

Biological Assessment Report

Humboldt County, California

APN 403-081-023

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I. Summary of Findings and Conclusions

The proposed project is located on a 21.30-acre parcel on APN 403-081-023 in Humboldt County (Figure 1). The project is limited to the subdivision of the parcel into four, 5-acre parcels (Figure 2). This assessment describes potential impacts to the plants, plant communities, and terrestrial animals occurring in the project footprint and surrounding area, and whether habitat exists for special status plant and wildlife species (Table 1).

Summary of Mitigation Measures

- Any additional lighting will be minimal and directed downward to minimize light pollution for nocturnal species, including NSO
- Preconstruction surveys for nesting hawks and songbirds (Cooper's hawk, olive-sided flycatcher) will be required if ground-disturbing activity, vegetation, or tree removal occur during the nesting season (February 1 through September 15)
- Preconstruction surveys for Sonoma tree vole will be required if tree removal occurs during the reproductive season (February through September)
- Preconstruction surveys for fisher denning habitat structures (large live trees or snags with cavities or broken top; large downed logs) are required unless tree removal occurs outside of the denning season (July through September)
- If there is any development occurring on Parcel #4, it will require a full USACE Wetland Delineation to investigate the status and size of the potential herbaceous wetland found within the Survey Area.
- If there is any development occurring on Parcel #4, a seasonally appropriate floristic survey of the project area is recommended to determine the presence or absence and potential distribution of Howell's montia (CRPR 2B.2).II.

II. Introduction, Background, and Project Understanding

The purpose of this Biological Report is to review the project in sufficient detail to determine potential impacts to listed botanical species, and wildlife species currently listed or formally proposed for listing as endangered or threatened under the federal Endangered Species Act (ESA), or designated as a Species of Special Concern (SSC), Fully Protected (FP), or on the Watch List (WL) of the California Department of Fish and Wildlife (CDFW); these species are hereinafter referred to as special status species. All wildlife and plant species known to occur in the nine-quad area surrounding the project are listed in Table 1. A biological assessment of the project area and surrounding habitat was conducted to evaluate any potential habitat for special status wildlife and plants or other environmental issues. Botanical surveys of the entire project area were conducted on July 20th, 2022 (Appendix B).

Project Site

The project is located on APN 403-081-023 in Humboldt County, California (Figure 1). The legal description of the site is within the USGS 7.5' Eureka quadrangle, T5N, R1E, Section 32, HB&M. The project location is 3706 Pigeon Point Road, Eureka. The parcel is approximately 21.30 acres in size. The

project area is accessed from Pigeon Point Road, a residential road off Old Arcata Road, east of US Highway 101, which terminates at the parcel.

