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Initial Biological Assessment:

**Planned Home Development
4721 Union St - Eureka, CA**

Humboldt County

APN: 301-052-036

**Prepared by
Hohman and Associates
July 22, 2024**

Setting

This document assesses habitats and potentially occurring special-status animals and plants; and identifies potential impacts of operation-related activities on biological resources for the proposed home development at 4721 Union St. in Eureka, CA. The proposed development would occur in a small mowed field located adjacent to existing structures and cell tower infrastructure within a suburban neighborhood. A lone Monterey pine (*Pinus radiata*) exists in the Northwest corner of the project area. The entire property has evidence of continual vegetation management (e.g. mowing). This assessment assumes that all potential impacts from the development will occur throughout the mowed field.

The proposed development location is approximately 0.5 acres located on a parcel located at 4721 Union St. in Eureka, CA. The property is located in Section 8, Township 3 North, Range 1 West; HB&M, approximately 2 miles south of Eureka, CA in Humboldt County on the Eureka USGS 7.5' Quad. The property lies within the California Floristic Province, Northwestern California region, and North Coast sub-region. No watercourses exist in the project area, and no fish-bearing streams exist in the parcel. Elevation of the parcel is approximately 130 feet, and no discernable slope exists in the project area. The project area is composed entirely of a non-native grassland, which is mowed frequently by the landowner.

Summary of Findings

The project area lies within a mowed field of non-native grassland surrounded by a broad swath of suburban homes. No evidence of listed plant species was observed in and around the project area, so no botanical survey is recommended. The area does not provide the high canopy-closure forest habitat that could support northern spotted owls, and no occurrences of NSO have been recorded within the 0.7 mile BAA. Although a single Monterey pine (*Pinus radiata*) exists on the north end of the parcel, noise from generators beneath the adjacent cell tower would prevent any raptors or large wading shorebirds from utilizing this tree as a nesting site. The habitat requirements of special status mammals within the BAA make the project footprint unsuitable for these species. The project may avoid indirect impacts to special-status fish, amphibians, and reptiles by remaining within the confines of the proposed project area, which avoids all wetland locations. No further biological surveys are recommended prior to project activity. If newly discovered special-status species are observed, consultation with CDFW should be conducted and the results of that consultation shall be amended into the project before operations begin again.

Methods

Hohman and Associates conducted a field review in July of 2024 of the project footprint and surrounding habitat in the parcel. This included looking for signs of listed species and available habitat.

This Biological Scoping report considers the potentially occurring species and communities that could be affected by project activities in the proposed footprint based on available spatial data and habitat requirements. Focused site visits may be necessary to further evaluate potential habitat value to special-status species and finalize survey recommendations for proposed project activity. A list of special-status species was downloaded from CNDDDB BIOS for the Eureka 9-quad area. Species on the CNDDDB list were primarily included based on State or Federal listing status or CDFW designation. Native pollinators found in the area were also included based on State rarity and their potential to be impacted by project activities. The U.S. Fish and Wildlife Service IPac was queried and generated a scoping list to consider. Additional species were added to the special-status list for consideration based on potential habitat or high levels of conservation concern. Habitats within the 0.7-mile Biological Assessment Area (BAA) for potentially occurring species were evaluated based on CALVEG vegetation mapping and aerial photos.

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Table 1. Birds

Scientific Name	Common Name	Federal Listing	CA Listing	Global Rank	State Rank	Potential in BAA
<i>Accipiter striatus</i>	sharp-shinned hawk	None	None	G5	S4	Yes
<i>Ardea alba</i>	great egret	None	None	G5	S4	Yes
<i>Ardea herodias</i>	great blue heron	None	None	G5	S4	Yes
<i>Brachyramphus marmoratus</i>	marbled murrelet	Threatened	Endangered	G3	S2	No
<i>Charadrius montanus</i>	mountain plover	None	None	G3	S2	No
<i>Charadrius nivosus nivosus</i>	western snowy plover	Threatened	None	G3T3	S3	No
<i>Circus hudsonius</i>	northern harrier	None	None	G5	S3	Yes
<i>Coturnicops noveboracensis</i>	yellow rail	None	None	G4	S2	No
<i>Egretta thula</i>	snowy egret	None	None	G5	S4	Yes
<i>Elanus leucurus</i>	white-tailed kite	None	None	G5	S3S4	Yes
<i>Falco peregrinus anatum</i>	American peregrine falcon	Delisted	Delisted	G4T4	S3S4	Yes
<i>Haliaeetus leucocephalus</i>	bald eagle	Delisted	Endangered	G5	S3	Yes
<i>Nannopterum auritum</i>	double-crested cormorant	None	None	G5	S4	No
<i>Nycticorax nycticorax</i>	black-crowned night heron	None	None	G5	S4	Yes
<i>Pandion haliaetus</i>	osprey	None	None	G5	S4	Yes
<i>Rallus obsoletus obsoletus</i>	California Ridgway's rail	Endangered	Endangered	G3T1	S2	No
<i>Riparia riparia</i>	bank swallow	None	Threatened	G5	S3	No

Table 2. Mammals

Scientific Name	Common Name	Federal Listing	CA Listing	Global Rank	State Rank	Potential in BAA
<i>Aplodontia rufa humboldtiana</i>	Humboldt mountain beaver	None	None	G5TNR	SNR	No
<i>Arborimus albipes</i>	white-footed vole	None	None	G3G4	S2	No
<i>Arborimus pomo</i>	Sonoma tree vole	None	None	G3	S3	Yes
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	None	None	G4	S2	No
<i>Erethizon dorsatum</i>	North American porcupine	None	None	G5	S3	No
<i>Martes caurina humboldtensis</i>	Humboldt marten	Threatened	Endangered	G4G5T1	S1	No
<i>Myotis evotis</i>	long-eared myotis	None	None	G5	S3	Yes
<i>Pekania pennanti</i>	Fisher	None	None	G5	S2S3	Yes

Table 3. Reptiles and Amphibians

Scientific Name	Common Name	Federal Listing	CA Listing	Global Rank	State Rank	Potential in BAA
<i>Actinemys marmorata</i>	northwestern pond turtle	Proposed Threatened	None	G2	SNR	Yes
<i>Ascaphus truei</i>	Pacific tailed frog	None	None	G4	S3S4	No
<i>Rana aurora</i>	northern red-legged frog	None	None	G4	S3	Yes
<i>Rana boylei</i> pop. 1	foothill yellow-legged frog - north coast DPS	None	None	G3T4	S4	No
<i>Rhyacotriton variegatus</i>	southern torrent salamander	None	None	G3?	S2S3	No

Table 4. Fish

Scientific Name	Common Name	Federal Listing	CA Listing	Global Rank	State Rank	Potential in BAA
<i>Acipenser medirostris</i> pop. 1	green sturgeon - southern DPS	Threatened	None	G2T1	S1	Yes
<i>Anodonta californiensis</i>	California floater	None	None	G3	S2?	Yes
<i>Entosphenus tridentatus</i>	Pacific lamprey	None	None	G4	S3	Yes
<i>Eucyclogobius newberryi</i>	tidewater goby	Endangered	None	G3	S3	Yes
<i>Lampetra richardsoni</i>	western brook lamprey	None	None	G4G5	S3S4	Yes
<i>Margaritifera falcata</i>	western pearlshell	None	None	G3G4	S1S2	Yes
<i>Oncorhynchus clarkii clarkii</i>	coast cutthroat trout	None	None	G5T4	S3	Yes
<i>Oncorhynchus kisutch</i> pop. 2	coho salmon - southern Oregon / northern California ESU	Threatened	Threatened	G5T2Q	S2	Yes
<i>Oncorhynchus mykiss irideus</i> pop. 48	steelhead - northern California DPS summer-run	Threatened	Endangered	G5T2Q	S2	Yes
<i>Oncorhynchus mykiss irideus</i> pop. 49	steelhead - northern California DPS winter-run	Threatened	None	G5T3Q	S3	Yes

