus	obscure bumble bee	31	Iaqua Buttes	None	None	G2 G3	S1 S2	
Bombus caliginosus	obscure bumble bee	34	Redcrest	None	None	G2 G3	S1 S2	
Bombus caliginosus	obscure bumble bee	33	Ferndale	None	None	G2 G3	S1 S2	

Bombus caliginosus	obscure bumble bee	28	Fields Landing	None	None	G2 G3	S1 S2
Bombus caliginosus	obscure bumble bee	29	Fields Landing	None	None	G2 G3	S1 S2
Bombus occidentalis	western bumble bee	43	Korbel	None	Candidate Endangered	G3	S1
Bombus occidentalis	western bumble bee	45	Ferndale	None	Candidate Endangered	G3	S1
Bombus occidentalis	western bumble bee	48	Scotia	None	Candidate Endangered	G3	S1
Bombus occidentalis	western bumble bee	44	Fields Landing	None	Candidate Endangered	G3	S1
Bombus occidentalis	western bumble bee	47	Fortuna	None	Candidate Endangered	G3	S1
Brachyramphus marmoratus	marbled murrelet	72	McWhinney Creek	Threatened	Endangered	G3	S2
Brachyramphus marmoratus	marbled murrelet	73	McWhinney Creek	Threatened	Endangered	G3	S2
Brachyramphus marmoratus	marbled murrelet	62	Iaqua Buttes	Threatened	Endangered	G3	S2
Brachyramphus marmoratus	marbled murrelet	70	Hydesville	Threatened	Endangered	G3	S2
Brachyramphus marmoratus	marbled murrelet	69	Scotia	Threatened	Endangered	G3	S2
Brachyramphus marmoratus	marbled murrelet	65	Iaqua Buttes	Threatened	Endangered	G3	S2
Brachyramphus marmoratus	marbled murrelet	64	Iaqua Buttes	Threatened	Endangered	G3	S2

Brachyramphus marmoratus	marbled murrelet	67	Scotia	Threatened	Endangered	G3	S2
Brachyramphus marmoratus	marbled murrelet	66	Iaqua Buttes	Threatened	Endangered	G3	S2
Brachyramphus marmoratus	marbled murrelet	68	Scotia	Threatened	Endangered	G3	S2
Brachyramphus marmoratus	marbled murrelet	71	Hydesville	Threatened	Endangered	G3	S2
Brachyramphus marmoratus	marbled murrelet	63	Iaqua Buttes	Threatened	Endangered	G3	S2
Brachyramphus marmoratus	marbled murrelet	54	Owl Creek	Threatened	Endangered	G3	S2
Brachyramphus marmoratus	marbled murrelet	60	Owl Creek	Threatened	Endangered	G3	S2
Brachyramphus marmoratus	marbled murrelet	59	Owl Creek	Threatened	Endangered	G3	S2
Brachyramphus marmoratus	marbled murrelet	57	Owl Creek	Threatened	Endangered	G3	S2
Brachyramphus marmoratus	marbled murrelet	55	Owl Creek	Threatened	Endangered	G3	S2
Brachyramphus marmoratus	marbled murrelet	50	Redcrest	Threatened	Endangered	G3	S2
Brachyramphus marmoratus	marbled murrelet	52	Redcrest	Threatened	Endangered	G3	S2
Brachyramphus marmoratus	marbled murrelet	56	Owl Creek	Threatened	Endangered	G3	S2
Brachyramphus marmoratus	marbled murrelet	58	Owl Creek	Threatened	Endangered	G3	S2
Brachyramphus marmoratus	marbled murrelet	53	Redcrest	Threatened	Endangered	G3	S2

Brachyramphus marmoratus	marbled murrelet	61	Iaqua Buttes	Threatened	Endangered	G3	S2		
Brachyramphus marmoratus	marbled murrelet	49	Redcrest	Threatened	Endangered	G3	S2		
Brachyramphus marmoratus	marbled murrelet	51	Redcrest	Threatened	Endangered	G3	S2		
Cardamine angulata	seaside bittercress	2	Arcata South	None	None	G4 G5	S3	2B.1	
Carex arcta	northern clustered sedge	9	Owl Creek	None	None	G5	S1	2B.2	
Carex arcta	northern clustered sedge	3	Owl Creek	None	None	G5	S1	2B.2	
Carex arcta	northern clustered sedge	8	Redcrest	None	None	G5	S1	2B.2	
Carex leptalea	bristle-stalked sedge	3	Fields Landing	None	None	G5	S1	2B.2	
Carex lyngbyei	Lyngbye's sedge	9	Eureka	None	None	G5	S3	2B.2	
Castilleja ambigua var. humboldtiensis	Humboldt Bay owl's-clover	34	Fields Landing	None	None	G4 T2	S2	1B.2	
Castilleja litoralis	Oregon coast paintbrush	17	Fields Landing	None	None	G3	S3	2B.2	
Charadrius montanus	mountain plover	96	Fields Landing	None	None	G3	S2 S3		SSC
Charadrius nivosus nivosus	western snowy plover	78	Cannibal Island	Threatened	None	G3 T3	S3		SSC
Chloropyron maritimum ssp. palustre	Point Reyes salty bird's-beak	15	Fields Landing	None	None	G4? T2	S2	1B.2	
Chloropyron maritimum ssp. palustre	Point Reyes salty bird's-beak	16	Fields Landing	None	None	G4? T2	S2	1B.2	
Clarkia amoena ssp. whitneyi	Whitney's farewell-to-spring	8	Fortuna	None	None	G5 T1	S1	1B.1	
Coptis laciniata	Oregon goldthread	113	Iaqua Buttes	None	None	G4?	S3?	4.2	

Coptis laciniata	Oregon goldthread	59	Iaqua Buttes	None	None	G4?	S3?	4.2	
Coptis laciniata	Oregon goldthread	7	Owl Creek	None	None	G4?	S3?	4.2	
Corynorhinus townsendii	Townsend's big-eared bat	568	McWhinney Creek	None	None	G4	S2		SSC
Corynorhinus townsendii	Townsend's big-eared bat	567	Hydesville	None	None	G4	S2		SSC
Corynorhinus townsendii	Townsend's big-eared bat	146	Redcrest	None	None	G4	S2		SSC
Corynorhinus townsendii	Townsend's big-eared bat	139	Redcrest	None	None	G4	S2		SSC
Corynorhinus townsendii	Townsend's big-eared bat	124	Scotia	None	None	G4	S2		SSC
Downingia willamettensis	Cascade downingia	5	Fortuna	None	None	G4	S2	2B.2	
Downingia willamettensis	Cascade downingia	6	Fortuna	None	None	G4	S2	2B.2	
Downingia willamettensis	Cascade downingia	7	Fortuna	None	None	G4	S2	2B.2	
Downingia willamettensis	Cascade downingia	4	Hydesville	None	None	G4	S2	2B.2	
Egretta thula	snowy egret	6	Fields Landing	None	None	G5	S4		
Emys marmorata	western pond turtle	1,375	Redcrest	None	None	G3G4	S3		SSC
Emys marmorata	western pond turtle	1,367	Fields Landing	None	None	G3G4	S3		SSC
Emys marmorata	western pond turtle	560	Redcrest	None	None	G3G4	S3		SSC
Emys marmorata	western pond turtle	740	Hydesville	None	None	G3G4	S3		SSC
Emys marmorata	western pond turtle	738	Redcrest	None	None	G3G4	S3		SSC
Emys marmorata	western pond turtle	737	Redcrest	None	None	G3G4	S3		SSC
Emys marmorata	western pond turtle	739	Hydesville	None	None	G3G4	S3		SSC
Emys marmorata	western pond turtle	742	McWhinney Creek	None	None	G3G4	S3		SSC
Emys marmorata	western pond turtle	743	Fields Landing	None	None	G3G4	S3		SSC
Emys marmorata	western pond turtle	741	Owl Creek	None	None	G3G4	S3		SSC
Emys marmorata	western pond turtle	733	Redcrest	None	None	G3G4	S3		SSC