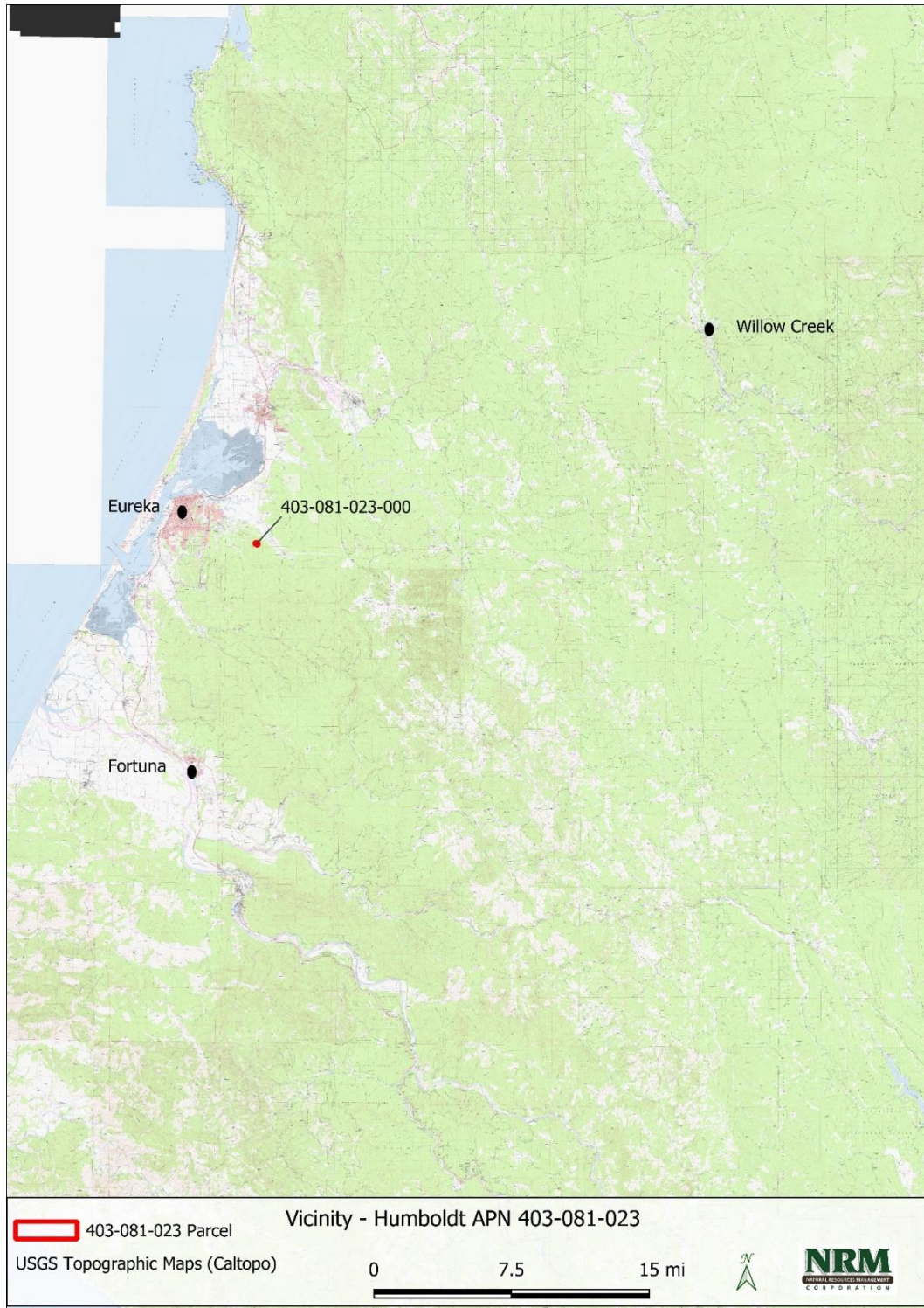


Figure 1. Vicinity map for APN 403-081-023

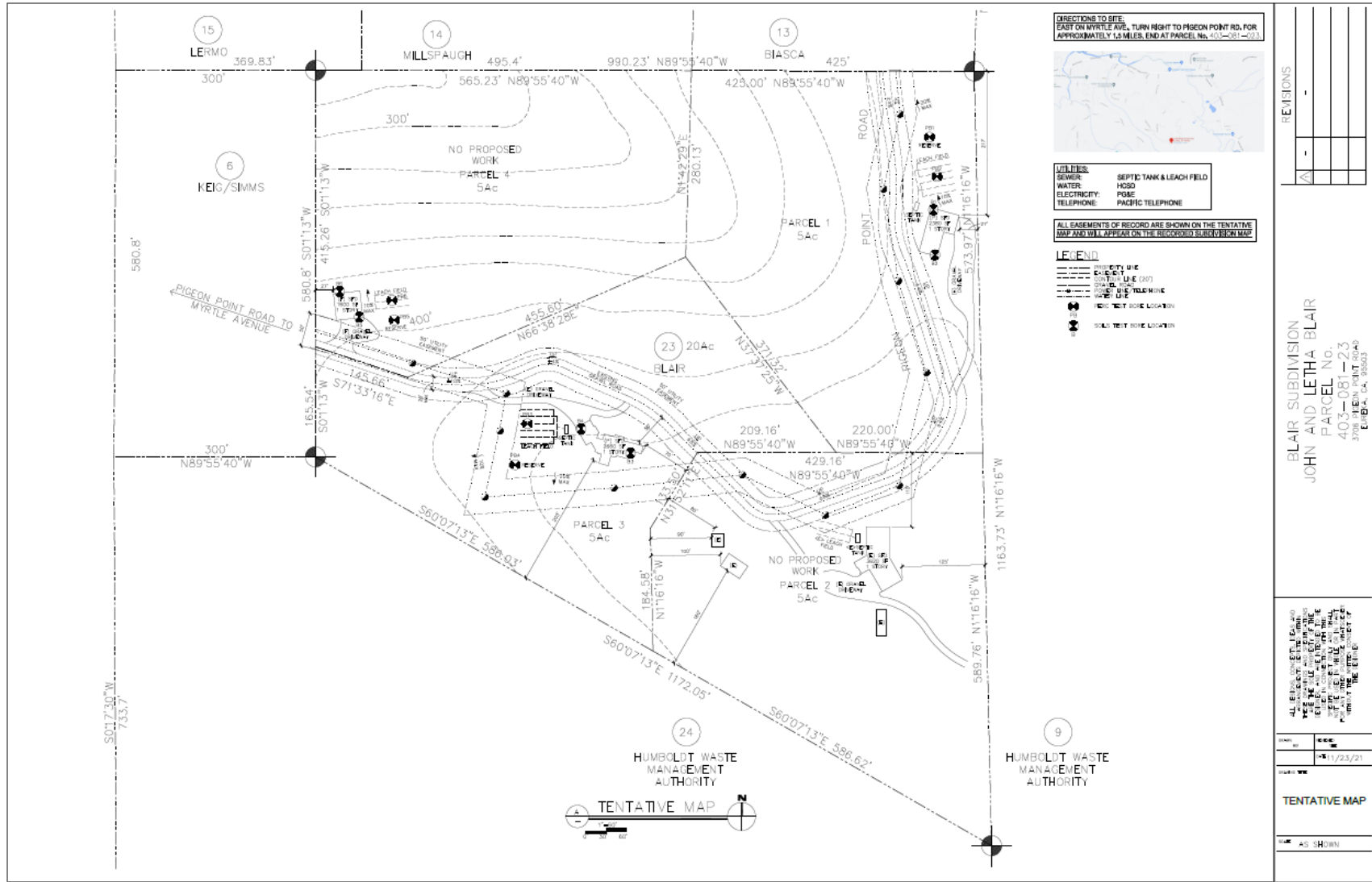


Figure 2. Project area map for APN 403-081-023

Biological Description

This proposed project site is situated at the eastern edge of Eureka city limits, within the Freshwater Creek watershed. There are no watercourses on the parcel; the nearest is intermittent, originating approximately 600 feet northwest of the parcel and flowing north. A drainage in the northwestern corner of the parcel drains into this mapped stream and has appears to have pockets of inundations. A watercourse to the southwest approximately 820 feet from the parcel boundary is a tributary to Freshwater Slough. The parcel has an elevational range of approximately 180 feet with a northwesterly aspect. The elevation above sea level is approximately 300 feet in the northwest portion, rising to approximately 480 feet in the southeast portion. The vegetation consists of redwood forest and the flats are an assortment of native and invasive, annual and perennial forbs and grasses.

Natural Resource Conservation Service (NRCS) Web Soil Survey mapped 61.8% of the parcel as Salmoncreek-Tepona-Rootcreek complex, 2 to 15% slopes, which are colluvium derived from siltstone and/or residuum weathered from siltstone. They are poorly drained and have a moderately high to high ability to transit water.

The remainder (38.2%) is mapped as Salmoncreek-Tepona-Rootcreek complex, 30 to 50% slopes (NRCS 2022). Salmoncreek-Tepona-Rootcreek complex soils can be residuum weathered from siltstone and/or colluvium derived from siltstone. They are moderately well drained soils with a moderately high to high capability to transit water.

Project Description

A subdivision of 21.30 acres at APN 403-081-023 into 4 separate parcels is being proposed. The landowner(s) are proposing to subdivide the existing parcel into four approximately 5-acre parcels. Being proposed is a 2,380 square foot residence on Parcel 1, and a 2,660 square foot residence on Parcel 3. According to the Project Map (Figure 2), Parcels 2 and 4 have no proposed work, with existing buildings and infrastructure. The proposed and existing buildings and associated infrastructure are shown in Figure 2. Pigeon Point Drive accesses the western parcel boundary at the south end, contours through the parcel, and terminates near the northeast boundary (Figure 2).

III. Methods

Pre-Field Review

Prior to the survey, a query was made of the CDFW California Natural Diversity Data Base (CNDDDB 2022) for wildlife and plant species occurrences within a nine-quad topographical map area of the parcel. The current inventories of the California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants of California (CNPS 2022a), and the CNDDDB Quickview tool (CNDDDB 2022) were consulted to determine which special status plant and wildlife species may occur within the project area and to compile a target species list. In total, 48 special status wildlife species and 49 special status plant species were identified during scoping (Table 1). These scoping strategies are consisted with California

Department of Fish and Wildlife protocols (CDFW 2018d) and the California Environmental Quality Act (State of California 2001). The following resources were consulted:

- California Natural Communities List (CDFW 2022a)
- State and Federally Listed Endangered, Threatened, and Rare Plants of California (CDFW 2022a)
- Special Vascular Plants, Bryophytes, Lichens List (CDFW 2022b)
- California Natural Diversity Database: Quickview Tool (CNDDDB 2022)
- The Jepson Manual, 2nd Edition (Baldwin et al. 2012)
- Jepson eFlora (Jepson Flora Project 2022)
- The California Native Plant Society's Online Inventory of Rare and Endangered Plants of California (CNPS 2022a)
- A Manual of California Vegetation, Online Edition (CNPS 2022b)
- Consortium of California Herbaria (CCH 2022)
- Calflora online database (Calflora 2022)

Botanical taxonomy and nomenclature conform to The Jepson Manual, 2nd Edition (Baldwin et al. 2012) and the recent circumscriptions in the Jepson eFlora (Jepson Flora Project 2022). Common names of plant species are derived from the Calflora Database (Calflora 2022). Nomenclature for special-status plants species conforms to the Inventory of Rare and Endangered Plants of California (CNPS 2022a). And Special Vascular Plants, Bryophytes and Lichens List (CDFW 2018c). Vegetation communities described herein conform to California Vegetation (Holland and Keil 1995), the Preliminary Descriptions of the Terrestrial Natural Communities of California (Holland 1986), and/or A Manual of California Vegetation, Online edition CNPS 2022b).

This review provided a comprehensive target species list from which to evaluate potential habitat on the parcel, as well as any known locations for special status species in the general area (Table 1). Species with no protective status are not included in the table and will not be evaluated for project impacts. Due to no watercourses present on the parcel or in the vicinity of the project area that are tributaries to Humboldt Bay, species associated with marine, estuary, or beach environments (*) will not be included in the impact discussion.

Table 1. CNDDDB list of potential special status wildlife, plants, and plant communities in the Arcata South nine-quad area

Common Name	Scientific Name	Federal Listing	State Listing	CDFW Status	CA Rare Plant Rank
WILDLIFE					
northern spotted owl	<i>Strix occidentalis caurina</i>	Threatened	Threatened	-	-
short-eared owl	<i>Asio flammeus</i>	None	None	SSC	-
bald eagle	<i>Haliaeetus leucocephalus</i>	Delisted	Endangered	FP	-
American peregrine falcon	<i>Falco peregrinus anatum</i>	Delisted	Delisted	FP	-
osprey	<i>Pandion haliaetus</i>	None	None	WL	-
Cooper's hawk	<i>Accipiter cooperii</i>	None	None	WL	-
sharp-shinned hawk	<i>Accipiter striatus</i>	None	None	WL	-
northern harrier	<i>Circus hudsonius</i>	None	None	SSC	-
white-tailed kite	<i>Elanus leucurus</i>	None	None	FP	-
merlin	<i>Falco columbarius</i>	None	None	WL	-
marbled murrelet	<i>Brachyramphus marmoratus</i>	Threatened	Endangered	-	-
mountain plover	<i>Charadrius montanus</i>	None	None	SSC	-
western snowy plover*	<i>Charadrius nivosus nivosus</i>	Threatened	None	SSC	-
California brown pelican*	<i>Pelecanus occidentalis californicus</i>	Delisted	Delisted	FP	-
double-crested cormorant*	<i>Nannopterum auritum</i>	None	None	WL	-
yellow rail*	<i>Coturnicops noveboracensis</i>	None	None	SSC	-
California Ridgway's rail*	<i>Rallus obsoletus obsoletus</i>	Endangered	Endangered	FP	-
long-billed curlew*	<i>Numenius americanus</i>	None	None	WL	-
bank swallow	<i>Riparia riparia</i>	None	Threatened	-	-
Vaux's swift	<i>Chaetura vauxi</i>	None	None	SSC	-
black-capped chickadee	<i>Poecile atricapillus</i>	None	None	WL	-
Bryant's savannah sparrow	<i>Passerculus sandwichensis alaudinus</i>	None	None	SSC	-
olive-sided flycatcher	<i>Contopus cooperi</i>	None	None	SSC	-
willow flycatcher	<i>Empidonax traillii</i>	None	Endangered	-	-
Fisher	<i>Pekania pennanti</i>	None	None	SSC	-
Humboldt marten	<i>Martes caurina humboldtensis</i>	Threatened	Endangered	SSC	-