Table 5. Invertebrates

Scientific Name	Common Name	Federal Listing	CA Listing	Global Rank	State Rank	Potential in BAA
<i>Bombus caliginosus</i>	obscure bumble bee	None	None	G2G3	S1S2	Yes
<i>Bombus crotchii</i>	Crotch's bumble bee	None	Candidate Endangered	G2	S2	Yes
<i>Bombus occidentalis</i>	western bumble bee	None	Candidate Endangered	G3	S1	Yes
<i>Cicindela hirticollis</i> gravida	sandy beach tiger beetle	None	None	G5T2	S2	No

Table 6. Plants

Scientific Name	Common Name	Federal Listing	CA Listing	Global Rank	State Rank	CNPS Rank	Habitat	Potential in BAA
<i>Abronia umbellata</i> var. <i>breviflora</i>	pink sand-verbena	None	None	G4G5T2	S2	1B.1	Coastal dunes and coastal strand.	Yes
<i>Astragalus pycnostachyus</i> var. <i>pycnostachyus</i>	coastal marsh milk-vetch	None	None	G2T2	S2	1B.2	Coastal dunes, marshes and swamps, coastal scrub.	Yes
<i>Cardamine angulata</i>	seaside bittercress	None	None	G4G5	S3	2B.1	North coast coniferous forest, lower montane coniferous forest.	No
<i>Carex arcta</i>	northern clustered sedge	None	None	G5	S1	2B.2	Bogs and fens, north coast coniferous forest.	No
<i>Carex leptalea</i>	bristle-stalked sedge	None	None	G5	S1	2B.2	Bogs and fens, meadows and seeps, marshes and swamps.	No
<i>Carex lyngbyei</i>	Lyngbye's sedge	None	None	G5	S3	2B.2	Marshes and swamps (brackish or freshwater).	Yes
<i>Carex praticola</i>	northern meadow sedge	None	None	G5	S2	2B.2	Meadows and seeps.	No
<i>Castilleja ambigua</i> var. <i>humboldtensis</i>	Humboldt Bay owl's-clover	None	None	G4T2	S2	1B.2	Marshes and swamps.	Yes
<i>Castilleja litoralis</i>	Oregon coast paintbrush	None	None	G3	S3	2B.2	Coastal bluff scrub, coastal dunes, coastal scrub.	No
<i>Chloropyron maritimum</i> ssp. <i>palustre</i>	Point Reyes salty bird's-beak	None	None	G4?T2	S2	1B.2	Coastal salt marsh.	Yes
<i>Collinsia corymbosa</i>	round-headed collinsia	None	None	G1	S1	1B.2	Coastal dunes.	No
<i>Erysimum menziesii</i>	Menzies' wallflower	Endangered	Endangered	G1	S1	1B.1	Coastal dunes.	Yes
<i>Erythronium revolutum</i>	coast fawn lily	None	None	G4G5	S3	2B.2	Bogs and fens, broadleaved upland forest, north coast coniferous forest.	No
<i>Fissidens pauperculus</i>	minute pocket moss	None	None	G3?	S2	1B.2	North coast coniferous forest.	No

<i>Gilia capitata</i> ssp. <i>pacifica</i>	Pacific gilia	None	None	G5T3	S3	1B.2	Coastal bluff scrub, chaparral, coastal prairie, valley and foothill grassland.	No
<i>Gilia millefoliata</i>	dark-eyed gilia	None	None	G2	S2	1B.2	Coastal dunes.	Yes
<i>Hesperervax sparsiflora</i> var. <i>brevifolia</i>	short-leaved evax	None	None	G4T3	S3	1B.2	Coastal bluff scrub, coastal dunes, coastal prairie.	Yes
<i>Lasthenia californica</i> ssp. <i>macrantha</i>	perennial goldfields	None	None	G3T2	S2	1B.2	Coastal bluff scrub, coastal dunes, coastal scrub.	No
<i>Lathyrus japonicus</i>	seaside pea	None	None	G5	S2	2B.1	Coastal dunes.	Yes
<i>Lathyrus palustris</i>	marsh pea	None	None	G5	S2	2B.2	Bogs and fens, lower montane coniferous forest, marshes and swamps, north coast coniferous forest, coastal prairie, coastal scrub.	Yes
<i>Layia carnosa</i>	beach layia	Threatened	Endangered	G2	S2	1B.1	Coastal dunes, coastal scrub.	Yes
<i>Lilium occidentale</i>	western lily	Endangered	Endangered	G1G2	S1	1B.1	Coastal scrub, freshwater marsh, bogs and fens, coastal bluff scrub, coastal prairie, north coast coniferous forest, marshes and swamps.	Yes
<i>Lycopodium clavatum</i>	running-pine	None	None	G5	S3	4.1	Lower montane coniferous forest, north coast coniferous forest, marshes and swamps.	Yes
<i>Mitellastrum caulescens</i>	leafy-stemmed mitrewort	None	None	G5	S4	4.2	Broadleafed upland forest, lower montane coniferous forest, meadows and seeps, north coast coniferous forest.	No
<i>Monotropa uniflora</i>	ghost-pipe	None	None	G5	S2	2B.2	Broadleafed upland forest, north coast coniferous forest.	No

<i>Montia howellii</i>	Howell's montia	None	None	G3G4	S2	2B.2	Meadows and seeps, north coast coniferous forest, vernal pools.	Yes
<i>Oenothera wolfii</i>	Wolf's evening-primrose	None	None	G2	S1	1B.1	Coastal bluff scrub, coastal dunes, coastal prairie, lower montane coniferous forest.	Yes
<i>Puccinellia pumila</i>	dwarf alkali grass	None	None	G5	SH	2B.2	Marshes and swamps.	Yes
<i>Sidalcea malachroides</i>	maple-leaved checkerbloom	None	None	G3	S3	4.2	Broadleaved upland forest, coastal prairie, coastal scrub, north coast coniferous forest, riparian forest.	Yes
<i>Sidalcea malviflora</i> ssp. <i>patula</i>	Siskiyou checkerbloom	None	None	G4G5T2	S2	1B.2	Coastal bluff scrub, coastal prairie, north coast coniferous forest.	Yes
<i>Sidalcea oregana</i> ssp. <i>eximia</i>	coast checkerbloom	None	None	G5T1	S1	1B.2	Meadows and seeps, north coast coniferous forest, lower montane coniferous forest.	Yes
<i>Silene scouleri</i> ssp. <i>scouleri</i>	Scouler's catchfly	None	None	G5T4T5	S2S3	2B.2	Coastal bluff scrub, coastal prairie, valley and foothill grassland.	No
<i>Spergularia canadensis</i> var. <i>occidentalis</i>	western sand-spurrey	None	None	G5T4	S1	2B.1	Marshes and swamps (coastal salt marshes).	Yes
<i>Trichodon cylindricus</i>	cylindrical trichodon	None	None	G4G5	S2	2B.2	Broadleaved upland forest, upper montane coniferous forest, meadows and seeps.	No
<i>Viola palustris</i>	alpine marsh violet	None	None	G5	S1S2	2B.2	Coastal scrub, bogs and fens.	No

Special-Status Species Details

Birds

Sharp-shinned hawk (*Accipiter striatus*)

Special Status: CDFW Fully Protected; Protected under Migratory Bird Treaty Act.