Emys marmorata	western pond turtle	734	Redcrest	None	None	G3 G4	S3	SSC
Emys marmorata	western pond turtle	735	Redcrest	None	None	G3 G4	S3	SSC
Emys marmorata	western pond turtle	732	Redcrest	None	None	G3 G4	S3	SSC
Emys marmorata	western pond turtle	522	Redcrest	None	None	G3 G4	S3	SSC
Emys marmorata	western pond turtle	419	Hydesville	None	None	G3 G4	S3	SSC
Entosphenus tridentatus	Pacific lamprey	6	Fields Landing	None	None	G4	S3	SSC
Entosphenus tridentatus	Pacific lamprey	4	Arcata South	None	None	G4	S3	SSC
Entosphenus tridentatus	Pacific lamprey	5	Fields Landing	None	None	G4	S3	SSC
Erethizon dorsatum	North American porcupine	471	Redcrest	None	None	G5	S3	
Erethizon dorsatum	North American porcupine	479	Maple Creek	None	None	G5	S3	
Erethizon dorsatum	North American porcupine	474	Scotia	None	None	G5	S3	
Erethizon dorsatum	North American porcupine	472	Bridgeville	None	None	G5	S3	
Erethizon dorsatum	North American porcupine	191	Redcrest	None	None	G5	S3	
Erethizon dorsatum	North American porcupine	182	McWhinney Creek	None	None	G5	S3	
Erethizon dorsatum	North American porcupine	189	Fortuna	None	None	G5	S3	
Erethizon dorsatum	North American porcupine	181	McWhinney Creek	None	None	G5	S3	
Erethizon dorsatum	North American porcupine	190	Scotia	None	None	G5	S3	
Erethizon dorsatum	North American porcupine	183	Fields Landing	None	None	G5	S3	

Erethizon dorsatum	North American porcupine	180	Fields Landing	None	None	G5	S3	
Erythronium oregonum	giant fawn lily	12	Scotia	None	None	G5	S2	2B.2
Erythronium oregonum	giant fawn lily	7	Taylor Peak	None	None	G5	S2	2B.2
Erythronium oregonum	giant fawn lily	8	Iaqua Buttes	None	None	G5	S2	2B.2
Erythronium revolutum	coast fawn lily	145	Iaqua Buttes	None	None	G4 G5	S3	2B.2
Erythronium revolutum	coast fawn lily	179	Yager Junction	None	None	G4 G5	S3	2B.2
Erythronium revolutum	coast fawn lily	116	Iaqua Buttes	None	None	G4 G5	S3	2B.2
Erythronium revolutum	coast fawn lily	26	Iaqua Buttes	None	None	G4 G5	S3	2B.2
Erythronium revolutum	coast fawn lily	8	Iaqua Buttes	None	None	G4 G5	S3	2B.2
Erythronium revolutum	coast fawn lily	173	Taylor Peak	None	None	G4 G5	S3	2B.2
Erythronium revolutum	coast fawn lily	114	Iaqua Buttes	None	None	G4 G5	S3	2B.2
Erythronium revolutum	coast fawn lily	84	Scotia	None	None	G4 G5	S3	2B.2
Erythronium revolutum	coast fawn lily	33	Scotia	None	None	G4 G5	S3	2B.2
Erythronium revolutum	coast fawn lily	153	Owl Creek	None	None	G4 G5	S3	2B.2
Erythronium revolutum	coast fawn lily	146	Iaqua Buttes	None	None	G4 G5	S3	2B.2
Erythronium revolutum	coast fawn lily	149	Scotia	None	None	G4 G5	S3	2B.2
Erythronium revolutum	coast fawn lily	35	Iaqua Buttes	None	None	G4 G5	S3	2B.2
Erythronium revolutum	coast fawn lily	42	Taylor Peak	None	None	G4 G5	S3	2B.2
Erythronium revolutum	coast fawn lily	98	Owl Creek	None	None	G4 G5	S3	2B.2
Erythronium revolutum	coast fawn lily	99	Owl Creek	None	None	G4 G5	S3	2B.2
Erythronium revolutum	coast fawn lily	97	Owl Creek	None	None	G4 G5	S3	2B.2
Erythronium revolutum	coast fawn lily	117	Iaqua Buttes	None	None	G4 G5	S3	2B.2
Erythronium revolutum	coast fawn lily	115	Iaqua Buttes	None	None	G4 G5	S3	2B.2

Erythronium revolutum	coast fawn lily	66	Iaqua Buttes	None	None	G4 G5	S3	2B.2	
Erythronium revolutum	coast fawn lily	41	Taylor Peak	None	None	G4 G5	S3	2B.2	
Erythronium revolutum	coast fawn lily	83	Scotia	None	None	G4 G5	S3	2B.2	
Erythronium revolutum	coast fawn lily	61	Owl Creek	None	None	G4 G5	S3	2B.2	
Erythronium revolutum	coast fawn lily	43	Taylor Peak	None	None	G4 G5	S3	2B.2	
Erythronium revolutum	coast fawn lily	60	Taylor Peak	None	None	G4 G5	S3	2B.2	
Erythronium revolutum	coast fawn lily	39	Taylor Peak	None	None	G4 G5	S3	2B.2	
Erythronium revolutum	coast fawn lily	38	Taylor Peak	None	None	G4 G5	S3	2B.2	
Erythronium revolutum	coast fawn lily	40	Taylor Peak	None	None	G4 G5	S3	2B.2	
Erythronium revolutum	coast fawn lily	12	Owl Creek	None	None	G4 G5	S3	2B.2	
Erythronium revolutum	coast fawn lily	25	Iaqua Buttes	None	None	G4 G5	S3	2B.2	
Eucyclogobius newberryi	tidewater goby	127	Fields Landing	Endangered	None	G3	S3		
Eucyclogobius newberryi	tidewater goby	119	Eureka	Endangered	None	G3	S3		
Falco peregrinus anatum	American peregrine falcon	77	Fields Landing	Delisted	Delisted	G4 T4	S3 S4		FP
Falco peregrinus anatum	American peregrine falcon	59	Redcrest	Delisted	Delisted	G4 T4	S3 S4		FP
Falco peregrinus anatum	American peregrine falcon	76	Redcrest	Delisted	Delisted	G4 T4	S3 S4		FP
Falco peregrinus anatum	American peregrine falcon	75	Redcrest	Delisted	Delisted	G4 T4	S3 S4		FP
Falco peregrinus anatum	American peregrine falcon	71	Hydesville	Delisted	Delisted	G4 T4	S3 S4		FP
Falco peregrinus anatum	American peregrine falcon	74	Fields Landing	Delisted	Delisted	G4 T4	S3 S4		FP

Falco peregrinus anatum	American peregrine falcon	66	Arcata South	Delisted	Delisted	G4T4	S3S4		FP
Falco peregrinus anatum	American peregrine falcon	67	Arcata South	Delisted	Delisted	G4T4	S3S4		FP
Falco peregrinus anatum	American peregrine falcon	65	McWhinney Creek	Delisted	Delisted	G4T4	S3S4		FP
Falco peregrinus anatum	American peregrine falcon	63	Eureka	Delisted	Delisted	G4T4	S3S4		FP
Falco peregrinus anatum	American peregrine falcon	64	Eureka	Delisted	Delisted	G4T4	S3S4		FP
Fissidens pauperculus	minute pocket moss	17	Fortuna	None	None	G3?	S2	1B.2	
Fissidens pauperculus	minute pocket moss	18	Arcata South	None	None	G3?	S2	1B.2	
Gilia capitata ssp. pacifica	Pacific gilia	87	Iaqua Buttes	None	None	G5T3	S2	1B.2	
Gilia capitata ssp. pacifica	Pacific gilia	77	Scotia	None	None	G5T3	S2	1B.2	
Gilia capitata ssp. pacifica	Pacific gilia	24	Taylor Peak	None	None	G5T3	S2	1B.2	
Gilia capitata ssp. pacifica	Pacific gilia	53	Iaqua Buttes	None	None	G5T3	S2	1B.2	
Gilia capitata ssp. pacifica	Pacific gilia	75	Scotia	None	None	G5T3	S2	1B.2	
Gilia capitata ssp. pacifica	Pacific gilia	76	Scotia	None	None	G5T3	S2	1B.2	
Gilia capitata ssp. pacifica	Pacific gilia	23	Scotia	None	None	G5T3	S2	1B.2	
Gilia capitata ssp. pacifica	Pacific gilia	50	Owl Creek	None	None	G5T3	S2	1B.2	
Gilia capitata ssp. pacifica	Pacific gilia	63	Hydesville	None	None	G5T3	S2	1B.2	
Gilia capitata ssp. pacifica	Pacific gilia	62	Taylor Peak	None	None	G5T3	S2	1B.2	
Gilia capitata ssp. pacifica	Pacific gilia	61	Taylor Peak	None	None	G5T3	S2	1B.2	
Gilia capitata ssp. pacifica	Pacific gilia	54	Iaqua Buttes	None	None	G5T3	S2	1B.2	
Gilia capitata ssp. pacifica	Pacific gilia	10	Iaqua Buttes	None	None	G5T3	S2	1B.2	
Gilia capitata ssp. pacifica	Pacific gilia	37	Iaqua Buttes	None	None	G5T3	S2	1B.2	