Common Name	Scientific Name	Federal Listing	State Listing	CDFW Status	CA Rare Plant Rank
white-footed vole	<i>Arborimus albipes</i>	None	None	SSC	-
Sonoma tree vole	<i>Arborimus pomo</i>	None	None	SSC	-
southern sea otter*	<i>Enhydra lutris nereis</i>	Threatened	None	FP	-
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	None	None	SSC	-
western pond turtle	<i>Emys marmorata</i>	None	None	SSC	-
Pacific tailed frog	<i>Ascaphus truei</i>	None	None	SSC	-
northern red-legged frog	<i>Rana aurora</i>	None	None	SSC	-
foothill yellow-legged frog	<i>Rana boylei</i>	None	Endangered	SSC	-
southern torrent salamander	<i>Rhyacotriton variegatus</i>	None	None	SSC	-
green sturgeon - southern DPS*	<i>Acipenser medirostris</i> pop. 1	Threatened	None	-	-
green sturgeon - northern DPS*	<i>Acipenser medirostris</i> pop. 2	None	None	SSC	-
white sturgeon*	<i>Acipenser transmontanus</i>	None	None	SSC	-
tidewater goby*	<i>Eucyclogobius newberryi</i>	Endangered	None	-	-
longfin smelt*	<i>Spirinchus thaleichthys</i>	Candidate	Threatened	-	-
Eulachon*	<i>Thaleichthys pacificus</i>	Threatened	None	-	-
Pacific lamprey*	<i>Entosphenus tridentatus</i>	None	None	SSC	-
western brook lamprey*	<i>Lampetra richardsoni</i>	None	None	SSC	-
coast cutthroat trout*	<i>Oncorhynchus clarkii clarkii</i>	None	None	SSC	-
coho salmon* - southern Oregon / northern California ESU	<i>Oncorhynchus kisutch</i> pop. 2	Threatened	Threatened	-	-
Steelhead* - northern California DPS	<i>Oncorhynchus mykiss irideus</i> pop. 16	Threatened	None	-	-
summer-run steelhead trout*	<i>Oncorhynchus mykiss irideus</i> pop. 36	None	Candidate Endangered	SSC	-
chinook salmon* - California coastal ESU	<i>Oncorhynchus tshawytscha</i> pop. 17	Threatened	None	-	-
PLANTS					
cylindrical trichodon	<i>Trichodon cylindricus</i>	None	None	-	2B.2
minute pocket moss	<i>Fissidens pauperculus</i>	None	None	-	1B.2
twisted horsehair lichen	<i>Sulcaria spiralifera</i>	None	None	-	1B.2
Methuselah's beard lichen	<i>Usnea longissima</i>	None	None	-	4.2

Common Name	Scientific Name	Federal Listing	State Listing	CDFW Status	CA Rare Plant Rank
sea-watch	<i>Angelica lucida</i>	None	None	-	4.2
American glehnia	<i>Glehnia littoralis</i> ssp. <i>leiocarpa</i>	None	None	-	4.2
short-leaved evax	<i>Hesperevax sparsiflora</i> var. <i>brevifolia</i>	None	None	-	1B.2
perennial goldfields	<i>Lasthenia californica</i> ssp. <i>macrantha</i>	None	None	-	1B.2
beach layia	<i>Layia carnosa</i>	Threatened	Endangered	-	1B.1
seaside bittercress	<i>Cardamine angulata</i>	None	None	-	2B.1
Menzies' wallflower	<i>Erysimum menziesii</i>	Endangered	Endangered	-	1B.1
Scouler's catchfly	<i>Silene scouleri</i> ssp. <i>scouleri</i>	None	None	-	2B.2
western sand-spurrey	<i>Spergularia canadensis</i> var. <i>occidentalis</i>	None	None	-	2B.1
northern clustered sedge	<i>Carex arcta</i>	None	None	-	2B.2
bristle-stalked sedge	<i>Carex leptalea</i>	None	None	-	2B.2
Lyngbye's sedge	<i>Carex lyngbyei</i>	None	None	-	2B.2
northern meadow sedge	<i>Carex praticola</i>	None	None	-	2B.2
small spikerush	<i>Eleocharis parvula</i>	None	None	-	4.3
coastal marsh milk-vetch	<i>Astragalus pycnostachyus</i> var. <i>pycnostachyus</i>	None	None	-	1B.2
Rattan's milk-vetch	<i>Astragalus rattanii</i> var. <i>rattanii</i>	None	None	-	4.3
harlequin lotus	<i>Hosackia gracilis</i>	None	None	-	4.2
sticky pea	<i>Lathyrus glandulosus</i>	None	None	-	4.3
seaside pea	<i>Lathyrus japonicus</i>	None	None	-	2B.1
marsh pea	<i>Lathyrus palustris</i>	None	None	-	2B.2
trailing black currant	<i>Ribes laxiflorum</i>	None	None	-	4.3
coast fawn lily	<i>Erythronium revolutum</i>	None	None	-	2B.2
Kellogg's lily	<i>Lilium kelloggii</i>	None	None	-	4.3
western lily	<i>Lilium occidentale</i>	Endangered	Endangered	-	1B.1
running-pine	<i>Lycopodium clavatum</i>	None	None	-	4.1
maple-leaved checkerbloom	<i>Sidalcea malachroides</i>	None	None	-	4.2
Siskiyou checkerbloom	<i>Sidalcea malviflora</i> ssp. <i>patula</i>	None	None	-	1B.2

Common Name	Scientific Name	Federal Listing	State Listing	CDFW Status	CA Rare Plant Rank
coast checkerbloom	<i>Sidalcea oregana</i> ssp. <i>eximia</i>	None	None	-	1B.2
ghost-pipe	<i>Monotropa uniflora</i>	None	None	-	2B.2
California pinefoot	<i>Pityopus californicus</i>	None	None	-	4.2
Howell's montia	<i>Montia howellii</i>	None	None	-	2B.2
pink sand-verbena	<i>Abronia umbellata</i> var. <i>breviflora</i>	None	None	-	1B.1
Wolf's evening-primrose	<i>Oenothera wolfii</i>	None	None	-	1B.1
heart-leaved twayblade	<i>Listera cordata</i>	None	None	-	4.2
Humboldt Bay owl's-clover	<i>Castilleja ambigua</i> var. <i>humboldtiensis</i>	None	None	-	1B.2
Oregon coast paintbrush	<i>Castilleja litoralis</i>	None	None	-	2B.2
Point Reyes salty bird's-beak	<i>Chloropyron maritimum</i> ssp. <i>palustre</i>	None	None	-	1B.2
round-headed Chinese-houses	<i>Collinsia corymbosa</i>	None	None	-	1B.2
nodding semaphore grass	<i>Pleuropogon refractus</i>	None	None	-	4.2
dwarf alkali grass	<i>Puccinellia pumila</i>	None	None	-	2B.2
Pacific gilia	<i>Gilia capitata</i> ssp. <i>pacifica</i>	None	None	-	1B.2
dark-eyed gilia	<i>Gilia millefoliata</i>	None	None	-	1B.2
Pacific golden saxifrage	<i>Chrysosplenium glechomifolium</i>	None	None	-	4.3
leafy-stemmed mitrewort	<i>Mitellastra caulescens</i>	None	None	-	4.2
alpine marsh violet	<i>Viola palustris</i>	None	None	-	2B.2
HABITATS					
Coastal Terrace Prairie	Coastal Terrace Prairie	None	None	-	-
Northern Coastal Salt Marsh	Northern Coastal Salt Marsh	None	None	-	-
Northern Foredune Grassland	Northern Foredune Grassland	None	None	-	-
Sitka Spruce Forest	Sitka Spruce Forest	None	None	-	-

State: FP Fully protected (legally protected), SC Candidate: (T)hreatened or (E)ndangered, SE Endangered (legally protected), SSC Species of special concern (no formal protection other than CEQA consideration), ST Threatened (legally protected), SD Delisted, WL Watch List. Federal: FE Endangered (legally protected), FT Threatened (legally protected), FP Proposed: (T)hreatened or (E)ndangered, FD Delisted. For plant species : CRPR 1B = rare, threatened, or endangered in CA and elsewhere; CRPR 2B = rare, threatened, or endangered in CA, but more common elsewhere; CRPR 3 = plants about which more information is needed; a review list; CRPR 4 = of limited distribution or infrequent throughout a broader area in California. Ranks at each level also include a threat rank and are determined as follows: 0.1-Seriously threatened in California; 0.2-Moderately threatened in California; 0.3-Not very threatened in California

The above CNDDDB species with special status that have been determined to have habitat within the project vicinity are discussed in Table 4, below.

In total, there are 15 special status species from the CNDDDB list that are associated with the marine and estuary habitats of Humboldt Bay (Table 1). Because there are no watercourses on the parcel connecting it to the bay, the following species will not be impacted either directly or indirectly by this project, and therefore are removed from further analysis: California brown pelican (*Pelecanus occidentalis californicus*), double-crested cormorant (*Phalacrocorax auritus*), southern sea otter (*Enhydra lutris nereis*), white sturgeon (*Acipenser transmontanus*), green sturgeon (*Acipenser medirostris*), eulachon (*Thaleichthys pacificus*), Pacific lamprey (*Entosphenus tridentatus*), tidewater goby (*Eucyclogobius newberryi*), longfin smelt (*Spirinchus thaleichthyus*), western brook lamprey (*Lampetra richardsoni*), coast cutthroat trout (*Oncorhynchus clarkii clarkii*), coho salmon (*O. kisutch* pop. 2), steelhead (*O. mykiss irideus* pop. 16), summer-run steelhead (*O. mykiss irideus* pop. 36), and chinook salmon (*O. tshawytscha* pop.17).