Habitat/Life-history Requirements: The sharp-shinned hawk roosts in intermediate to high-canopy forest and nests in dense, even-aged, single-layered forest canopy. Nest is a platform or cup in dense foliage against trunk, or in main crotch of tree, usually 6-80 ft above ground.

Status within the Project Area: Nesting is highly unlikely given their typical seasonality and noise from nearby cell tower generators.

Potential Impact/Mitigation Due to the lack of contiguous forest, no significant impact from project activity is expected.

Great egret (*Ardea alba*)

Special Status: Protected under Migratory Bird Treaty Act.

Habitat/Life-history Requirements: The great egret is a common yearlong resident throughout California, except for high mountains and deserts. Feeds and rests in fresh, and saline emergent wetlands, along the margins of estuaries, lakes, and slow-moving streams, on mudflats and salt ponds, and in irrigated croplands and pastures. Nests in large trees, and roosts in trees. Nests are usually near water at a height of 10-80ft and nesting activity is very sensitive to frequent human disturbance.

Status within the Project Area: No nesting or foraging locations exist within the project area. Noise from nearby cell tower generators would prevent nesting.

Potential Impact/Mitigation Project operations would not significantly impact nesting habitat, no mitigation is necessary.

Great blue heron (*Ardea herodias*)

Special Status: USFS.S.

Habitat/Life-history Requirements: The great blue heron is fairly common all year throughout most of California, in shallow estuaries and fresh and saline emergent wetlands. Less common along riverine and rocky marine shores, in croplands, pastures, and in mountains above foothills. Usually nests in colonies in tops of secluded large snags or live trees, usually among the tallest available; rarely nests on ground, rock ledges, sea cliffs, mats of tules, or shrubs. Nesting activity is sensitive to human disturbance.

Status within the Project Area: No nesting or foraging locations exist within the project area. Noise from nearby cell tower generators would prevent nesting.

Potential Impact/Mitigation: Project operations would not significantly impact nesting habitat, no mitigation is necessary.

Northern harrier (*Circus hudsonius*)

Special Status: CDF – Sensitive.

Habitat/Life-history Requirements: Frequents meadows, grasslands, open rangelands, desert sinks, fresh and saltwater emergent wetlands; seldom found in wooded areas. Permanent resident of the northeastern plateau and coastal areas; less common resident of the Central Valley. Widespread winter resident and migrant in suitable habitat. California population has decreased in recent decades. Nests on the ground in shrubby vegetation or tall grasses, often near wetlands.

Status within the Project Area: No suitable nesting or foraging sites exist within the project area, as the field is mowed to a length insufficient for nesting or harboring prey animals.

Potential Impact/Mitigation: Project operations would have no significant impact to nesting or foraging.

Snowy egret (*Egretta thula*)

Special Status: CDF – Species of Special Concern; Protected under Migratory Bird Treaty Act.

Habitat/Life-history Requirements: The snowy egret is widespread in California along shores of coastal estuaries, fresh and saline emergent wetlands, ponds, slow-moving rivers, irrigation ditches, and wet fields. Feeds in shallow water or along shores of wetlands or aquatic habitats, and is the most active feeder of the California herons. Can nest either low in trees or on the ground in dense marshes.

Status within the Project Area: No nesting or foraging locations exist within the project area. Noise from nearby cell tower generators would prevent nesting.

Potential Impact/Mitigation: Project operations would have no significant impact to nesting or foraging.

White-tailed kite (*Elanus leucurus*)

Special Status: CDFW – Species of Special Concern.

Habitat/Life-history Requirements: Common to uncommon, yearlong resident in coastal and valley lowlands; rarely found away from agricultural areas. Inhabits herbaceous and open stages of most habitats mostly in cismontane California. Typically nests near the top of available tree species adjacent to foraging ground (e.g. grassland and meadows).

Status within the Project Area: No nesting or foraging locations exist within the project area. Noise from nearby cell tower generators would prevent nesting.

Potential Impact/Mitigation: Project operations would have no significant impact to nesting or foraging.

Bald Eagle (*Haliaeetus leucocephalus*)

Status: State Endangered, Federally Delisted August 8, 2007, CDFW “Fully Protected”, and BOF Sensitive Species

Habitat/Life-history Requirements: Requires large bodies of water or free flowing rivers with abundant fish populations, with adjacent snags or other perches. Fish are a primary source of prey, and bald eagles are typically found in forested areas near large fish-bearing waters. Bald eagles build large nests about 6 feet wide. Nests are typically found in large trees, but may be built on other available vegetation or structures.

Status within the Project Area: No suitable dead tops or snags exist within the project area, thus no suitable nesting site exists.

Potential Impact/Mitigation: The project will not significantly impact nesting Bald Eagles or their habitat.

Black-crowned night heron (*Nycticorax nycticorax*)

Special Status: CDFW – Watchlist.

Habitat/Life-history Requirements: The black-crowned night-heron is a fairly common, yearlong resident in lowlands and foothills throughout most of California. Can nest either low in trees or on the ground in dense marshes. Feeds along the margins of lacustrine, large riverine, and fresh and saline emergent habitats.

Status within the Project Area: No nesting or foraging locations exist within the project area. Noise from nearby cell tower generators would prevent nesting.

Potential Impact/Mitigation: Project operations would have no significant impact to nesting or foraging.

Osprey (*Pandion haliaetus*)

Special Status: CDFW Watch List; Protected under Migratory Bird Treaty Act; NatureServe Ranks: G5, S4

Family: Accipitridae

Habitat/Life-history Requirements: Ospreys primarily prey on fish and they require large fish-bearing waters for hunting (Zeiner et al. 1988). Ospreys typically make large nests in tall snags or trees high off the ground in open forest habitats (Zeiner et al.).

Status within the Project Area: Ospreys are unlikely to occur in the area directly impacted by the project due to the lack of suitable snags or dead tree tops for nesting.

Potential Impact/Mitigation: The project will not significantly impact nesting Osprey or their habitat.

Peregrine falcon (*Falco peregrinus anatum*)

Special Status: Federally Delisted, State Delisted, CDFW Fully Protected; Protected under Migratory Bird Treaty Act; NatureServe Ranks: G4T4, S3S4

Habitat/Life-history Requirements: The formerly federally endangered peregrine falcon was delisted in 1999 due to recovery (USFWS ECOS). The peregrine falcon is an uncommon year-round resident and migrant in California (Zeiner et al. 1988). Peregrine falcons typically use cliffs and ledges near bodies of water for cover and nesting areas, but they may also nest on buildings or bridges in the city (Sibley 2003, Cornell Lab). Peregrine falcons may breed in woodland, forest, or coastal habitat (Zeiner et al. 1988). Riparian and wetland areas are important habitat yearlong (Zeiner et al. 1988).

Status within the Project Area: No nesting habitat exists within the project area.

Potential Impact/Mitigation: No buildings or bridges are being removed with this project. The project will not significantly impact nesting peregrine falcons or their habitat.

Mammals

Sonoma tree vole (*Arborimus pomo*)

Special status: G3, S3

Family: Muridae

Habitat/Life History Requirements: Sonoma tree voles occur in old-growth and other forests, mainly Douglas-fir, redwood, and montane hardwood-conifer habitats. Males nest most frequently in a tree nest constructed of fir needles, or, less frequently, in shallow burrows at the base of fir trees, beneath litter. Males nest most frequently in a tree nest constructed of fir needles, or, less frequently, in shallow burrows at the base of fir trees, beneath litter.

Status within the Project Area: No Douglas-fir or grand fir trees were present within the parcel when surveyed, thus no suitable foraging or nesting material was present in the project area.