Gilia capitata ssp. pacifica	Pacific gilia	34	Taylor Peak	None	None	G5T3	S2	1B.2	
Gilia capitata ssp. pacifica	Pacific gilia	36	Hydesville	None	None	G5T3	S2	1B.2	
Gilia capitata ssp. pacifica	Pacific gilia	12	Fortuna	None	None	G5T3	S2	1B.2	
Gilia capitata ssp. pacifica	Pacific gilia	25	Taylor Peak	None	None	G5T3	S2	1B.2	
Gilia capitata ssp. pacifica	Pacific gilia	26	Taylor Peak	None	None	G5T3	S2	1B.2	
Gilia millefoliata	dark-eyed gilia	51	Fields Landing	None	None	G2	S2	1B.2	
Gonidea angulata	western ridged mussel	156	Redcrest	None	None	G3	S2		
Haliaeetus leucocephalus	bald eagle	250	Fields Landing	Delisted	Endangered	G5	S3		FP
Hesperevax sparsiflora var. brevifolia	short-leaved evax	34	Taylor Peak	None	None	G4T3	S3	1B.2	
Lampetra richardsoni	western brook lamprey	2	McWhinney Creek	None	None	G4G5	S3S4		SSC
Lampetra richardsoni	western brook lamprey	4	Fields Landing	None	None	G4G5	S3S4		SSC
Lampetra richardsoni	western brook lamprey	1	Arcata South	None	None	G4G5	S3S4		SSC
Lasiurus cinereus	hoary bat	29	Ferndale	None	None	G3G4	S4		
Lathyrus japonicus	seaside pea	1	Eureka	None	None	G5	S2	2B.1	
Layia carnosa	beach layia	27	Fields Landing	Threatened	Endangered	G2	S2	1B.1	
Lilium occidentale	western lily	18	Arcata South	Endangered	Endangered	G1G2	S1	1B.1	
Lilium occidentale	western lily	24	Fields Landing	Endangered	Endangered	G1G2	S1	1B.1	
Lilium occidentale	western lily	22	Cannibal Island	Endangered	Endangered	G1G2	S1	1B.1	
Lilium occidentale	western lily	21	Fields Landing	Endangered	Endangered	G1G2	S1	1B.1	
Lilium occidentale	western lily	32	Fields Landing	Endangered	Endangered	G1G2	S1	1B.1	

Lilium occidentale	western lily	10	Fields Landing	Endangered	Endangered	G1 G2	S1	1B.1
Lilium occidentale	western lily	14	Arcata South	Endangered	Endangered	G1 G2	S1	1B.1
Lilium occidentale	western lily	4	Fields Landing	Endangered	Endangered	G1 G2	S1	1B.1
Lycopodium clavatum	running-pine	116	Redcrest	None	None	G5	S3	4.1
Lycopodium clavatum	running-pine	119	Redcrest	None	None	G5	S3	4.1
Lycopodium clavatum	running-pine	118	Redcrest	None	None	G5	S3	4.1
Lycopodium clavatum	running-pine	117	Redcrest	None	None	G5	S3	4.1
Lycopodium clavatum	running-pine	23	Redcrest	None	None	G5	S3	4.1
Lycopodium clavatum	running-pine	79	McWhinney Creek	None	None	G5	S3	4.1
Lycopodium clavatum	running-pine	67	Iaqua Buttes	None	None	G5	S3	4.1
Lycopodium clavatum	running-pine	65	McWhinney Creek	None	None	G5	S3	4.1
Lycopodium clavatum	running-pine	66	McWhinney Creek	None	None	G5	S3	4.1
Lycopodium clavatum	running-pine	68	McWhinney Creek	None	None	G5	S3	4.1
Lycopodium clavatum	running-pine	61	McWhinney Creek	None	None	G5	S3	4.1
Lycopodium clavatum	running-pine	62	McWhinney Creek	None	None	G5	S3	4.1
Lycopodium clavatum	running-pine	64	McWhinney Creek	None	None	G5	S3	4.1
Lycopodium clavatum	running-pine	35	Iaqua Buttes	None	None	G5	S3	4.1
Lycopodium clavatum	running-pine	59	McWhinney Creek	None	None	G5	S3	4.1
Lycopodium clavatum	running-pine	56	Hydesville	None	None	G5	S3	4.1
Lycopodium clavatum	running-pine	55	Hydesville	None	None	G5	S3	4.1
Lycopodium clavatum	running-pine	60	McWhinney Creek	None	None	G5	S3	4.1
Lycopodium clavatum	running-pine	58	McWhinney Creek	None	None	G5	S3	4.1

Lycopodium clavatum	running-pine	57	McWhinney Creek	None	None	G5	S3	4.1	
Lycopodium clavatum	running-pine	53	Scotia	None	None	G5	S3	4.1	
Lycopodium clavatum	running-pine	54	Scotia	None	None	G5	S3	4.1	
Lycopodium clavatum	running-pine	34	McWhinney Creek	None	None	G5	S3	4.1	
Lycopodium clavatum	running-pine	30	Owl Creek	None	None	G5	S3	4.1	
Lycopodium clavatum	running-pine	33	Iaqua Buttes	None	None	G5	S3	4.1	
Lycopodium clavatum	running-pine	24	Redcrest	None	None	G5	S3	4.1	
Lycopodium clavatum	running-pine	26	Redcrest	None	None	G5	S3	4.1	
Lycopodium clavatum	running-pine	29	Owl Creek	None	None	G5	S3	4.1	
Lycopodium clavatum	running-pine	32	Iaqua Buttes	None	None	G5	S3	4.1	
Lycopodium clavatum	running-pine	27	Owl Creek	None	None	G5	S3	4.1	
Lycopodium clavatum	running-pine	28	Owl Creek	None	None	G5	S3	4.1	
Lycopodium clavatum	running-pine	25	Redcrest	None	None	G5	S3	4.1	
Lycopodium clavatum	running-pine	31	Owl Creek	None	None	G5	S3	4.1	
Lycopodium clavatum	running-pine	22	Bridgeville	None	None	G5	S3	4.1	
Margaritifera falcata	western pearlshell	83	Fields Landing	None	None	G4 G5	S1 S2		
Martes caurina humboldtensis	Humboldt marten	28	Owl Creek	Threatened	Endangered	G4 G5 T1	S1		SSC
Martes caurina humboldtensis	Humboldt marten	29	Hydesville	Threatened	Endangered	G4 G5 T1	S1		SSC
Mitellastra caulescens	leafy-stemmed mitrewort	11	Iaqua Buttes	None	None	G5	S4	4.2	
Montia howellii	Howell's montia	49	Fields Landing	None	None	G3 G4	S2	2B.2	
Montia howellii	Howell's montia	15	Owl Creek	None	None	G3 G4	S2	2B.2	

Montia howellii	Howell's montia	14	Owl Creek	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	19	Scotia	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	12	Redcrest	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	45	Hydesville	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	40	Scotia	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	22	Redcrest	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	35	Iaqua Buttes	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	48	Fields Landing	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	76	Scotia	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	10	Redcrest	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	11	Redcrest	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	30	Owl Creek	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	120	Scotia	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	107	McWhinney Creek	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	118	Owl Creek	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	83	Redcrest	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	127	McWhinney Creek	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	119	Owl Creek	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	92	Iaqua Buttes	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	63	Owl Creek	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	46	Ferndale	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	32	Owl Creek	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	31	Owl Creek	None	None	G3 G4	S2	2B.2