A CNDDDB database search for all special status species within a 1-mile radius of the project revealed records for species associated with Freshwater Slough, originating southeast of the parcel and flowing northwest towards Humboldt Bay (Figure 2). To the north and east were records for tidewater goby (State Endangered) and coast cutthroat trout (Species of Special Concern); northern red-legged frog (Species of Special Concern) had records in areas adjacent to Freshwater Slough; and osprey (Watch List) southeast of the parcel (Figure 3). There are no watercourses on the parcel connecting to the habitats these species utilize, therefore no project impacts are expected.

The survey protocol (USFWS Revised 2012) for northern spotted owl (NSO) Activity Centers (ACs) in coastal habitat (USFWS 2011) requires a 0.7-mile habitat analysis buffer for determining potential project effects. The northern spotted owl is a State and Federal Threatened species. The nearest AC (HUM0576) is approximately 1 mile south of the parcel, in appropriate forested habitat (Figure 4). Recent NSO data for this AC is displayed in Table 2. Although the most recent surveys at these ACs did not detect NSO presence, they are still considered occupied as long as habitat remains.

Table 2. NSO Activity Center in the vicinity of APN 403-081-023

NSO Activity Center	CNDDDB Reported Positive Data	CNDDDB Reported Negative Data	Approximate Distance to Nearest Project Site (miles)
HUM0576	<p>Single owl detections: 1992, 2013-2016</p> <p>Non-nesting pair: 1993, 1995, 1997, 1998, 2000, 2001, 2004, 2005, 2009, 2011, 2012</p> <p>Nesting pair with young: 1994, 1996, 1999, 2002, 2003, 2006-2008, 2010</p>	2018-2020	1.0
HUM1028	<p>Non-nesting pair: 2011-2012</p> <p>Nesting pair with young: 2008</p>	2006, 2007, 2009, 2010, 2013-2020	1.2

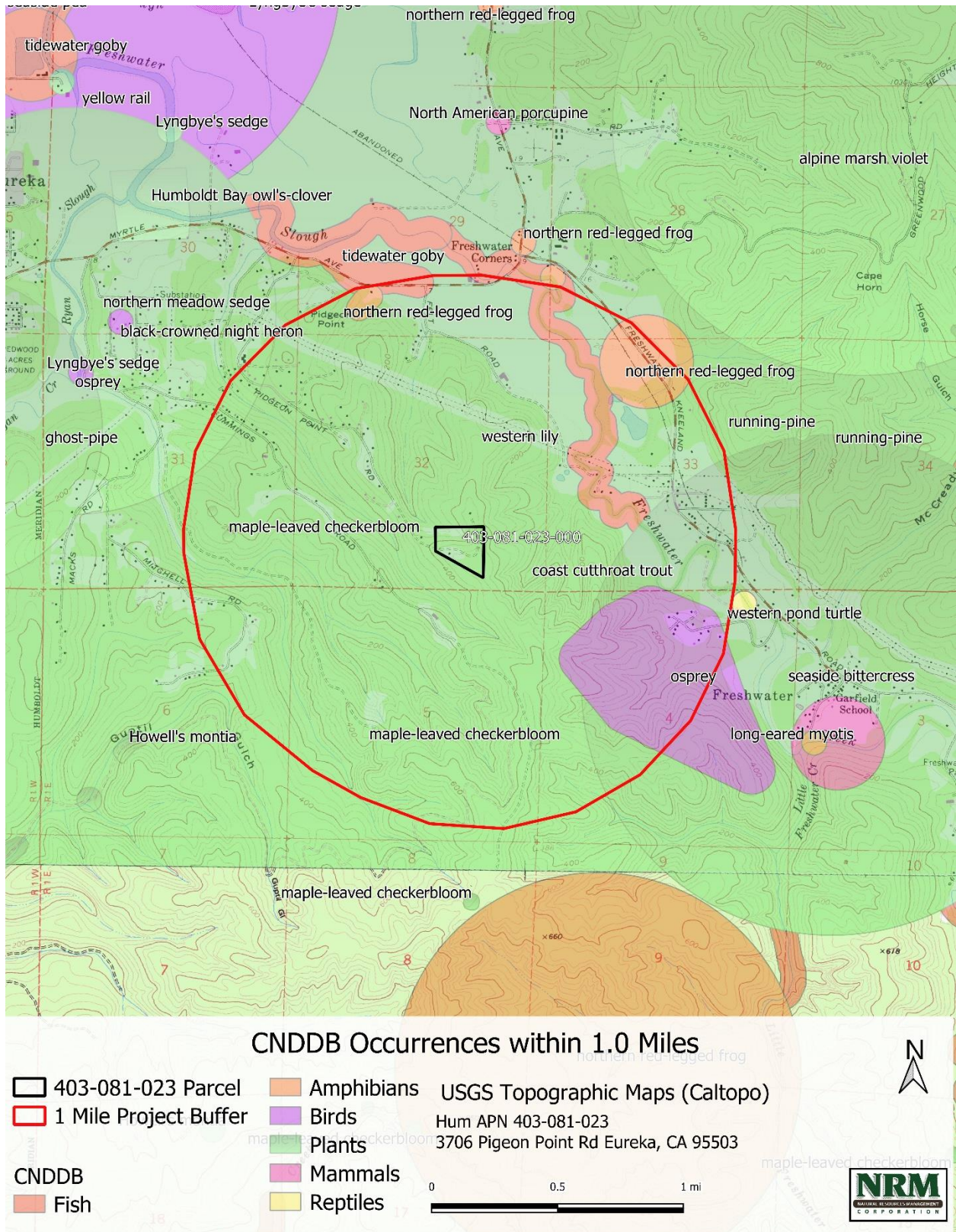


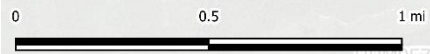
Figure 3. CNBBD species within 1 mile of APN 403-081-023



0.7 Mile Northern Spotted Owl (NSO) Habitat Retention Buffer



403-081-023 Parcel
 0.7 Mile Buffer
 ◆ NSO Activity Center
 Google Satellite



Hum APN 403-081-023
3706 Pigeon Point Rd Eureka, CA 95503



Figure 4. NSO Activity Centers within a 0.7-mile radius of APN 403-081-023

Field Surveys

Botanical

NRM Botanist Jenell Jackson visited the site on July 20th, 2022 to perform early season botanical surveys and to assess the site for potential wetlands.

Jenell Jackson has an M.S. in Biology from Humboldt State University and has eight years of experience surveying vegetation and rare plants in California, including four years' experience on the North Coast.

This survey was floristic in nature, covered the Study Area (project footprint plus buffer) comprehensively, and followed the 2018 California Department of Fish and Wildlife (CDFW) Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities (CDFW 2018). The timing of the survey was such as to capture the bloom window of the target species for those species with potential to occur at the site elevation and within habitat and soil types present. All species encountered can be found in Appendix B.

Within the Study Area, vegetation types were assessed according to the conventions of A Manual of California Vegetation, Online Edition (CNPS 2022b). CDFW's *California Natural Communities* list (CDFW 2022a) was referenced to determine if Sensitive Communities were included in the vegetation alliances and associations found on-site.

Wetland

On June 20th, 2022, Parcel #4 (not slated for development) was investigated as a potential wetland by botanist and wetland specialist Jenell Jackson. One plot was dug to document soil, vegetation, and hydrology and the perimeter of the potential wetland was mapped using an Arrow Gold 100 GPS unit. No further wetland investigation was done.