Potential Impact/Mitigation: The project will not significantly impact Sonoma tree vole habitat.

Fisher - West Coast DPS (*Pekania pennanti*)

Special Status: CDFW Species of Special Concern; NatureServe Ranks: G5, S2S3

Habitat/Life-history Requirements: The fisher uses large expanses of forest with moderate to high canopy closure, and will avoid open forest, grasslands, and wetlands. Fishers use cavities in live trees, snags and down logs for reproductive dens. Structural complexity is a critical element of fisher habitat, necessary to provide cover for resting and denning, and habitat for prey.

Status within the Project Area: The project area does not contain fisher habitat due to the lack forested area in its vicinity.

Potential Impact/Mitigation: No impact to Fisher habitat is expected

Long-eared myotis (*Myotis evotis*)

Special Status: G5, S3

Habitat/Life-history Requirements: The long-eared myotis is widespread in California, but generally is believed to be uncommon in most of its range. It avoids the arid Central Valley and hot deserts, occurring along the entire coast and in the Sierra Nevada, Cascades, and Great Basin from the Oregon border south

through the Tehachapi Mts. to the Coast Ranges. This species has been found in nearly all brush, woodland, and forest habitats, from sea level to at least 9000 ft, but coniferous woodlands and forests seem to be preferred.

Status within the Project Area: No suitable habitat exists within the project area.

Potential Impact/Mitigation: No impact to long-eared myotis is expected.

Amphibians

Northern red-legged frog (*Rana aurora*)

Special Status: CDFW “Species of Special Concern”; NatureServe Ranks: G4, S3

Habitat/Life-history Requirements: Found in riparian areas and permanent bodies of relatively quiet water such as ponds, pools along streams, reservoirs, springs, lakes and marshes. This frog is highly aquatic, preferring shorelines with extensive vegetation for terrestrial cover and escaping to pools 3 feet or deeper.

Status within the Project Area: The project area does not contain any wet areas or watercourses, thus no high-quality habitat for northern red-legged frogs exists in the area.

Potential Impact/Mitigation: The project footprint does not intersect or impact areas of high quality Northern red-legged frog habitat.

Western pond turtle (*Actinemys marmorata*)

Special Status: CDFW Species of Special Concern; NatureServe Ranks: G3G4, S3

Family: Emydidae

Habitat/Life-history Requirements: The western pond turtle is associated with permanent or nearly permanent water in ponds, lakes, streams, irrigation ditches or permanent pools along intermittent streams (Ziener et al. 1988). Invasive American bullfrogs prey upon hatchlings and juveniles (Ziener et al. 1988).

Status within the Project Area: The project area does not contain any permanent bodies of water, thus no habitat exists.

Potential Impact/Mitigation: The project footprint does not intersect or impact areas of high quality western pond turtle habitat.

Fishes

No suitable year-round watercourse exists within or adjacent to the project area, thus no fishes will be present or impacted by project activity. Suitable streams exist within the BAA, however the project area lies entirely outside of the County Streamside Management Areas (SMA).

Invertebrates

Obscure bumble bee (*Bombus caliginosus*)

Special Status: CDFW Special Animals List; NatureServe Ranks: G2G3, S1

Habitat/Life-history Requirements: The obscure bumble bee occupies open grassy coastal prairies and Coast Range meadows (IUCN). This long-tongued species may pollinate flowers with elongated corollas, such as *Keckiella* spp. (IUCN). The obscure bumblebee does not fare well in agricultural or urban/suburban environments, where it is often outcompeted by more common bumblebees (NatureServe 2017). The obscure bumblebee has declined in the San Francisco Bay area, and may be threatened by habitat loss from development (NatureServe 2017).

Potential Impact/Mitigation: The property has the potential to support many native pollinators, however, the project footprint currently consists of a large mowed field with minimal nectar sources. The project is not expected to have significant impacts on *Bombus* species.

Western bumble bee (*Bombus occidentalis*)

Special Status: State Candidate Endangered, NatureServe Ranks: G3, S1

Habitat/Life-history Requirements: The western bumble bee is a generalist short-tongued forager that may be found in open habitats such as grassy areas, urban parks and gardens, chaparral and shrub areas, and mountain meadows. Like many bumble bees, the western bumble bee nests underground in abandoned rodent holes. The western bumble bee is threatened by disease, habitat loss and degradation, and insecticides.

Potential Impact/Mitigation: The property has the potential to support many native pollinators, however, the project footprint currently consists of a large mowed field with minimal nectar sources. The project is not expected to have significant impacts on *Bombus* species.

Appendix A: Photos of Project Area



Picture 1. View of the project area looking north. Note the cell tower located roughly 80 feet north of the fenceline.



Picture 2. View of the project area looking south. Note the mowed vegetation and surrounding homes.



Picture 3. View of the project area's northwest corner, which contains a single Monterey pine.



Picture 4. The view of from the southern end of the project area looking toward Union St.