Montia howellii	Howell's montia	84	Redcrest	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	36	Iaqua Buttes	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	41	Scotia	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	122	Redcrest	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	123	Iaqua Buttes	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	85	Redcrest	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	17	Owl Creek	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	28	Redcrest	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	42	Taylor Peak	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	95	Scotia	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	99	Scotia	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	29	Redcrest	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	113	Iaqua Buttes	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	82	Redcrest	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	94	Scotia	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	27	Redcrest	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	20	Scotia	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	43	Taylor Peak	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	25	Bridgeville	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	34	Iaqua Buttes	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	97	McWhinney Creek	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	96	McWhinney Creek	None	None	G3 G4	S2	2B.2
Montia howellii	Howell's montia	55	Arcata South	None	None	G3 G4	S2	2B.2

Montia howellii	Howell's montia	68	McWhinney Creek	None	None	G3 G4	S2	2B.2	
Montia howellii	Howell's montia	70	Fields Landing	None	None	G3 G4	S2	2B.2	
Montia howellii	Howell's montia	53	Fields Landing	None	None	G3 G4	S2	2B.2	
Myotis volans	long-legged myotis	44	Redcrest	None	None	G4 G5	S3		
Myotis yumanensis	Yuma myotis	35	Scotia	None	None	G5	S4		
Myotis yumanensis	Yuma myotis	34	Redcrest	None	None	G5	S4		
Navarretia leucocephala ssp. bakeri	Baker's navarretia	68	Yager Junction	None	None	G4 T2	S2	1B.1	
Noccaea fendleri ssp. californica	Kneeland Prairie pennycress	1	Iaqua Buttes	Endangered	None	G5? T1	S1	1B.1	
Northern Coastal Salt Marsh	Northern Coastal Salt Marsh	42	Fields Landing	None	None	G3	S3.2		
Northern Coastal Salt Marsh	Northern Coastal Salt Marsh	39	Eureka	None	None	G3	S3.2		
Nycticorax nycticorax	black-crowned night heron	34	Cannibal Island	None	None	G5	S4		
Nycticorax nycticorax	black-crowned night heron	28	Fields Landing	None	None	G5	S4		
Nycticorax nycticorax	black-crowned night heron	5	Fields Landing	None	None	G5	S4		
Oncorhynchus clarkii clarkii	coast cutthroat trout	56	Fields Landing	None	None	G5 T4	S3		SSC
Oncorhynchus clarkii clarkii	coast cutthroat trout	59	Arcata South	None	None	G5 T4	S3		SSC
Oncorhynchus clarkii clarkii	coast cutthroat trout	15	Arcata South	None	None	G5 T4	S3		SSC
Oncorhynchus clarkii clarkii	coast cutthroat trout	80	Owl Creek	None	None	G5 T4	S3		SSC
Oncorhynchus clarkii clarkii	coast cutthroat trout	55	Fields Landing	None	None	G5 T4	S3		SSC
Oncorhynchus clarkii clarkii	coast cutthroat trout	42	Eureka	None	None	G5 T4	S3		SSC
Oncorhynchus clarkii clarkii	coast cutthroat trout	13	Fortuna	None	None	G5 T4	S3		SSC
Oncorhynchus kisutch pop. 2	coho salmon - southern Oregon /	7	Fields Landing	Threatened	Threatened	G5 T2Q	S2		

	northern California ESU						
Oncorhynchus kisutch pop. 2	coho salmon - southern Oregon / northern California ESU	8	Arcata South	Threatened	Threatened	G5T2Q	S2
Oncorhynchus kisutch pop. 2	coho salmon - southern Oregon / northern California ESU	10	Arcata South	Threatened	Threatened	G5T2Q	S2
Oncorhynchus kisutch pop. 2	coho salmon - southern Oregon / northern California ESU	6	Fields Landing	Threatened	Threatened	G5T2Q	S2
Oncorhynchus mykiss irideus pop. 48	steelhead - northern California DPS summer-run	8	Blocksburg	Threatened	Endangered	G5T2Q	S2
Oncorhynchus mykiss irideus pop. 48	steelhead - northern California DPS summer-run	3	Bridgeville	Threatened	Endangered	G5T2Q	S2
Oncorhynchus mykiss irideus pop. 48	steelhead - northern California DPS summer-run	2	Mad River Buttes	Threatened	Endangered	G5T2Q	S2
Oncorhynchus mykiss irideus pop. 48	steelhead - northern California DPS summer-run	5	Bridgeville	Threatened	Endangered	G5T2Q	S2
Oncorhynchus mykiss irideus pop. 49	steelhead - northern California DPS winter-run	19	Bridgeville	Threatened	None	G5T3Q	S3
Oncorhynchus mykiss irideus pop. 49	steelhead - northern California DPS winter-run	16	Fortuna	Threatened	None	G5T3Q	S3
Oncorhynchus mykiss irideus pop. 49	steelhead - northern California DPS winter-run	13	Arcata South	Threatened	None	G5T3Q	S3

Oncorhynchus mykiss irideus pop. 49	steelhead - northern California DPS winter-run	17	Redcrest	Threatened	None	G5T3Q	S3	
Oncorhynchus mykiss irideus pop. 49	steelhead - northern California DPS winter-run	36	Taylor Peak	Threatened	None	G5T3Q	S3	
Oncorhynchus mykiss irideus pop. 49	steelhead - northern California DPS winter-run	14	McWhinney Creek	Threatened	None	G5T3Q	S3	
Oncorhynchus mykiss irideus pop. 49	steelhead - northern California DPS winter-run	40	Honeydew	Threatened	None	G5T3Q	S3	
Oncorhynchus mykiss irideus pop. 49	steelhead - northern California DPS winter-run	18	Taylor Peak	Threatened	None	G5T3Q	S3	
Oncorhynchus mykiss irideus pop. 49	steelhead - northern California DPS winter-run	11	Showers Mtn.	Threatened	None	G5T3Q	S3	
Oncorhynchus mykiss irideus pop. 49	steelhead - northern California DPS winter-run	15	Fields Landing	Threatened	None	G5T3Q	S3	
Oncorhynchus tshawytscha pop. 17	chinook salmon - California coastal ESU	1	Owl Creek	Threatened	None	G5T2Q	S2	
Packera bolanderi var. bolanderi	seacoast ragwort	62	Owl Creek	None	None	G4T4	S2S3	2B.2
Packera bolanderi var. bolanderi	seacoast ragwort	59	Owl Creek	None	None	G4T4	S2S3	2B.2
Packera bolanderi var. bolanderi	seacoast ragwort	12	Owl Creek	None	None	G4T4	S2S3	2B.2
Packera bolanderi var. bolanderi	seacoast ragwort	19	Scotia	None	None	G4T4	S2S3	2B.2
Packera bolanderi var. bolanderi	seacoast ragwort	54	Scotia	None	None	G4T4	S2S3	2B.2

Packera bolanderi var. bolanderi	seacoast ragwort	11	Scotia	None	None	G4 T4	S2 S3	2B.2
Packera bolanderi var. bolanderi	seacoast ragwort	55	Redcrest	None	None	G4 T4	S2 S3	2B.2
Packera bolanderi var. bolanderi	seacoast ragwort	35	Redcrest	None	None	G4 T4	S2 S3	2B.2
Packera bolanderi var. bolanderi	seacoast ragwort	76	Redcrest	None	None	G4 T4	S2 S3	2B.2
Packera bolanderi var. bolanderi	seacoast ragwort	73	Redcrest	None	None	G4 T4	S2 S3	2B.2
Packera bolanderi var. bolanderi	seacoast ragwort	42	Owl Creek	None	None	G4 T4	S2 S3	2B.2
Packera bolanderi var. bolanderi	seacoast ragwort	63	Iaqua Buttes	None	None	G4 T4	S2 S3	2B.2
Packera bolanderi var. bolanderi	seacoast ragwort	2	Redcrest	None	None	G4 T4	S2 S3	2B.2
Packera bolanderi var. bolanderi	seacoast ragwort	58	Owl Creek	None	None	G4 T4	S2 S3	2B.2
Packera bolanderi var. bolanderi	seacoast ragwort	40	Owl Creek	None	None	G4 T4	S2 S3	2B.2
Packera bolanderi var. bolanderi	seacoast ragwort	14	Owl Creek	None	None	G4 T4	S2 S3	2B.2
Packera bolanderi var. bolanderi	seacoast ragwort	70	Owl Creek	None	None	G4 T4	S2 S3	2B.2
Packera bolanderi var. bolanderi	seacoast ragwort	61	Owl Creek	None	None	G4 T4	S2 S3	2B.2
Packera bolanderi var. bolanderi	seacoast ragwort	69	Iaqua Buttes	None	None	G4 T4	S2 S3	2B.2
Packera bolanderi var. bolanderi	seacoast ragwort	68	Owl Creek	None	None	G4 T4	S2 S3	2B.2