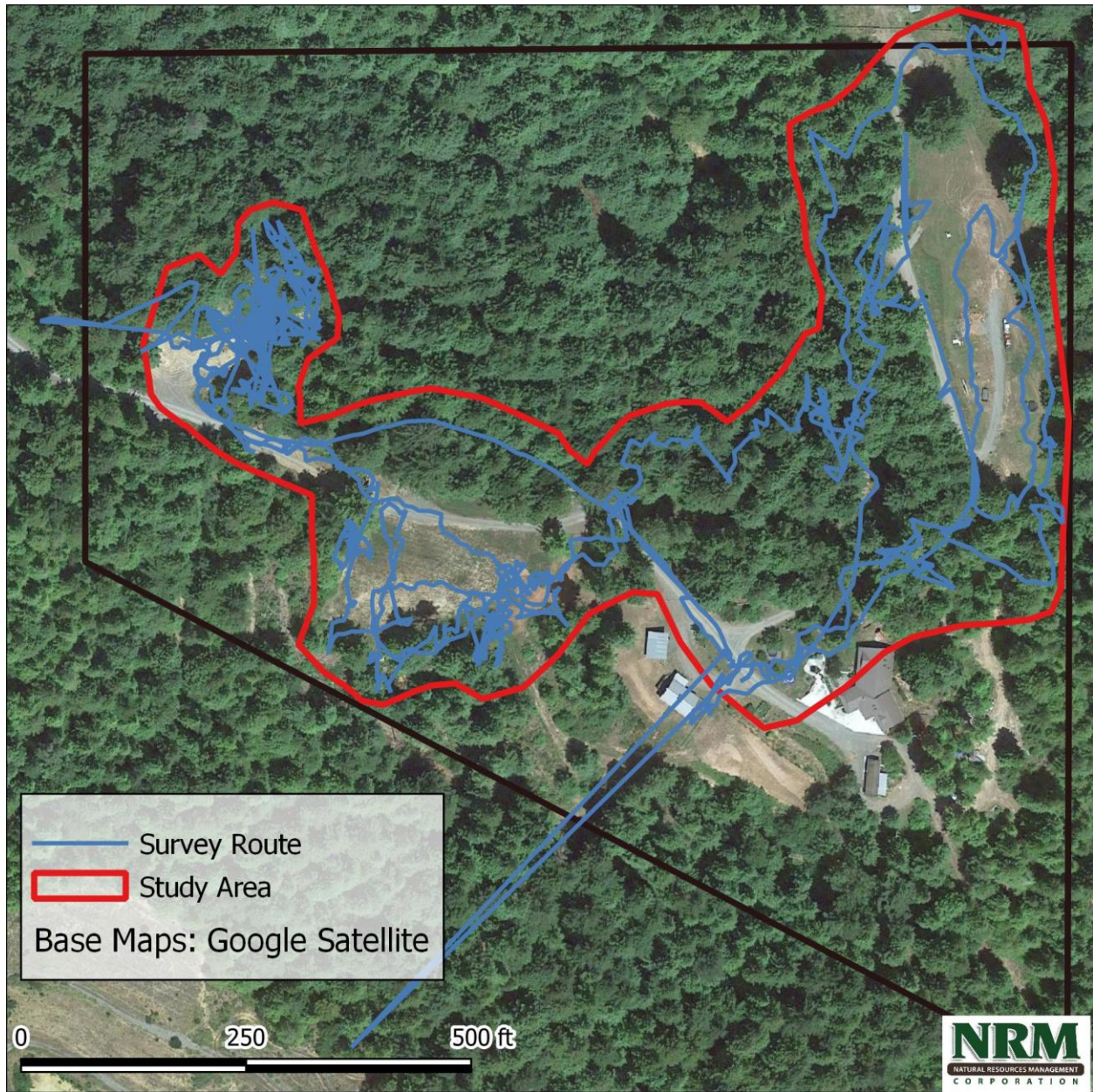


Figure 5. Botanical Survey Route

Reference Populations

The following reference populations were visited preceding surveys:

Howell’s Montia (*Montia howellii*): Korbels Quad, at the logger’s palace; 150 ft elevation; visited 2022-03-09, 52 individuals, approximately 60% of individuals in bud/flower.

Coast Fawn Lily (*Erythronium revolutum*): Blue Lake Quad, on Stover Rd; elevation ~700 ft; visited 2022-03-12. Population of 24 plants 25% were in bloom/bud and the remaining 75% were vegetative.

Coast Fawn Lily (*Erythronium revolutum*): Lord Ellis Summit Quad, on Chezem Rd; elevation 800 ft; visited 2022-03-25. %5 bloom, 50% bud

Seaside bittercress (*Cardamine angulata*): Orick Quad, Lost Man's creek; 300 ft elevation; visited 2022-03-25. Sprawling population of approximately 50% in bloom.

Siskiyou checkerbloom (*Sidalcea malviflora ssp. patula*): Capetown Quad, on Mattole Rd; elevation 1300 ft; visited 2022-04-07; 19 individuals observed, 26% of which were flowering and the rest were still vegetative.

Bald Mountain Milk Vetch (*Astragalus umbraticus*): Showers Mtn Quad, on Stapp Rd; ~3400 ft elevation; visited 2022-05-03; approximately 600 individuals & on 2022-07-13; of the 600 individuals 80% had fruited and 20% were still in flower.

Pacific gilia (*Gilia capitata ssp. pacifica*): Larabee Buttes Quad, in Larabee Valley; elevation ~2400 ft; visited 2022-06-03. Population of over 4 individuals, 50% in bud.

Bolander's silene (*Silene bolanderi*): Larabee Buttes Quad, in Larabee Valley; elevation ~2400 ft; visited 2022-06-03; 12 individuals, 92% of which were in flower.

Seacoast Ragwort (*Packera bolanderi var. bolanderi*): Red Crest Quad, along HWY 36, less than 100 yards west of entrance to Grizzly Creek campground; Elevation ~400 ft. Visited 2022-06-08; 3 individuals observed, 100% in bloom.

Rein orchid (*Piperia candida*): Harris Quad, on private land, elevation ~2000 ft, visited 2022-06-26; 4 individuals, 1 in flower.

Redwood lily (*Lilium rubescens*): On Kneeland Rd, elevation ~2000 ft, visited 2022-07-13; 1 individual in flower

Kellogg's Lily (*Lilium kelloggii*): On Kneeland Rd, elevation ~2100 ft, visited 2022-07-13; approximately 100 individuals alongside Kneeland Rd for roughly 1 mile, 50% in flower, 10% in bud.

IV. Results and Discussion

Botanical

No Special Status Plant species were observed at the time of the site visit. However, areas on Parcel #4 (not slated for development at this time), are highly compacted, wetland habitat with potential for Special Status Plant, Howell's montia (*Montia howellii*) (CRPR 2B.2), which is not detectable in a late season survey. Plans for any future development of Parcel #4 should include conducting a seasonally appropriate survey for Howell's montia.

Table 3. Botanical Survey Results

Scientific Name	Common Name	CRPR	GRank	SRank	CESA	FESA	Blooming Period	Habitat	Micro Habitat	Elevation Low (ft)	Elevation High (ft)	Habitat Present?	Species Detected?
<i>Abronia umbellata</i> var. <i>breviflora</i>	pink sand-verbena	1B.1	G4G5T2	S2	None	None	Jun-Oct	Coastal dunes		0	35	No- coastal dune habitat not present	
<i>Angelica lucida</i>	sea-watch	4.2	G5	S3	None	None	Apr-Sep	Coastal bluff scrub, Coastal dunes, Coastal scrub, Marshes and swamps		0	490	No- coastal dune, coastal scrub or marshes or swamps	
<i>Astragalus pycnostachyus</i> var. <i>pycnostachyus</i>	coastal marsh milk-vetch	1B.2	G2T2	S2	None	None	(Apr)Jun-Oct	Coastal dunes, Coastal scrub, Marshes and swamps		0	100	No- coastal dune, coastal scrub or marshes or swamps	
<i>Astragalus rattanii</i> var. <i>rattanii</i>	Rattan's milk-vetch	4.3	G4T4	S4	None	None	Apr-Jul	Chaparral, Cismontane woodland, Lower montane coniferous forest	Gravelly, Streambanks	100	2705	No- area lacking chaparral and cismontane woodland	
<i>Cardamine angulata</i>	seaside bittercress	2B.2	G4G5	S3	None	None	(Jan)Mar-Jul	Lower montane coniferous forest, North Coast coniferous forest	Streambanks	50	3000	No	Project areas lack well drained soils and periods with adequate inundation
<i>Carex arcta</i>	northern clustered sedge	2B.2	G5	S1	None	None	Jun-Sep	Bogs and fens, North Coast coniferous forest		195	4595	No	Project areas lack well drained soils and periods with

														adequate inundation
<i>Carex leptalea</i>	bristle-stalked sedge	2B.2	G5	S1	None	None	Mar-Jul	Bogs and fens, Marshes and swamps, Meadows and seeps		0	2295	No bog, fen, marsh or swamp habitat		
<i>Carex lyngbyei</i>	Lyngbye's sedge	2B.2	G5	S3	None	None	Apr-Aug	Marshes and swamps		0	35	No marsh and swamp habitat		
<i>Carex praticola</i>	northern meadow sedge	2B.2	G5	S2	None	None	May-Jul	Meadows and seeps		0	10500	No meadows and seeps		
<i>Castilleja ambigua var. humboldtiensis</i>	Humboldt Bay owl's-clover	1B.2	G4T2	S2	None	None	Apr-Aug	Marshes and swamps		0	10	No marsh and swamp habitat		
<i>Castilleja litoralis</i>	Oregon coast paintbrush	2B.2	G3	S3	None	None	Jun	Coastal bluff scrub, Coastal dunes, Coastal scrub	Sandy	50	330	No- coastal dune, coastal scrub or marshes or swamps		
<i>Chloropyron maritimum ssp. palustre</i>	Point Reyes salty bird's-beak	1B.2	G4?T2	S2	None	None	Jun-Oct	Marshes and swamps		0	35	No marsh and swamp habitat		
<i>Chrysosplenium glechomifolium</i>	Pacific golden saxifrage	4.3	G5?	S3	None	None	Feb-Jun	North Coast coniferous forest, Riparian forest	Roadsides (sometimes), Seeps (sometimes), Streambanks	35	720	No	Project areas lack well drained soils and periods with adequate inundation	
<i>Collinsia corymbosa</i>	round-headed Chinese-houses	1B.2	G1	S1	None	None	Apr-Jun	Coastal dunes		0	65	No- coastal dune habitat present		
<i>Coptis laciniata</i>	Oregon goldthread	4.2	G4?	S3?	None	None	(Feb)Mar-May(Sep-Nov)	Meadows and seeps, North Coast coniferous forest	Mesic	0	3280	No	Project areas lack well drained soils and periods with adequate inundation	