Appendix B: Maps

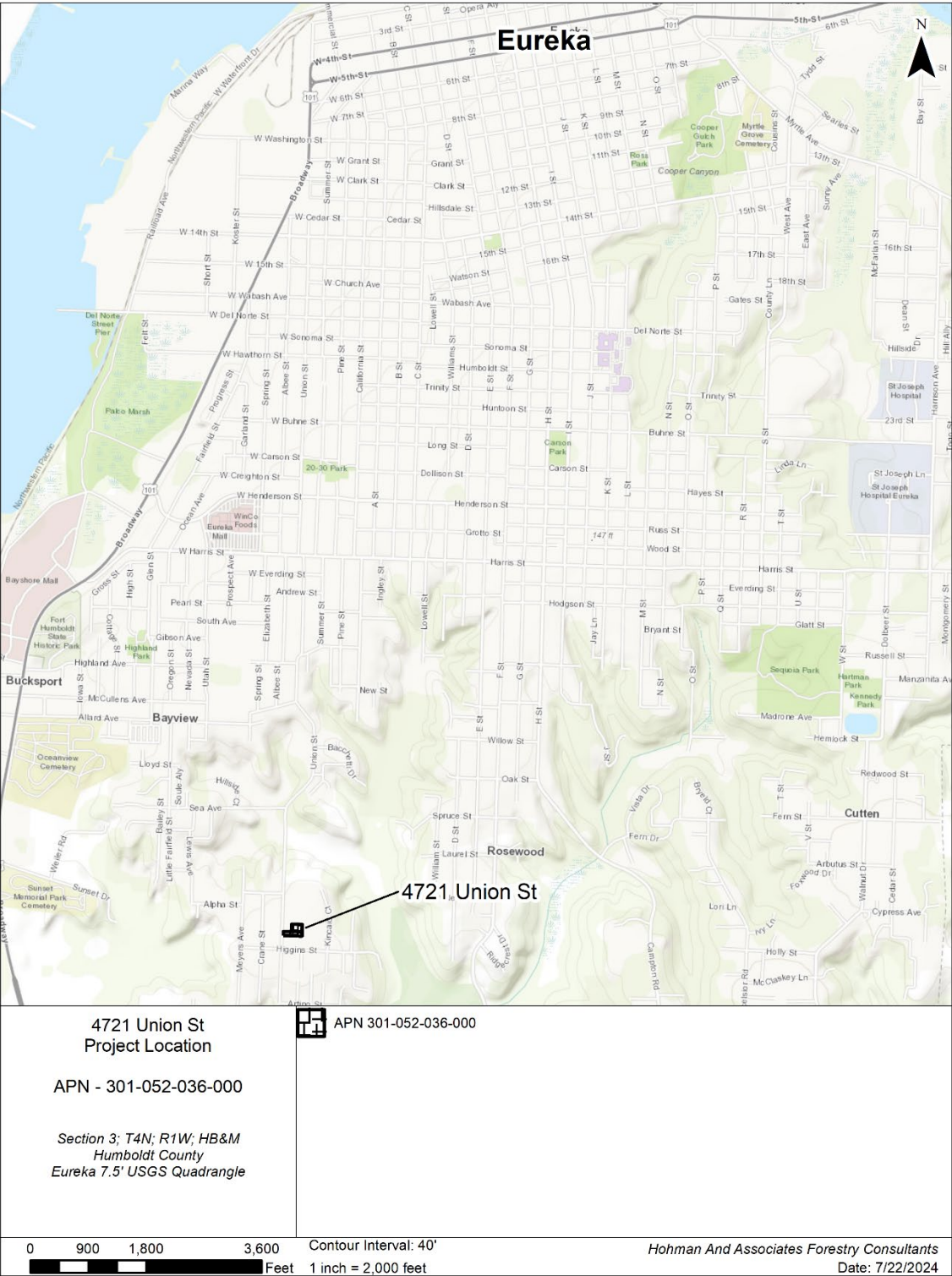


Figure 1. Location of 4721 Union St property



Figure 2. Detail map of parcel division and project area

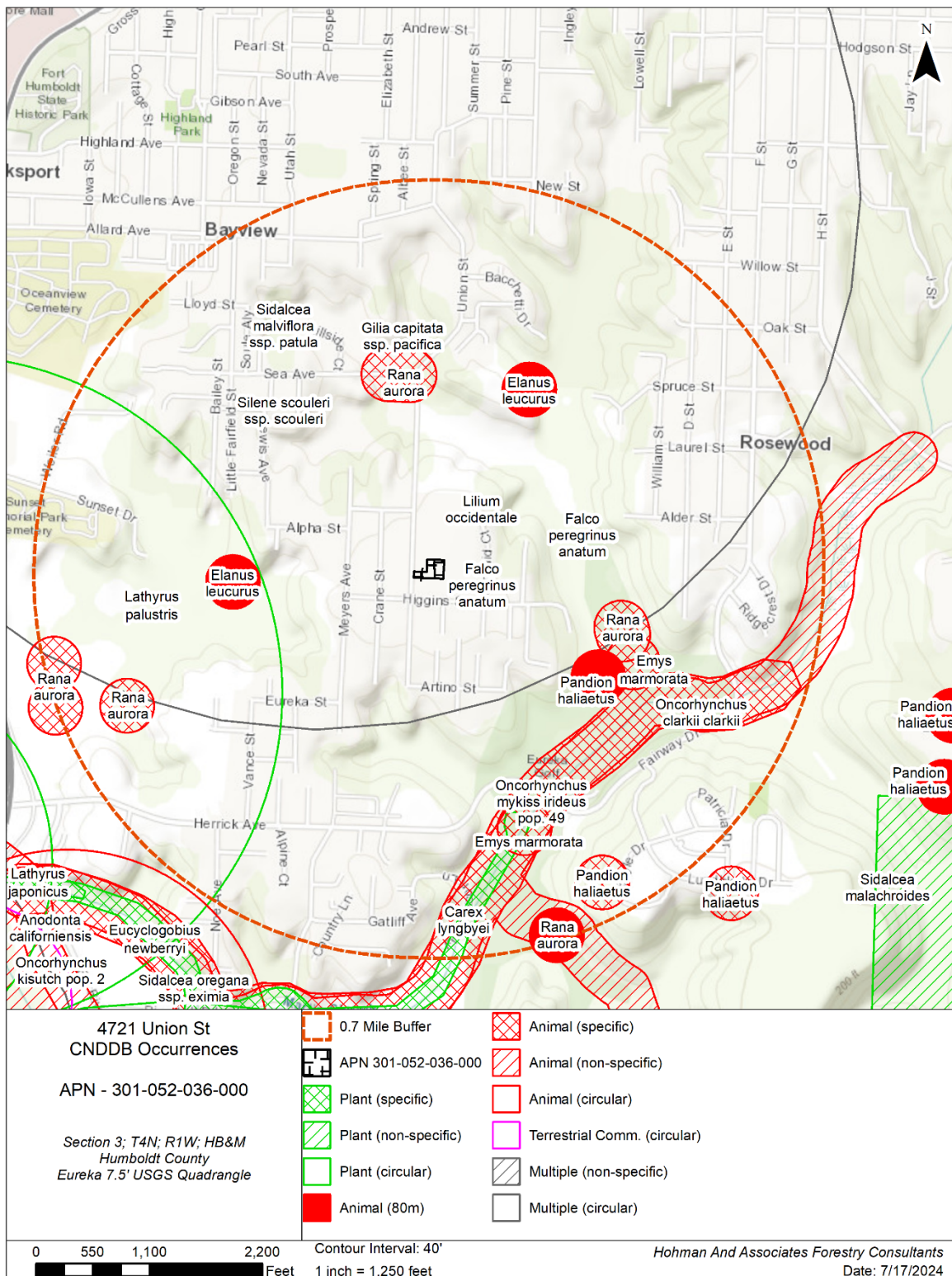


Figure 3. CNDDDB occurrences map of 0.7 mile buffer surrounding parcel

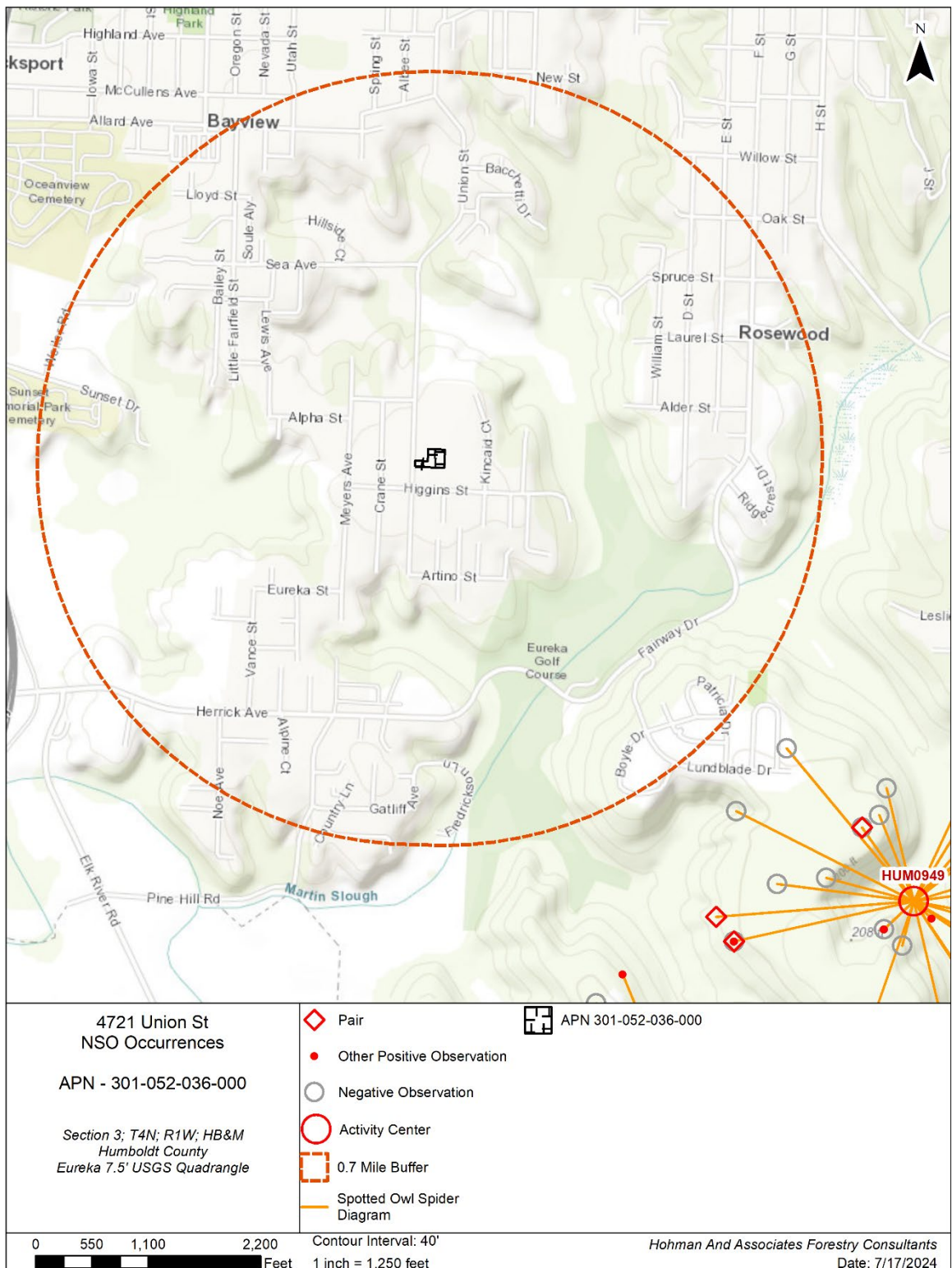


Figure 4. NSO activity centers in the vicinity of the parcel

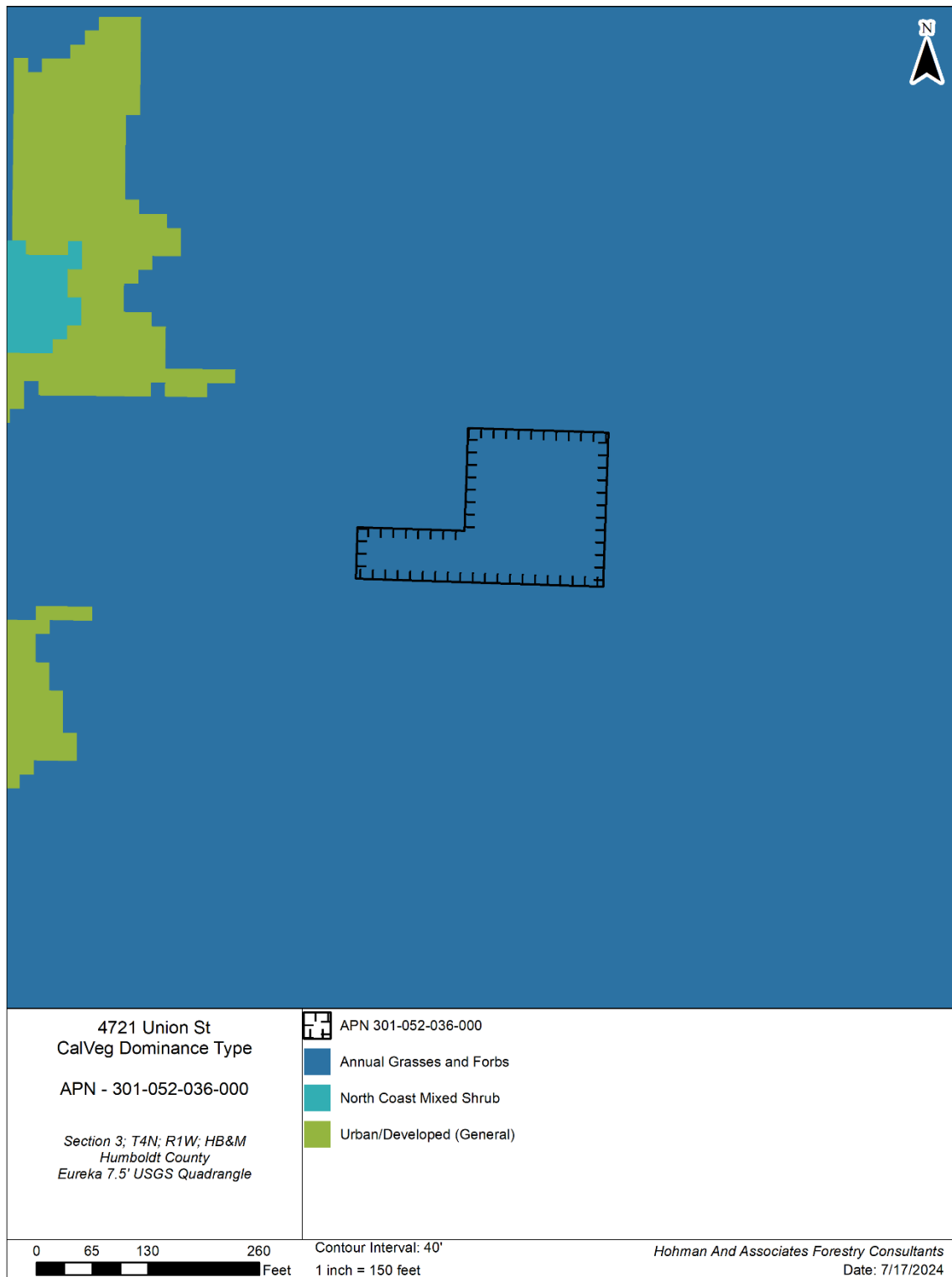


Figure 5. Calveg cover type of area surrounding the 4721 Union St. parcel



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Query Criteria: Quad IS (Eureka (4012472) OR Tyee City (4012482) OR Fields Landing (4012462) OR Cannibal Island (4012463) OR McWhinney Creek (4012461) OR Arcata South (4012471) OR Arcata North (4012481))
 AND Taxonomic Group IS (Fish OR Amphibians OR Reptiles OR Birds OR Mammals OR Mollusks OR Arachnids OR Crustaceans OR Insects OR Ferns OR Gymnosperms OR Monocots OR Dicots OR Lichens OR Bryophytes OR Fungi)

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Abronia umbellata</i> var. <i>breviflora</i> pink sand-verbena	G4G5T2 S2	None None	Rare Plant Rank - 1B.1 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	5 236	61 S:16	0	9	2	1	1	3	8	8	15	1	0