Packera bolanderi var. bolanderi	seacoast ragwort	66	Scotia	None	None	G4 T4	S2 S3	2B.2
Packera bolanderi var. bolanderi	seacoast ragwort	39	Owl Creek	None	None	G4 T4	S2 S3	2B.2
Packera bolanderi var. bolanderi	seacoast ragwort	67	Owl Creek	None	None	G4 T4	S2 S3	2B.2
Packera bolanderi var. bolanderi	seacoast ragwort	60	Owl Creek	None	None	G4 T4	S2 S3	2B.2
Packera bolanderi var. bolanderi	seacoast ragwort	37	Taylor Peak	None	None	G4 T4	S2 S3	2B.2
Packera bolanderi var. bolanderi	seacoast ragwort	56	Redcrest	None	None	G4 T4	S2 S3	2B.2
Packera bolanderi var. bolanderi	seacoast ragwort	57	Owl Creek	None	None	G4 T4	S2 S3	2B.2
Packera bolanderi var. bolanderi	seacoast ragwort	36	Scotia	None	None	G4 T4	S2 S3	2B.2
Packera bolanderi var. bolanderi	seacoast ragwort	9	Redcrest	None	None	G4 T4	S2 S3	2B.2
Packera bolanderi var. bolanderi	seacoast ragwort	34	Redcrest	None	None	G4 T4	S2 S3	2B.2
Packera bolanderi var. bolanderi	seacoast ragwort	53	Scotia	None	None	G4 T4	S2 S3	2B.2
Packera bolanderi var. bolanderi	seacoast ragwort	38	Taylor Peak	None	None	G4 T4	S2 S3	2B.2
Packera bolanderi var. bolanderi	seacoast ragwort	41	Owl Creek	None	None	G4 T4	S2 S3	2B.2
Packera bolanderi var. bolanderi	seacoast ragwort	43	Hydesville	None	None	G4 T4	S2 S3	2B.2
Packera bolanderi var. bolanderi	seacoast ragwort	44	Hydesville	None	None	G4 T4	S2 S3	2B.2

Packera bolanderi var. bolanderi	seacoast ragwort	20	Hydesville	None	None	G4 T4	S2 S3	2B.2	
Pandion haliaetus	osprey	85	Fields Landing	None	None	G5	S4		WL
Pandion haliaetus	osprey	89	Fields Landing	None	None	G5	S4		WL
Pandion haliaetus	osprey	352	Fields Landing	None	None	G5	S4		WL
Pandion haliaetus	osprey	90	Fields Landing	None	None	G5	S4		WL
Pandion haliaetus	osprey	321	McWhinney Creek	None	None	G5	S4		WL
Pandion haliaetus	osprey	322	Fields Landing	None	None	G5	S4		WL
Pandion haliaetus	osprey	288	McWhinney Creek	None	None	G5	S4		WL
Pandion haliaetus	osprey	287	McWhinney Creek	None	None	G5	S4		WL
Pandion haliaetus	osprey	289	McWhinney Creek	None	None	G5	S4		WL
Pandion haliaetus	osprey	290	McWhinney Creek	None	None	G5	S4		WL
Pandion haliaetus	osprey	263	Fields Landing	None	None	G5	S4		WL
Pandion haliaetus	osprey	259	McWhinney Creek	None	None	G5	S4		WL
Pandion haliaetus	osprey	262	McWhinney Creek	None	None	G5	S4		WL
Pandion haliaetus	osprey	260	McWhinney Creek	None	None	G5	S4		WL
Pandion haliaetus	osprey	261	McWhinney Creek	None	None	G5	S4		WL
Pandion haliaetus	osprey	178	Fields Landing	None	None	G5	S4		WL
Pandion haliaetus	osprey	258	Fields Landing	None	None	G5	S4		WL
Pandion haliaetus	osprey	253	Fields Landing	None	None	G5	S4		WL
Pandion haliaetus	osprey	257	Fields Landing	None	None	G5	S4		WL
Pandion haliaetus	osprey	246	Fields Landing	None	None	G5	S4		WL
Pandion haliaetus	osprey	245	Fields Landing	None	None	G5	S4		WL
Pandion haliaetus	osprey	248	Fields Landing	None	None	G5	S4		WL

Pandion haliaetus	osprey	251	Fields Landing	None	None	G5	S4	WL
Pandion haliaetus	osprey	252	Fields Landing	None	None	G5	S4	WL
Pandion haliaetus	osprey	244	Fields Landing	None	None	G5	S4	WL
Pandion haliaetus	osprey	247	Fields Landing	None	None	G5	S4	WL
Pandion haliaetus	osprey	249	Fields Landing	None	None	G5	S4	WL
Pandion haliaetus	osprey	250	Fields Landing	None	None	G5	S4	WL
Pandion haliaetus	osprey	243	Fields Landing	None	None	G5	S4	WL
Pandion haliaetus	osprey	242	Fields Landing	None	None	G5	S4	WL
Pandion haliaetus	osprey	239	Fields Landing	None	None	G5	S4	WL
Pandion haliaetus	osprey	237	Fields Landing	None	None	G5	S4	WL
Pandion haliaetus	osprey	241	Fields Landing	None	None	G5	S4	WL
Pandion haliaetus	osprey	238	Fields Landing	None	None	G5	S4	WL
Pandion haliaetus	osprey	235	Hydesville	None	None	G5	S4	WL
Pandion haliaetus	osprey	236	Fields Landing	None	None	G5	S4	WL
Pandion haliaetus	osprey	93	Fields Landing	None	None	G5	S4	WL
Pandion haliaetus	osprey	87	Fields Landing	None	None	G5	S4	WL
Pandion haliaetus	osprey	234	Scotia	None	None	G5	S4	WL
Pandion haliaetus	osprey	232	Scotia	None	None	G5	S4	WL
Pandion haliaetus	osprey	231	Scotia	None	None	G5	S4	WL
Pandion haliaetus	osprey	233	Scotia	None	None	G5	S4	WL
Pandion haliaetus	osprey	81	Scotia	None	None	G5	S4	WL
Pandion haliaetus	osprey	79	Scotia	None	None	G5	S4	WL
Pandion haliaetus	osprey	83	Scotia	None	None	G5	S4	WL

Pandion haliaetus	osprey	84	Scotia	None	None	G5	S4	WL
Pandion haliaetus	osprey	76	Redcrest	None	None	G5	S4	WL
Pandion haliaetus	osprey	210	McWhinney Creek	None	None	G5	S4	WL
Pandion haliaetus	osprey	73	Redcrest	None	None	G5	S4	WL
Pandion haliaetus	osprey	100	Hydesville	None	None	G5	S4	WL
Pandion haliaetus	osprey	185	McWhinney Creek	None	None	G5	S4	WL
Pandion haliaetus	osprey	174	Eureka	None	None	G5	S4	WL
Pandion haliaetus	osprey	86	Fields Landing	None	None	G5	S4	WL
Pandion haliaetus	osprey	82	Scotia	None	None	G5	S4	WL
Pandion haliaetus	osprey	75	Redcrest	None	None	G5	S4	WL
Pandion haliaetus	osprey	80	Scotia	None	None	G5	S4	WL
Pandion haliaetus	osprey	91	Fields Landing	None	None	G5	S4	WL
Pandion haliaetus	osprey	92	Fields Landing	None	None	G5	S4	WL
Pandion haliaetus	osprey	94	Fields Landing	None	None	G5	S4	WL
Pandion haliaetus	osprey	95	Fields Landing	None	None	G5	S4	WL
Pandion haliaetus	osprey	97	Fields Landing	None	None	G5	S4	WL
Pandion haliaetus	osprey	96	Fields Landing	None	None	G5	S4	WL
Pandion haliaetus	osprey	74	Redcrest	None	None	G5	S4	WL
Pandion haliaetus	osprey	98	Fields Landing	None	None	G5	S4	WL
Pandion haliaetus	osprey	88	Fields Landing	None	None	G5	S4	WL
Pandion haliaetus	osprey	72	Redcrest	None	None	G5	S4	WL
Pekania pennanti	Fisher	647	Taylor Peak	None	None	G5	S2 S3	SSC
Pekania pennanti	Fisher	611	Hydesville	None	None	G5	S2 S3	SSC