<i>Eleocharis parvula</i>	small spikerush	4.3	G5	S3	None	None	(Apr)Jun-Aug(Sep)	Marshes and swamps		5	9910	No marsh and swamp habitat	
<i>Epilobium septentrionale</i>	Humboldt County fuchsia	4.3	G4	S4	None	None	Jul-Sep	Broadleafed upland forest, North Coast coniferous forest	Rocky (sometimes), Sandy (sometimes)	150	5905	No-lacking rocky areas	
<i>Erysimum menziesii</i>	Menzies' wallflower	1B.1	G1	S1	CE	FE	Mar-Sep	Coastal dunes		0	115	No- coastal dune habitat	
<i>Erythronium oregonum</i>	giant fawn lily	2B.2	G5	S2	None	None	Mar-Jun(Jul)	Cismontane woodland, Meadows and seeps	Openings, Rocky, Serpentinite (sometimes)	330	3775	No- lacking rocky outcroppings and deciduous canopy	
<i>Erythronium revolutum</i>	coast fawn lily	2B.2	G4G5	S3	None	None	Mar-Jul(Aug)	Bogs and fens, Broadleafed upland forest, North Coast coniferous forest	Mesic, Streambanks	0	5250	No- lacking rocky outcroppings and deciduous canopy	
<i>Fissidens pauperculus</i>	minute pocket moss	1B.2	G3?	S2	None	None		North Coast coniferous forest		35	3360	Yes-marginal	Wet areas near roadcuts surveyed intensively w/o detection. Other inundated areas outside of project scope
<i>Fritillaria purdyi</i>	Purdy's fritillary	4.3	G4	S4	None	None	Mar-Jun	Chaparral, Cismontane woodland,	Serpentinite (usually)	575	7400	No- outside elevation range	

								Lower montane coniferous forest					
<i>Gilia capitata ssp. pacifica</i>	Pacific gilia	1B.2	G5T3	S2	None	None	Apr-Aug	Chaparral, Coastal bluff scrub, Coastal prairie, Valley and foothill grassland		15	5465	Yes	No-grasslands surveyed intensively w/o detection
<i>Gilia millefoliata</i>	dark-eyed gilia	1B.2	G2	S2	None	None	Apr-Jul	Coastal dunes		5	100	No- coastal dune habitat	
<i>Glehnia littoralis ssp. leiocarpa</i>	American glehnia	4.2	G5T5	S2S3	None	None	May-Aug	Coastal dunes		0	65	No- coastal dune habitat	
<i>Hemizonia congesta ssp. tracyi</i>	Tracy's tarplant	4.3	G5T4	S4	None	None	(Mar)May-Oct	Coastal prairie, Lower montane coniferous forest, North Coast coniferous forest	Openings, Serpentinite (sometimes)	395	3935	Yes-marginal	Herbaceous flats are dominated by non-natives, these areas surveyed intensively w/o detection
<i>Hesperevax sparsiflora var. brevifolia</i>	short-leaved evax	1B.2	G4T3	S3	None	None	Mar-Jun	Coastal bluff scrub, Coastal dunes, Coastal prairie		0	705	No- coastal dune, coastal scrub or marshes or swamps	
<i>Hosackia gracilis</i>	harlequin lotus	4.2	G3G4	S3	None	None	Mar-Jul	Broadleafed upland forest, Cismontane woodland, Closed-cone coniferous forest,	Roadsides	0	2295	Yes-marginal	Herbaceous flats are dominated by non-natives, these areas surveyed intensively

								Coastal bluff scrub, Coastal prairie, Coastal scrub, Marshes and swamps, Meadows and seeps, North Coast coniferous forest, Valley and foothill grassland						w/o detection
<i>Iliamna latibracteata</i>	California globe mallow	1B.2	G2G3	S2	None	None	Jun-Aug	Chaparral, Lower montane coniferous forest, North Coast coniferous forest, Riparian scrub	Burned areas (often)	195	6560	No- area lacking in chaparral, riparian scrub or recently burned areas		
<i>Lasthenia californica ssp. macrantha</i>	perennial goldfields	1B.2	G3T2	S2	None	None	Jan-Nov	Coastal bluff scrub, Coastal dunes, Coastal scrub		15	1705	No- coastal dune, coastal scrub or marshes or swamps		
<i>Lathyrus glandulosus</i>	sticky pea	4.3	G3	S3	None	None	Apr-Jun	Cismontane woodland		985	2625	No- outside of elevation range		
<i>Lathyrus japonicus</i>	seaside pea	2B.1	G5	S2	None	None	May-Aug	Coastal dunes		5	100	No- coastal dune habitat		
<i>Lathyrus palustris</i>	marsh pea	2B.2	G5	S2	None	None	Mar-Aug	Bogs and fens, Coastal prairie, Coastal scrub, Lower montane	Mesic	5	330	No- area lacks bogs, fens, coastal prairie and/or marsh or		

								coniferous forest, Marshes and swamps, North Coast coniferous forest					swamp habitat	
<i>Layia carnosa</i>	beach layia	1B.1	G2	S2	CE	FT	Mar-Jul	Coastal dunes, Coastal scrub		0	195		No- coastal dune, coastal scrub habitat	
<i>Lilium kelloggii</i>	Kellogg's lily	4.3	G3	S3	None	None	May-Aug	Lower montane coniferous forest, North Coast coniferous forest	Openings, Roadsides	10	4265		Yes	Forested areas adjacent roadcuts and project areas surveyed intensively w/o detection
<i>Lilium occidentale</i>	western lily	1B.1	G1G2	S1	CE	FE	Jun-Jul	Bogs and fens, Coastal bluff scrub, Coastal prairie, Coastal scrub, Marshes and swamps, North Coast coniferous forest		5	605		Yes	Forested areas adjacent roadcuts and project areas surveyed intensively w/o detection
<i>Lilium rubescens</i>	redwood lily	4.2	G3	S3	None	None	Apr-Aug(Sep)	Broadleaved upland forest, Chaparral, Lower montane coniferous forest, North Coast	Roadsides (sometimes), Serpentine (sometimes)	100	6265		Yes	Forested areas adjacent roadcuts and project areas surveyed intensively w/o detection

								coniferous forest, Upper montane coniferous forest					
<i>Listera cordata</i>	heart-leaved twayblade	4.2	G5	S4	None	None	Feb-Jul	Bogs and fens, Lower montane coniferous forest, North Coast coniferous forest		15	4495	Yes	Forested areas adjacent roadcuts and project areas surveyed intensively w/o detection
<i>Lycopodium clavatum</i>	running-pine	4.1	G5	S3	None	None	Jun-Aug(Sep)	Lower montane coniferous forest, Marshes and swamps, North Coast coniferous forest	Edges (often), Openings, Roadsides	150	4020	No	Project areas lack well drained soils and periods with adequate inundation
<i>Mitellastrca caulescens</i>	leafy-stemmed mitrewort	4.2	G5	S4	None	None	(Mar)Apr-Oct	Broadleafed upland forest, Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest	Mesic, Roadsides (sometimes)	15	5580	No	Project areas lack well drained soils and periods with adequate inundation
<i>Monotropa uniflora</i>	ghost-pipe	2B.2	G5	S2	None	None	Jun-Aug(Sep)	Broadleafed upland forest, North Coast coniferous forest		35	1805	Yes	Forested areas adjacent roadcuts and project areas surveyed intensively

													w/o detection
<i>Montia howellii</i>	Howell's montia	2B.2	G3G4	S2	None	None	(Feb)Mar-May	Meadows and seeps, North Coast coniferous forest, Vernal pools	Roadsides (sometimes), Vernal Mesic	0	2740	Yes	Potential habitat for this species is located on Parcel #4, which is not slated for development at this time
<i>Noccaea fendleri ssp. californica</i>	Kneeland Prairie pennycress	1B.1	G5?T1	S1	None	FE	May-Jun	Coastal prairie		2495	2675	No- coastal prairie habitat	
<i>Oenothera wolfii</i>	Wolf's evening-primrose	1B.1	G2	S1	None	None	May-Oct	Coastal bluff scrub, Coastal dunes, Coastal prairie, Lower montane coniferous forest	Mesic (usually), Sandy	10	2625	No- coastal dune, coastal scrub or marshes or swamps	
<i>Packera bolanderi var. bolanderi</i>	seacoast ragwort	2B.2	G4T4	S2S3	None	None	(Jan-Apr)May-Jul(Aug)	Coastal scrub, North Coast coniferous forest	Roadsides (sometimes)	100	2135	Yes	Forested areas adjacent roadcuts and project areas surveyed intensively w/o detection
<i>Piperia candida</i>	white-flowered rein orchid	1B.2	G3?	S3	None	None	(Mar)May-Sep	Broadleaved upland forest, Lower montane coniferous forest, North Coast	Serpentinite (sometimes)	100	4300	Yes	Forested areas are dominated by redwood, lacking in rocky soils and broadleaved