<i>Accipiter striatus</i> sharp-shinned hawk	G5 S4	None None	CDFW_WL-Watch List IUCN_LC-Least Concern	200 580	22 S:2	0	0	2	0	0	0	1	1	2	0	0
<i>Acipenser medirostris</i> pop. 1 green sturgeon - southern DPS	G2T1 S1	Threatened None	AFS_VU-Vulnerable CDFW_SSC-Species of Special Concern IUCN_EN-Endangered	0 0	14 S:1	0	1	0	0	0	0	0	1	1	0	0
<i>Actinemys marmorata</i> northwestern pond turtle	G2 SNR	Proposed Threatened None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable USFS_S-Sensitive	3 400	1082 S:9	1	3	1	0	0	4	2	7	9	0	0
<i>Anodonta californiensis</i> California floater	G3 S2?	None None	USFS_S-Sensitive	41 41	6 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Aplodontia rufa humboldtiana</i> Humboldt mountain beaver	G5TNR SNR	None None		50 1,700	28 S:16	0	0	0	0	0	16	14	2	16	0	0
<i>Arborimus albipes</i> white-footed vole	G3G4 S2	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	15 15	3 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Arborimus pomo</i> Sonoma tree vole	G3 S3	None None	CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened	40 1,600	222 S:7	0	0	0	0	0	7	7	0	7	0	0
<i>Ardea alba</i> great egret	G5 S4	None None	CDF_S-Sensitive IUCN_LC-Least Concern	4 194	43 S:6	1	0	0	0	0	5	4	2	6	0	0