Piperia candida	white-flowered rein orchid	75	Iaqua Buttes	None	None	G3?	S3	1B.2	
Piperia candida	white-flowered rein orchid	117	Scotia	None	None	G3?	S3	1B.2	
Piperia candida	white-flowered rein orchid	154	Scotia	None	None	G3?	S3	1B.2	
Piperia candida	white-flowered rein orchid	118	Scotia	None	None	G3?	S3	1B.2	
Piperia candida	white-flowered rein orchid	119	Scotia	None	None	G3?	S3	1B.2	
Piperia candida	white-flowered rein orchid	51	Scotia	None	None	G3?	S3	1B.2	
Piperia candida	white-flowered rein orchid	52	Scotia	None	None	G3?	S3	1B.2	
Platismatia lacunosa	crinkled rag lichen	1	Iaqua Buttes	None	None	G4	S1	2B.3	
Plethodon elongatus	Del Norte salamander	44	Iaqua Buttes	None	None	G4	S3		WL
Polemonium carneum	Oregon polemonium	7	Taylor Peak	None	None	G3G4	S2	2B.2	
Rana aurora	northern red-legged frog	293	Fields Landing	None	None	G4	S3		SSC
Rana aurora	northern red-legged frog	292	McWhinney Creek	None	None	G4	S3		SSC
Rana aurora	northern red-legged frog	179	Fields Landing	None	None	G4	S3		SSC
Rana aurora	northern red-legged frog	178	Fields Landing	None	None	G4	S3		SSC
Rana aurora	northern red-legged frog	180	Fields Landing	None	None	G4	S3		SSC
Rana aurora	northern red-legged frog	90	McWhinney Creek	None	None	G4	S3		SSC
Rana aurora	northern red-legged frog	176	McWhinney Creek	None	None	G4	S3		SSC
Rana aurora	northern red-legged frog	168	Fortuna	None	None	G4	S3		SSC
Rana aurora	northern red-legged frog	177	Fields Landing	None	None	G4	S3		SSC
Rana aurora	northern red-legged frog	175	McWhinney Creek	None	None	G4	S3		SSC

Rana aurora	northern red-legged frog	167	Hydesville	None	None	G4	S3	SSC
Rana aurora	northern red-legged frog	162	Scotia	None	None	G4	S3	SSC
Rana aurora	northern red-legged frog	165	Hydesville	None	None	G4	S3	SSC
Rana aurora	northern red-legged frog	163	Scotia	None	None	G4	S3	SSC
Rana aurora	northern red-legged frog	166	Hydesville	None	None	G4	S3	SSC
Rana aurora	northern red-legged frog	164	Taylor Peak	None	None	G4	S3	SSC
Rana aurora	northern red-legged frog	136	Redcrest	None	None	G4	S3	SSC
Rana aurora	northern red-legged frog	137	Redcrest	None	None	G4	S3	SSC
Rana aurora	northern red-legged frog	138	Redcrest	None	None	G4	S3	SSC
Rana aurora	northern red-legged frog	139	Owl Creek	None	None	G4	S3	SSC
Rana aurora	northern red-legged frog	140	Owl Creek	None	None	G4	S3	SSC
Rana aurora	northern red-legged frog	2	Fields Landing	None	None	G4	S3	SSC
Rana aurora	northern red-legged frog	4	Iaqua Buttes	None	None	G4	S3	SSC
Rana aurora	northern red-legged frog	40	Fields Landing	None	None	G4	S3	SSC
Rana aurora	northern red-legged frog	37	Redcrest	None	None	G4	S3	SSC
Rana aurora	northern red-legged frog	33	Owl Creek	None	None	G4	S3	SSC
Rana aurora	northern red-legged frog	28	McWhinney Creek	None	None	G4	S3	SSC
Rana aurora	northern red-legged frog	27	McWhinney Creek	None	None	G4	S3	SSC
Rana aurora	northern red-legged frog	26	Scotia	None	None	G4	S3	SSC
Rana aurora	northern red-legged frog	14	Fields Landing	None	None	G4	S3	SSC
Rana aurora	northern red-legged frog	13	Hydesville	None	None	G4	S3	SSC
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	283	Scotia	None	None	G3 T4	S4	SSC

Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	421	Redcrest	None	None	G3 T4	S4	SSC
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	427	Redcrest	None	None	G3 T4	S4	SSC
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	386	Owl Creek	None	None	G3 T4	S4	SSC
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	385	Owl Creek	None	None	G3 T4	S4	SSC
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	276	Taylor Peak	None	None	G3 T4	S4	SSC
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	259	Fields Landing	None	None	G3 T4	S4	SSC
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	418	Redcrest	None	None	G3 T4	S4	SSC
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	261	McWhinney Creek	None	None	G3 T4	S4	SSC
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	387	Owl Creek	None	None	G3 T4	S4	SSC
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	366	Iaqua Buttes	None	None	G3 T4	S4	SSC
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	280	Scotia	None	None	G3 T4	S4	SSC
Rana boylii pop. 1	foothill yellow-legged frog -	278	Scotia	None	None	G3 T4	S4	SSC

	north coast DPS							
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	425	Redcrest	None	None	G3 T4	S4	SSC
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	428	Redcrest	None	None	G3 T4	S4	SSC
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	388	Owl Creek	None	None	G3 T4	S4	SSC
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	268	Hydesville	None	None	G3 T4	S4	SSC
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	279	Scotia	None	None	G3 T4	S4	SSC
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	277	Taylor Peak	None	None	G3 T4	S4	SSC
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	269	Hydesville	None	None	G3 T4	S4	SSC
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	284	Scotia	None	None	G3 T4	S4	SSC
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	265	Fortuna	None	None	G3 T4	S4	SSC
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	426	Redcrest	None	None	G3 T4	S4	SSC
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	424	Redcrest	None	None	G3 T4	S4	SSC

Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	282	Scotia	None	None	G3 T4	S4	SSC
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	419	Redcrest	None	None	G3 T4	S4	SSC
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	422	Redcrest	None	None	G3 T4	S4	SSC
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	281	Scotia	None	None	G3 T4	S4	SSC
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	272	Hydesville	None	None	G3 T4	S4	SSC
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	420	Redcrest	None	None	G3 T4	S4	SSC
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	271	Hydesville	None	None	G3 T4	S4	SSC
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	417	Redcrest	None	None	G3 T4	S4	SSC
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	273	Hydesville	None	None	G3 T4	S4	SSC
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	266	Hydesville	None	None	G3 T4	S4	SSC
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	416	Redcrest	None	None	G3 T4	S4	SSC
Rana boylii pop. 1	foothill yellow-legged frog -	263	Fortuna	None	None	G3 T4	S4	SSC

	north coast DPS							
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	270	Hydesville	None	None	G3 T4	S4	SSC
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	267	Hydesville	None	None	G3 T4	S4	SSC
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	389	Owl Creek	None	None	G3 T4	S4	SSC
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	365	Iaqua Buttes	None	None	G3 T4	S4	SSC
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	264	Fortuna	None	None	G3 T4	S4	SSC
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	262	Fortuna	None	None	G3 T4	S4	SSC
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	341	Korbel	None	None	G3 T4	S4	SSC
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	260	Fields Landing	None	None	G3 T4	S4	SSC
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	258	Fields Landing	None	None	G3 T4	S4	SSC
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	364	Iaqua Buttes	None	None	G3 T4	S4	SSC
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	423	Redcrest	None	None	G3 T4	S4	SSC

Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	384	Owl Creek	None	None	G3 T4	S4	SSC
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	430	Bridgeville	None	None	G3 T4	S4	SSC
Rhyacotriton variegatus	southern torrent salamander	274	Scotia	None	None	G3?	S2 S3	SSC
Rhyacotriton variegatus	southern torrent salamander	276	Taylor Peak	None	None	G3?	S2 S3	SSC
Rhyacotriton variegatus	southern torrent salamander	277	McWhinney Creek	None	None	G3?	S2 S3	SSC
Rhyacotriton variegatus	southern torrent salamander	278	McWhinney Creek	None	None	G3?	S2 S3	SSC
Rhyacotriton variegatus	southern torrent salamander	275	Scotia	None	None	G3?	S2 S3	SSC
Rhyacotriton variegatus	southern torrent salamander	273	Scotia	None	None	G3?	S2 S3	SSC
Rhyacotriton variegatus	southern torrent salamander	228	Redcrest	None	None	G3?	S2 S3	SSC
Rhyacotriton variegatus	southern torrent salamander	233	Owl Creek	None	None	G3?	S2 S3	SSC
Rhyacotriton variegatus	southern torrent salamander	230	Redcrest	None	None	G3?	S2 S3	SSC
Rhyacotriton variegatus	southern torrent salamander	232	Owl Creek	None	None	G3?	S2 S3	SSC
Rhyacotriton variegatus	southern torrent salamander	231	Weott	None	None	G3?	S2 S3	SSC
Rhyacotriton variegatus	southern torrent salamander	229	Redcrest	None	None	G3?	S2 S3	SSC
Rhyacotriton variegatus	southern torrent salamander	227	Redcrest	None	None	G3?	S2 S3	SSC

Rhyacotriton variegatus	southern torrent salamander	239	Iaqua Buttes	None	None	G3?	S2 S3	SSC
Rhyacotriton variegatus	southern torrent salamander	226	Redcrest	None	None	G3?	S2 S3	SSC
Rhyacotriton variegatus	southern torrent salamander	140	McWhinney Creek	None	None	G3?	S2 S3	SSC
Rhyacotriton variegatus	southern torrent salamander	43	Iaqua Buttes	None	None	G3?	S2 S3	SSC
Riparia riparia	bank swallow	235	Fortuna	None	Threatened	G5	S3	
Riparia riparia	bank swallow	333	Fortuna	None	Threatened	G5	S3	
Riparia riparia	bank swallow	234	Fortuna	None	Threatened	G5	S3	
Riparia riparia	bank swallow	297	Hydesville	None	Threatened	G5	S3	
Sidalcea malachroides	maple-leaved checkerbloom	61	Redcrest	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	109	Scotia	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	81	McWhinney Creek	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	26	Hydesville	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	43	Hydesville	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	92	Redcrest	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	50	Redcrest	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	64	Owl Creek	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	70	Iaqua Buttes	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	51	Redcrest	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	144	Fields Landing	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	71	Iaqua Buttes	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	110	Redcrest	None	None	G3	S3	4.2

Sidalcea malachroides	maple-leaved checkerbloom	91	Arcata South	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	73	Scotia	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	130	Scotia	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	136	McWhinney Creek	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	131	Taylor Peak	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	132	Taylor Peak	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	133	McWhinney Creek	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	135	McWhinney Creek	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	134	McWhinney Creek	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	129	Iaqua Buttes	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	127	Iaqua Buttes	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	126	Iaqua Buttes	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	114	Redcrest	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	115	Redcrest	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	112	Redcrest	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	105	Eureka	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	76	Taylor Peak	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	107	Redcrest	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	108	Owl Creek	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	103	Fields Landing	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	102	McWhinney Creek	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	55	Redcrest	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	99	Redcrest	None	None	G3	S3	4.2

Sidalcea malachroides	maple-leaved checkerbloom	19	Redcrest	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	82	McWhinney Creek	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	79	McWhinney Creek	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	77	McWhinney Creek	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	75	Taylor Peak	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	78	McWhinney Creek	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	80	McWhinney Creek	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	74	Scotia	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	72	Scotia	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	65	Owl Creek	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	88	Iaqua Buttes	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	66	Owl Creek	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	68	Owl Creek	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	69	Owl Creek	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	67	Owl Creek	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	63	Owl Creek	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	60	Redcrest	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	57	Redcrest	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	53	Redcrest	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	52	Redcrest	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	54	Redcrest	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	59	Redcrest	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	56	Redcrest	None	None	G3	S3	4.2

Sidalcea malachroides	maple-leaved checkerbloom	58	Redcrest	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	24	Korbel	None	None	G3	S3	4.2
Sidalcea malachroides	maple-leaved checkerbloom	41	Scotia	None	None	G3	S3	4.2
Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	16	Fortuna	None	None	G5T2	S2	1B.2
Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	25	Scotia	None	None	G5T2	S2	1B.2
Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	38	Taylor Peak	None	None	G5T2	S2	1B.2
Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	1	Owl Creek	None	None	G5T2	S2	1B.2
Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	2	Hydesville	None	None	G5T2	S2	1B.2
Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	48	Iaqua Buttes	None	None	G5T2	S2	1B.2
Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	43	Iaqua Buttes	None	None	G5T2	S2	1B.2
Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	40	Yager Junction	None	None	G5T2	S2	1B.2
Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	41	Owl Creek	None	None	G5T2	S2	1B.2
Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	32	Capetown	None	None	G5T2	S2	1B.2
Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	35	Taylor Peak	None	None	G5T2	S2	1B.2
Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	34	Taylor Peak	None	None	G5T2	S2	1B.2
Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	42	Owl Creek	None	None	G5T2	S2	1B.2

Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	33	Taylor Peak	None	None	G5T2	S2	1B.2
Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	17	Fields Landing	None	None	G5T2	S2	1B.2
Sidalcea oregana ssp. eximia	coast checkerbloom	4	Fields Landing	None	None	G5T1	S1	1B.2
Sidalcea oregana ssp. eximia	coast checkerbloom	17	Fields Landing	None	None	G5T1	S1	1B.2
Sidalcea oregana ssp. eximia	coast checkerbloom	3	Fields Landing	None	None	G5T1	S1	1B.2
Sidalcea oregana ssp. eximia	coast checkerbloom	11	Iaqua Buttes	None	None	G5T1	S1	1B.2
Spergularia canadensis var. occidentalis	western sand-spurrey	3	Fields Landing	None	None	G5T4	S1	2B.1
Spirinchus thaleichthys	longfin smelt	4	Fields Landing	Candidate	Threatened	G5	S1	
Spirinchus thaleichthys	longfin smelt	2	Eureka	Candidate	Threatened	G5	S1	
Spirinchus thaleichthys	longfin smelt	9	Fields Landing	Candidate	Threatened	G5	S1	
Spirinchus thaleichthys	longfin smelt	8	Eureka	Candidate	Threatened	G5	S1	
Spirinchus thaleichthys	longfin smelt	5	Fortuna	Candidate	Threatened	G5	S1	
Thaleichthys pacificus	eulachon	4	Arcata South	Threatened	None	G5	S1	
Upland Douglas Fir Forest	Upland Douglas Fir Forest	11	Iaqua Buttes	None	None	G4	S3.1	
Usnea longissima	Methuselah's beard lichen	15	Redcrest	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	192	Taylor Peak	None	None	G4	S4	4.2

Usnea longissima	Methuselah's beard lichen	211	Taylor Peak	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	104	McWhinney Creek	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	171	Yager Junction	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	194	Taylor Peak	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	199	McWhinney Creek	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	198	Hydesville	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	210	Hydesville	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	172	Owl Creek	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	88	Taylor Peak	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	82	Taylor Peak	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	84	Taylor Peak	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	86	Taylor Peak	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	75	Scotia	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	200	McWhinney Creek	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	72	Scotia	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	193	Taylor Peak	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	94	Hydesville	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	90	Hydesville	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	196	Hydesville	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	195	Hydesville	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	191	Taylor Peak	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	68	Scotia	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	197	Hydesville	None	None	G4	S4	4.2