								coniferous forest					understory trees
<i>Pityopus californicus</i>	California pinefoot	4.2	G4G5	S4	None	None	(Mar-Apr)May-Aug	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest	Mesic	50	7300	No	Forested areas are dominated by redwood, lacking in broadleafed understory trees
<i>Pleuropogon refractus</i>	nodding semaphore grass	4.2	G4	S4	None	None	(Mar)Apr-Aug	Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest, Riparian forest	Mesic	0	5250	No	Project areas lack well drained soils and periods with adequate inundation
<i>Ribes laxiflorum</i>	trailing black currant	4.3	G5?	S3	None	None	Mar-Jul(Aug)	North Coast coniferous forest	Roadsides (sometimes)	15	4575	No	Project areas lack well drained soils and periods with adequate inundation
<i>Sidalcea malachroides</i>	maple-leaved checkerbloom	4.2	G3	S3	None	None	(Mar)Apr-Aug	Broadleafed upland forest, Coastal prairie, Coastal scrub, North Coast coniferous	Disturbed areas (often)	0	2395	Yes	No- Forest edges surveyed intensively w/o detection

								forest, Riparian woodland					
<i>Sidalcea malviflora ssp. patula</i>	Siskiyou checkerbloom	1B.2	G5T2	S2	None	None	(Mar)May-Aug	Coastal bluff scrub, Coastal prairie, North Coast coniferous forest	Roadsides (often)	50	4035	Yes	No- Forest edges surveyed intensively w/o detection
<i>Sidalcea oregana ssp. eximia</i>	coast checkerbloom	1B.2	G5T1	S1	None	None	Jun-Aug	Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest		15	4395	Yes	No- Forest edges surveyed intensively w/o detection
<i>Silene scouleri ssp. scouleri</i>	Scouler's catchfly	2B.2	G5T4T5	S2S3	None	None	(Mar-May)Jun-Aug(Sep)	Coastal bluff scrub, Coastal prairie, Valley and foothill grassland		0	1970	No- coastal dune or prairie habitat	
<i>Spergularia canadensis var. occidentalis</i>	western sand-spurrey	2B.1	G5T4	S1	None	None	Jun-Aug	Marshes and swamps		0	10	No marsh or swamp habitat	
<i>Sulcaria spiralifera</i>	twisted horsehair lichen	1B.2	G3G4	S2	None	None		Coastal dunes, North Coast coniferous forest		0	295	No- area lacking in coastal dune forest. Are is too mesic	
<i>Tiarella trifoliata var. trifoliata</i>	trifoliolate laceflower	3.2	G5T5	S2S3	None	None	(May)Jun-Aug	Lower montane coniferous forest, North Coast coniferous forest	Edges, Streambanks	560	4920	No- outside elevation range	

<i>Trichodon cylindricus</i>	cylindrical trichodon	2B.2	G4G5	S2	None	None		Broadleafed upland forest, Meadows and seeps, Upper montane coniferous forest	Roadsides, Sandy	165	6570	No-broadleaf upland forest, meadows, seeps, and upper montane coniferous forest habitat not present	
<i>Usnea longissima</i>	Methuselah's beard lichen	4.2	G4	S4	None	None		Broadleafed upland forest, North Coast coniferous forest		165	4790	Yes	Forested areas surveyed intensively w/o detection
<i>Viola palustris</i>	alpine marsh violet	2B.2	G5	S1S2	None	None	Mar-Aug	Bogs and fens, Coastal scrub		0	490	No- bogs, fens, marshes or swamps	

Potential Wetlands

The three-parameter method identifies a jurisdictional wetland (Waters of the United States) based on the presence of three wetland indicators: hydrophytes (plants adapted to anaerobic conditions resulting from a prolonged inundation with water), hydric soils (reduced soils resulting from a prolonged inundation with water), and wetland hydrology. Per Section 404 of the federal Clean Water Act, USACE is charged with regulating project activities that propose to dredge or fill a wetland resource. The California State Water Resource Control Board relies on the USACE method for identifying jurisdictional Waters of the State, regulated under Section 401 of the federal Clean Water Act and the Porter-Cologne Water Quality Control Act.

The National Wetland Inventory maps streams just outside of the parcel to the north and south west (Figure 6).

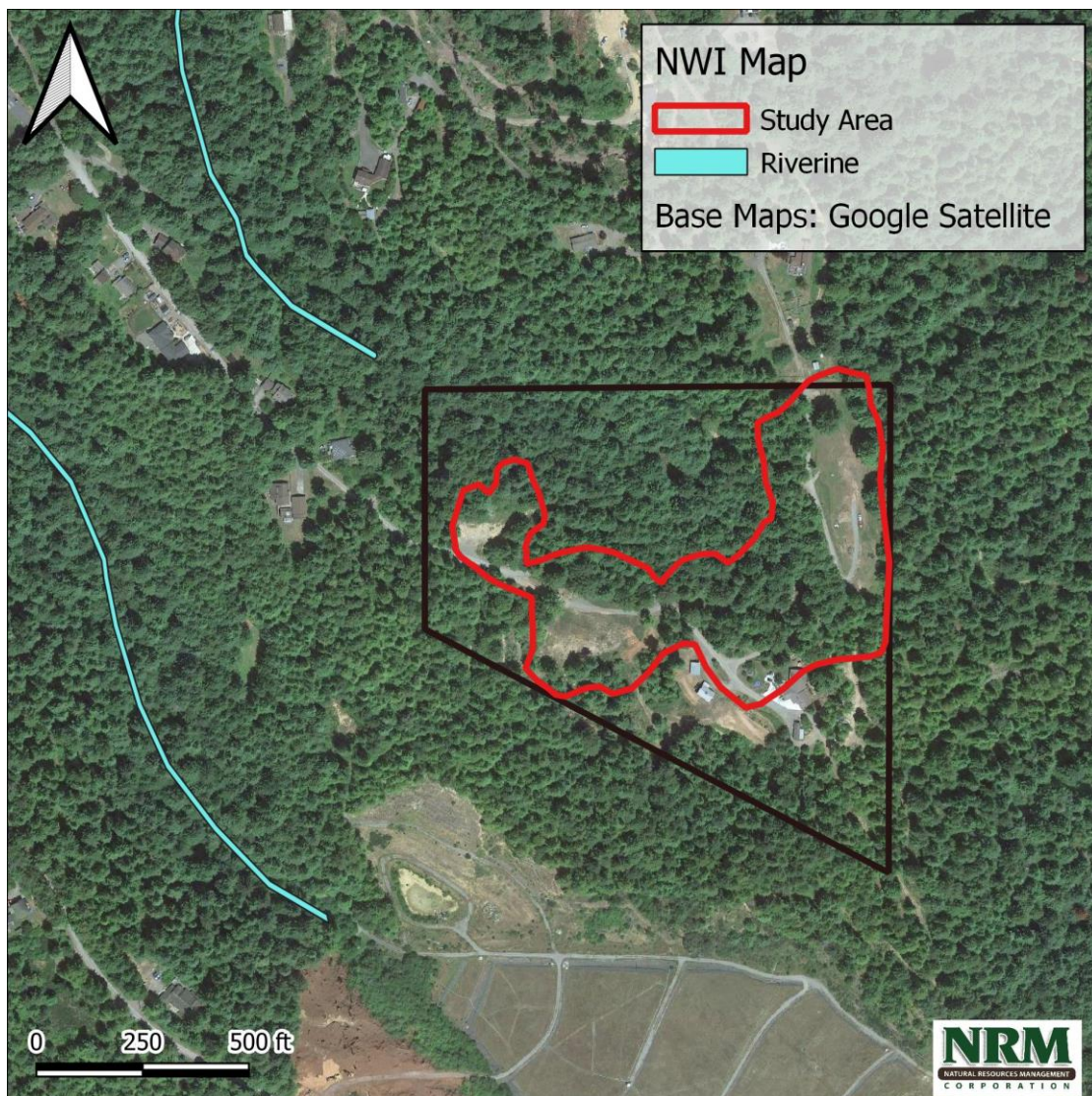


Figure 6. National Wetlands Inventory Map (NWI California, North Shapefile, 2022)

On June 20th, 2022 the lower flat was investigated as a potential wetland by botanist and wetland specialist Jenell Jackson. One plot was dug to document soil, vegetation, and hydrology.

A potential wetland was identified on the lower flat. This area is located on a lightly sloping, compacted flat. Plot 1, located at the center of the wetland, met wetland hydrological indicators Surface Soil Cracks (B6) and Oxidized Rhizospheres along Living Roots (C3) and hydrophytic vegetation Dominance test with pennyroyal (*Mentha pulegium*-OBL), white clover (*Trifolium repens*- FAC) and (*Juncus effusus*- FACW) dominating. Soils were problematic, the upper 8 inches were colored to 10YR 4/1 and had prominent redox concentrations (7.5 YR 5/8 and 5YR 5/8). It is unclear if this redox is relic. Below this is a three-inch layer (8-11 inches) of charred wood and other relic organics, colored to 10YR 3/2 and had concentrations in the matrix coloring to 7.5 YR 6/8 and 5YR 5/8. The lower portion of the profile (11-22 inches) colored to 10YR 5/1 with concentrations in the matrix coloring to 10YR 7/6 and 5YR 5/8. Wetland Data Sheet can be found in Appendix D.