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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Ardea herodias great blue heron	G5 S4	None None	CDF_S-Sensitive IUCN_LC-Least Concern	4156 450	S:13	6	0	0	0	0	7	10	3	13	0	0
Ascaphus truei Pacific tailed frog	G4 S3S4	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	100 1,027	S:8	0	0	0	0	0	8	5	3	8	0	0
Astragalus pycnostachyus var. pycnostachyus coastal marsh milk-vetch	G2T2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_SBBG-Santa Barbara Botanic Garden SB_UCBG-UC Botanical Garden at Berkeley		24 S:1	0	0	0	0	0	1	1	0	1	0	0
Bombus caliginosus obscure bumble bee	G2G3 S1S2	None None	IUCN_VU-Vulnerable	0 2,100	181 S:8	0	0	0	0	0	8	8	0	8	0	0
Bombus crotchii Crotch's bumble bee	G2 S2	None Candidate Endangered	IUCN_EN-Endangered	10 10	441 S:1	0	0	0	0	0	1	1	0	1	0	0
Bombus occidentalis western bumble bee	G3 S1	None Candidate Endangered	IUCN_VU-Vulnerable USFS_S-Sensitive	10 2,100	306 S:9	0	0	0	0	0	9	9	0	9	0	0
Brachyramphus marmoratus marbled murrelet	G3 S2	Threatened Endangered	CDF_S-Sensitive IUCN_EN-Endangered	1,200 1,800	110 S:4	0	2	0	0	0	2	4	0	4	0	0
Cardamine angulata seaside bittercress	G4G5 S3	None None	Rare Plant Rank - 2B.1	310 310	38 S:1	0	0	0	0	0	1	1	0	1	0	0
Carex arcta northern clustered sedge	G5 S1	None None	Rare Plant Rank - 2B.2 IUCN_LC-Least Concern	200 500	13 S:2	0	0	0	0	0	2	2	0	2	0	0
Carex leptalea bristle-stalked sedge	G5 S1	None None	Rare Plant Rank - 2B.2 IUCN_LC-Least Concern	300 300	8 S:1	0	0	0	0	0	1	1	0	1	0	0
Carex lyngbyei Lyngbye's sedge	G5 S3	None None	Rare Plant Rank - 2B.2 IUCN_LC-Least Concern	0 20	37 S:22	2	3	9	0	0	8	11	11	22	0	0



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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Carex praticola northern meadow sedge	G5 S2	None None	Rare Plant Rank - 2B.2		14 S:1	0	0	0	0	0	1	1	0	1	0	0
Castilleja ambigua var. humboldtensis Humboldt Bay owl's-clover	G4T2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_UCBG-UC Botanical Garden at Berkeley	5 65	31 S:21	2	8	2	0	0	9	15	6	21	0	0
Castilleja litoralis Oregon coast paintbrush	G3 S3	None None	Rare Plant Rank - 2B.2	50 500	44 S:3	0	0	0	0	0	3	2	1	3	0	0
Charadrius montanus mountain plover	G3 S2	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened USFWS_BCC-Birds of Conservation Concern	4 7	94 S:2	0	0	0	0	0	2	0	2	2	0	0
Charadrius nivosus nivosus western snowy plover	G3T3 S3	Threatened None	CDFW_SSC-Species of Special Concern	10 23	140 S:5	0	1	0	0	0	4	3	2	5	0	0
Chloropyron maritimum ssp. palustre Point Reyes salty bird's-beak	G4?T2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	5 10	80 S:17	2	6	1	1	0	7	10	7	17	0	0
Cicindela hirticollis grvida sandy beach tiger beetle	G5T2 S2	None None		10 10	34 S:1	0	0	0	0	1	0	1	0	0	0	1
Circus hudsonius northern harrier	G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	6 6	82 S:1	0	0	1	0	0	0	0	1	1	0	0
Collinsia corymbosa round-headed collinsia	G1 S1	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden		13 S:1	0	0	0	0	0	1	1	0	1	0	0



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Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	G4 S2	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive	30 250	635 S:3	0	0	0	0	0	3	3	0	3	0	0
<i>Coturnicops noveboracensis</i> yellow rail	G4 S2	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive USFWS_BCC-Birds of Conservation Concern	4 24	45 S:4	0	0	0	0	0	4	3	1	4	0	0
<i>Egretta thula</i> snowy egret	G5 S4	None None	IUCN_LC-Least Concern	4 47	20 S:3	1	0	0	0	0	2	1	2	3	0	0
<i>Elanus leucurus</i> white-tailed kite	G5 S3S4	None None	BLM_S-Sensitive CDFW_FP-Fully Protected IUCN_LC-Least Concern	23 60	190 S:3	0	1	0	0	0	2	0	3	3	0	0
<i>Entosphenus tridentatus</i> Pacific lamprey	G4 S3	None None	AFS_VU-Vulnerable BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive	14 43	9 S:5	0	0	0	0	0	5	1	4	5	0	0
<i>Erethizon dorsatum</i> North American porcupine	G5 S3	None None	IUCN_LC-Least Concern	13 817	523 S:9	0	0	0	0	0	9	4	5	9	0	0
<i>Erysimum menziesii</i> Menzies' wallflower	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCBG-UC Botanical Garden at Berkeley	5 30	19 S:6	2	2	1	1	0	0	1	5	6	0	0
<i>Erythronium revolutum</i> coast fawn lily	G4G5 S3	None None	Rare Plant Rank - 2B.2 SB_UCSC-UC Santa Cruz		172 S:1	0	0	0	0	0	1	1	0	1	0	0



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Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Eucyclogobius newberryi</i> tidewater goby	G3 S3	Endangered None	AFS_EN-Endangered CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened	0 12	127 S:10	1	1	0	1	0	7	1	9	10	0	0
<i>Falco peregrinus anatum</i> American peregrine falcon	G4T4 S3S4	Delisted Delisted	CDF_S-Sensitive	40 902	75 S:8	0	5	0	0	0	3	2	6	8	0	0
<i>Fissidens pauperculus</i> minute pocket moss	G3? S2	None None	Rare Plant Rank - 1B.2 USFS_S-Sensitive	100 650	22 S:3	0	0	0	0	0	3	3	0	3	0	0
<i>Gilia capitata ssp. pacifica</i> Pacific gilia	G5T3 S3	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	250 250	91 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Gilia millefoliata</i> dark-eyed gilia	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	5 50	54 S:11	1	4	1	0	0	5	9	2	11	0	0
<i>Haliaeetus leucocephalus</i> bald eagle	G5 S3	Delisted Endangered	BLM_S-Sensitive CDF_S-Sensitive CDFW_FP-Fully Protected IUCN_LC-Least Concern USFS_S-Sensitive	29 580	333 S:3	1	1	0	0	0	1	0	3	3	0	0
<i>Hesperovax sparsiflora var. brevifolia</i> short-leaved evax	G4T3 S3	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	10 15	72 S:6	0	1	1	0	0	4	2	4	6	0	0
<i>Lampetra richardsoni</i> western brook lamprey	G4G5 S3S4	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive	35 350	4 S:4	0	0	0	0	0	4	1	3	4	0	0