Usnea longissima	Methuselah's beard lichen	58	Iaqua Buttes	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	55	Iaqua Buttes	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	188	Scotia	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	186	Scotia	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	187	Taylor Peak	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	168	Redcrest	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	57	Iaqua Buttes	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	56	Iaqua Buttes	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	189	Scotia	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	160	Bridgeville	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	184	Buckeye Mtn.	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	166	Redcrest	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	169	Redcrest	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	174	Owl Creek	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	170	Redcrest	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	173	Owl Creek	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	167	Redcrest	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	132	Hydesville	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	42	Owl Creek	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	124	McWhinney Creek	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	127	McWhinney Creek	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	123	McWhinney Creek	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	121	Hydesville	None	None	G4	S4	4.2

Usnea longissima	Methuselah's beard lichen	125	McWhinney Creek	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	122	McWhinney Creek	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	126	Hydesville	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	19	Taylor Peak	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	110	Redcrest	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	93	Hydesville	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	109	Scotia	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	101	McWhinney Creek	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	103	McWhinney Creek	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	106	McWhinney Creek	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	102	McWhinney Creek	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	105	McWhinney Creek	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	100	Arcata South	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	95	Hydesville	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	91	Hydesville	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	96	Hydesville	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	97	Hydesville	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	92	Hydesville	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	99	Hydesville	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	98	Hydesville	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	89	Owl Creek	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	85	Taylor Peak	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	87	Taylor Peak	None	None	G4	S4	4.2

Usnea longissima	Methuselah's beard lichen	83	Taylor Peak	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	80	Scotia	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	76	Scotia	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	73	Scotia	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	78	Scotia	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	61	Scotia	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	79	Scotia	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	74	Scotia	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	77	Scotia	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	81	Scotia	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	67	Scotia	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	64	Redcrest	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	69	Scotia	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	66	Hydesville	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	71	Scotia	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	65	Scotia	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	70	Scotia	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	63	Redcrest	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	50	Iaqua Buttes	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	53	Iaqua Buttes	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	54	Iaqua Buttes	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	59	Iaqua Buttes	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	60	Iaqua Buttes	None	None	G4	S4	4.2

Usnea longissima	Methuselah's beard lichen	51	Iaqua Buttes	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	52	Iaqua Buttes	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	49	Owl Creek	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	43	Owl Creek	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	41	Owl Creek	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	48	Owl Creek	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	45	Owl Creek	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	46	Owl Creek	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	47	Owl Creek	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	44	Owl Creek	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	39	Redcrest	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	25	Bridgeville	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	40	Redcrest	None	None	G4	S4	4.2
Usnea longissima	Methuselah's beard lichen	37	Redcrest	None	None	G4	S4	4.2

Appendix B: IPAC Report

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Humboldt County, California

Local office

Arcata Fish And Wildlife Office

(707) 822-7201
(707) 822-8411

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are not shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Pacific Marten, Coastal Distinct Population Segment Martes caurina Wherever found There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/9081	Threatened

Birds

NAME	STATUS
Marbled Murrelet Brachyramphus marmoratus There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/4467	Threatened
Northern Spotted Owl Strix occidentalis caurina Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/1123	Threatened
Western Snowy Plover Charadrius nivosus nivosus There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/8035	Threatened
Yellow-billed Cuckoo Coccyzus americanus There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/3911	Threatened

Insects

NAME	STATUS

Monarch Butterfly *Danaus plexippus* Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743	**Candidate**

Flowering Plants

NAME	STATUS
Western Lily *Lilium occidentale* Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/998	**Endangered**

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-

measures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Allen's Hummingbird *Selasphorus sasin* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637	Breeds Feb 1 to Jul 15
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Jan 1 to Sep 30
Olive-sided Flycatcher *Contopus cooperi* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31
Rufous Hummingbird *selasphorus rufus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8002	Breeds Apr 15 to Jul 15

Western Grebe aechmophorus occidentalis This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/6743	Breeds Jun 1 to Aug 31
Wrentit Chamaea fasciata This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 10

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

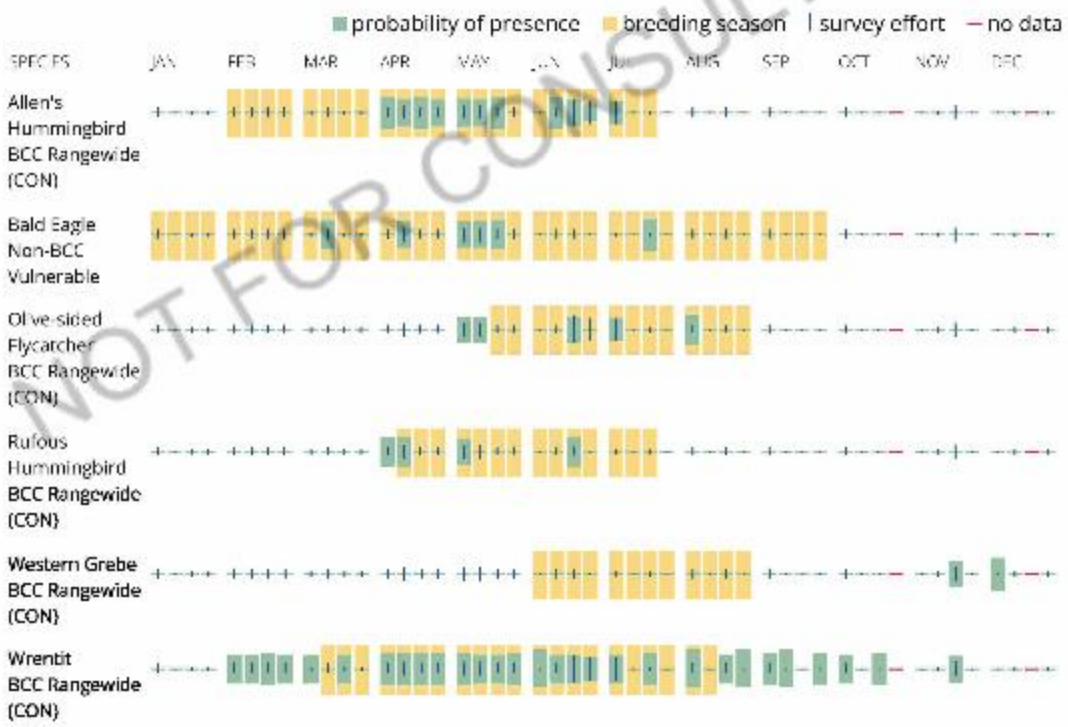
Breeding Season (●)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin

Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn

more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Coastal Barrier Resources System

Projects within the John H. Chafee Coastal Barrier Resources System (CBRS) may be subject to the restrictions on federal expenditures and financial assistance and the consultation requirements of the Coastal Barrier Resources Act (CBRA) (16 U.S.C. 3501 et seq.). For more information, please contact the local Ecological Services Field Office or visit the CBRA Consultations website. The CBRA website provides tools such as a flow chart to help determine whether consultation is required and a template to facilitate the consultation process.

There are no known coastal barriers at this location.

Data limitations

The CBRS boundaries used in IPaC are representations of the controlling boundaries, which are depicted on the official CBRS maps. The boundaries depicted in this layer are not to be considered authoritative for in/out determinations close to a CBRS boundary (i.e., within the "CBRS Buffer Zone" that appears as a hatched area on either side of the boundary). For projects that are very close to a CBRS boundary but do not clearly intersect a unit, you may contact the Service for an official determination by following the instructions here: https://www.fws.gov/service/coastal-barrier-resources-system-property-documentation

Data exclusions

CBRS units extend seaward out to either the 20- or 30-foot bathymetric contour (depending on the location of the unit). The true seaward extent of the units is not shown in the CBRS data, therefore projects in the offshore areas of units (e.g., dredging, breakwaters, offshore wind energy or oil and gas projects) may be subject to CBRA even if they do not intersect the CBRS data. For additional information, please contact CBRA@fws.gov.

Facilities

National Wildlife Refuge lands

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

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

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

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

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND
Palustrine

RIVERINE
Riverine

A full description for each wetland code can be found at the National Wetlands Inventory website

NOTE: This initial screening does not replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

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

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

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

Data exclusions

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

Data precautions

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