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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Lasthenia californica</i> ssp. <i>macrantha</i> perennial goldfields	G3T2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden		59 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Lathyrus japonicus</i> seaside pea	G5 S2	None None	Rare Plant Rank - 2B.1 IUCN_LC-Least Concern	524 200	S:3	0	0	0	0	0	3	3	0	3	0	0
<i>Lathyrus palustris</i> marsh pea	G5 S2	None None	Rare Plant Rank - 2B.2	10 10	13 S:2	0	0	0	0	0	2	2	0	2	0	0
<i>Layia carnosa</i> beach layia	G2 S2	Threatened Endangered	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_SBBG-Santa Barbara Botanic Garden	1025 40	S:6	0	3	1	0	0	2	1	5	6	0	0
<i>Lilium occidentale</i> western lily	G1G2 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_BerrySB-Berry Seed Bank	3016 350	S:9	0	3	1	1	3	1	3	6	6	3	0
<i>Lycopodium clavatum</i> running-pine	G5 S3	None None	Rare Plant Rank - 4.1	160 1,860	120 S:35	2	10	13	3	0	7	35	0	35	0	0
<i>Margaritifera falcata</i> western pearlshell	G3G4 S1S2	None None	IUCN_NT-Near Threatened	75 317	78 S:2	0	0	0	0	0	2	2	0	2	0	0
<i>Martes caurina humboldtensis</i> Humboldt marten	G4G5T1 S1	Threatened Endangered	CDFW_SSC-Species of Special Concern USFS_S-Sensitive	1,100 1,100	44 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Mitellastrum caulescens</i> leafy-stemmed mitrewort	G5 S4	None None	Rare Plant Rank - 4.2	1,200 1,200	21 S:1	0	1	0	0	0	0	1	0	1	0	0
<i>Monotropa uniflora</i> ghost-pipe	G5 S2	None None	Rare Plant Rank - 2B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	100 100	115 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Montia howellii</i> Howell's montia	G3G4 S2	None None	Rare Plant Rank - 2B.2	39 1,600	123 S:14	0	5	2	3	3	1	6	8	11	3	0



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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Myotis evotis</i> long-eared myotis	G5 S3	None None	BLM_S-Sensitive IUCN_LC-Least Concern	40 429	139 S:2	0	1	0	0	0	1	2	0	2	0	0
<i>Nannopterum auritum</i> double-crested cormorant	G5 S4	None None	CDFW_WL-Watch List IUCN_LC-Least Concern	10 10	39 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Nycticorax nycticorax</i> black-crowned night heron	G5 S4	None None	IUCN_LC-Least Concern	4 194	37 S:8	1	0	0	0	0	7	6	2	8	0	0
<i>Oenothera wolfii</i> Wolf's evening-primrose	G2 S1	None None	Rare Plant Rank - 1B.1 SB_BerrySB-Berry Seed Bank	10 25	29 S:2	0	0	0	0	0	2	2	0	2	0	0
<i>Oncorhynchus clarkii clarkii</i> coast cutthroat trout	G5T4 S3	None None	AFS_VU-Vulnerable CDFW_SSC-Species of Special Concern USFS_S-Sensitive	5 317	45 S:16	0	0	1	0	0	15	10	6	16	0	0
<i>Oncorhynchus kisutch pop. 2</i> coho salmon - southern Oregon / northern California ESU	G5T2Q S2	Threatened Threatened	AFS_TH-Threatened	35 117	10 S:6	0	0	2	0	0	4	1	5	6	0	0
<i>Oncorhynchus mykiss irideus pop. 48</i> steelhead - northern California DPS summer- run	G5T2Q S2	Threatened Endangered	AFS_TH-Threatened	200 700	10 S:2	0	0	2	0	0	0	0	2	2	0	0
<i>Oncorhynchus mykiss irideus pop. 49</i> steelhead - northern California DPS winter- run	G5T3Q S3	Threatened None	AFS_TH-Threatened CDFW_SSC-Species of Special Concern	16 350	96 S:10	0	0	6	1	0	3	2	8	10	0	0
<i>Pandion haliaetus</i> osprey	G5 S4	None None	CDF_S-Sensitive CDFW_WL-Watch List IUCN_LC-Least Concern	10 1,240	504 S:80	14	25	7	2	1	31	73	7	79	1	0
<i>Pekania pennanti</i> Fisher	G5 S2S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive	41 555	555 S:5	0	3	0	0	0	2	0	5	5	0	0
<i>Puccinellia pumila</i> dwarf alkali grass	G5 SH	None None	Rare Plant Rank - 2B.2	15 15	2 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Rallus obsoletus obsoletus</i> California Ridgway's rail	G3T1 S2	Endangered Endangered	CDFW_FP-Fully Protected		99 S:2	0	0	0	0	2	0	2	0	0	0	2



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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Rana aurora</i> northern red-legged frog	G4 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive	4292 800	S:57	0	4	0	1	0	52	15	42	57	0	0
<i>Rana boylii pop. 1</i> foothill yellow-legged frog - north coast DPS	G3T4 S4	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern USFS_S-Sensitive	71608 2,100	S:11	2	1	0	0	0	8	4	7	11	0	0
<i>Rhyacotriton variegatus</i> southern torrent salamander	G3? S2S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive	200 1,200	416 S:8	0	0	1	0	0	7	5	3	8	0	0
<i>Riparia riparia</i> bank swallow	G5 S3	None Threatened	BLM_S-Sensitive IUCN_LC-Least Concern	50 114	299 S:3	0	1	0	0	0	2	2	1	3	0	0
<i>Scaphinotus behrensi</i> Behrens' snail-eating beetle	G2G4 S2S4	None None		400 400	4 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Sidalcea malachroides</i> maple-leaved checkerbloom	G3 S3	None None	Rare Plant Rank - 4.2	100 1,650	136 S:26	2	4	7	10	0	3	26	0	26	0	0
<i>Sidalcea malviflora ssp. patula</i> Siskiyou checkerbloom	G4G5T2 S2	None None	Rare Plant Rank - 1B.2 SB_UCSC-UC Santa Cruz	50 300	60 S:6	0	0	3	0	0	3	3	3	6	0	0
<i>Sidalcea oregana ssp. eximia</i> coast checkerbloom	G5T1 S1	None None	Rare Plant Rank - 1B.2	20 200	19 S:5	0	0	2	0	0	3	4	1	5	0	0
<i>Silene scouleri ssp. scouleri</i> Scouler's catchfly	G5T4T5 S2S3	None None	Rare Plant Rank - 2B.2		23 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Spergularia canadensis var. occidentalis</i> western sand-spurrey	G5T4 S1	None None	Rare Plant Rank - 2B.1	5 10	4 S:4	0	0	1	0	0	3	4	0	4	0	0
<i>Spirinchus thaleichthys</i> longfin smelt	G5 S1	Proposed Endangered Threatened	IUCN_LC-Least Concern	0 10	46 S:6	0	0	0	0	0	6	5	1	6	0	0
<i>Sulcaria spiralifera</i> twisted horsehair lichen	G3G4 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	30 43	18 S:3	0	0	0	0	0	3	1	2	3	0	0



Summary Table Report
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California Natural Diversity Database



Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Thaleichthys pacificus</i> eulachon	G5 S1	Threatened None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern		10 S:2	0	0	0	0	1	1	2	0	1	1	0
<i>Trichodon cylindricus</i> cylindrical trichodon	G4G5 S2	None None	Rare Plant Rank - 2B.2		14 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Usnea longissima</i> Methuselah's beard lichen	G4 S4	None None	Rare Plant Rank - 4.2 BLM_S-Sensitive	520 2,100	206 S:16	0	3	1	6	0	6	16	0	16	0	0
<i>Viola palustris</i> alpine marsh violet	G5 S1S2	None None	Rare Plant Rank - 2B.2	100 100	10 S:2	0	0	0	0	0	2	2	0	2	0	0