The area was described as the “mud pit” by the owner and is used for recreating with bikes and vehicles. Soils are significantly disturbed and exhibit evidence of inundation; it is unclear if the redox concentrations in the matrix are the result of current or relic anaerobic conditions.

The perimeter of the potential wetland was mapped using an Arrow Gold 100 GPS unit (Figure 7).

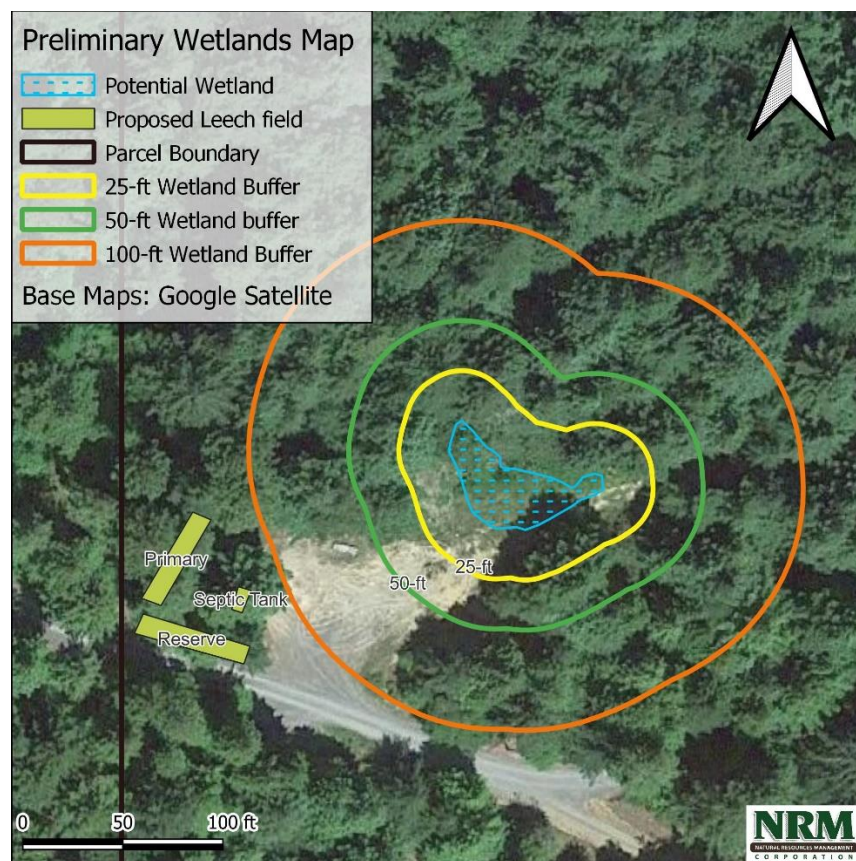


Figure 7. Preliminary Wetlands Map

Wildlife Special Status Species

Habitat Analysis

Below is the species list generated from the CNDDDB query (with the exception of the aforementioned estuary, beach, or marine environment species) and the potential impacts on these species by the proposed project (Table 4). Categories for a species potential to occur, based on available habitat, are defined as Low (little to no habitat present on the parcel), Moderate (some habitat present but not optimal), and High (optimal habitat is present). Mitigation measures have been recommended to reduce potential impacts to wildlife.

Table 4. Special status species, suitable habitat in project area, and potential impacts

Common Name	Listing Status	General Habitat Description	Presence of Suitable Habitat on Parcel?	Potential Occurrence Based on Habitat?	Potentially Impacted by Project?	Comments
BIRDS						
northern spotted owl	FT, ST	Old-growth forests or mixed stands of old-growth and mature trees; occasionally in younger forests with patches of big trees	No	Moderate	Yes	Less than significant impacts expected; nearest AC on industrial timber land approximately 1 mile south of the parcel
short-eared owl	SSC	Widespread winter migrant found primarily in Central Valley, w Sierra Nevada foothills, coastline; found in open grassland, prairie, meadows, wetland	No	Low	No	No impacts expected; no habitat present for this species
bald eagle	SE	Requires large bodies of water or free flowing rivers with abundant fish and adjacent perches; nests near water in large dominant trees	No	Low	No	No impacts expected; this species may forage along coastline
peregrine falcon	FP	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures; winters along coast	No	Low	No	No impacts expected; this species may forage along coastline in winter
osprey	WL	Ocean shore, bays, freshwater lakes, and larger streams. Large nests built in tree-tops within 15 miles of a good fish-producing body of water	No	Low	No	No impacts; this species expected to forage along coastline

Common Name	Listing Status	General Habitat Description	Presence of Suitable Habitat on Parcel?	Potential Occurrence Based on Habitat?	Potentially Impacted by Project?	Comments
Cooper's hawk	WL	Yearlong resident that frequents landscapes where wooded areas occur in patches, using edges with snags for perching; dense stands with moderate crown-depths and near water used most frequently for nesting	Yes	Moderate	Yes	Less than significant impacts; habitat is not optimal nesting habitat, but foraging in vicinity of parcel expected
sharp-shinned hawk	WL	Fairly common winter resident, prefers but not restricted to riparian habitats; requires north facing slopes with plucking perches.	Yes	Low	No	No impacts expected; suboptimal foraging due to lack of riparian habitat; present only in winter
northern harrier	SCC	Nests on the ground among herbaceous vegetation, such as grasses or cattails; forages in tall grasslands, agricultural fields, and marshes. Breeding range encompasses much of lowland California; winter range expands to include the remaining lowland areas.	No	Low	No	No impacts expected; no habitat present for this species
white-tailed kite	FP	Forages in grasslands, meadows, or marshes. Nests in woodlands and mature riparian habitat types.	No	Low	No	No impacts expected; no habitat present for this species

Common Name	Listing Status	General Habitat Description	Presence of Suitable Habitat on Parcel?	Potential Occurrence Based on Habitat?	Potentially Impacted by Project?	Comments
merlin	WL	Uncommon winter migrant; frequents coastlines, open grasslands, wetlands, forest edges below 3900 ft; dense tree stands close to water are needed for cover	No	Low	No	No impacts expected; no habitat present for this species
marbled murrelet	FT, SE	Occurs year round in marine subtidal and pelagic habitats; nests inland in tall trees in dense, mature redwood and Douglas-fir forests	No	Low	No	No impacts expected; no habitat present for this species
mountain plover	SSC	Found in short grass and plowed fields during winter; does not nest in California	No	Low	No	No impacts expected; no habitat present for this species
bank swallow	ST	Found primarily in riparian and other lowland habitats; restricted to lacustrine, riparian, and coastal areas with vertical banks, bluffs, cliffs to dig nest holes	No	Low	No	No impacts expected; no habitat present for this species
Vaux's swift	SSC	Summer resident that nests in large hollow trees; prefers redwood and Douglas-fir habitats; occasionally roosts in chimneys and buildings	No	Low	No	No impacts expected; no old growth habitat present for this species

Common Name	Listing Status	General Habitat Description	Presence of Suitable Habitat on Parcel?	Potential Occurrence Based on Habitat?	Potentially Impacted by Project?	Comments
black-capped chickadee	WL	Non-migratory songbird of deciduous and mixed forests; most typically nest in riparian habitats	No	Low	No	No impacts expected; no optimal habitat present for this species
Bryant's savannah sparrow	SSC	Breeds along entire California coast, restricted to saline emergent wetlands and moist grasslands within the fog belt	No	Low	No	No impacts expected; no habitat present for this species
olive-sided flycatcher	SSC	Uncommon summer resident that prefers nesting in mixed conifer, Douglas-fir, redwood habitats; requires large tall trees for nesting, singing, hunting	Yes	Moderate	Yes	Less than significant impacts expected if management recommendations adhered to
willow flycatcher	SE	Found within mountain meadow and riverine riparian habitats. Nests in vegetation clumps near edges of streams. Most numerous where extensive thickets of low, dense willows edge on wet meadows, ponds, or backwaters.	No	Low	No	No impacts expected; no habitat present for this species

Common Name	Listing Status	General Habitat Description	Presence of Suitable Habitat on Parcel?	Potential Occurrence Based on Habitat?	Potentially Impacted by Project?	Comments
MAMMALS						
Humboldt marten	FT, SE, SSC	Uncommon resident of high canopy closure, dense forested habitats with large trees and snags for reproduction	No	Low	No	No impacts expected; no old growth habitat present for this species
fisher	SSC	Intermediate to large-tree stages of coniferous forests and deciduous-riparian areas with high percent canopy closure	Yes	Moderate	Yes	Less than significant impacts if management recommendations adhered to
white-footed vole	SSC	In California, only known from Humboldt and Del Norte counties; a scarce resident of humid coastal forests and riparian areas	No	Low	No	No impacts expected; suboptimal habitat present for this species
Sonoma tree vole	SSC	More or less restricted to fog belt where it specializes on needles of Douglas-fir and grand fir; nests constructed in tall trees of fir needles; spends most of life above ground	Yes	Moderate	Yes	Less than significant impacts if management recommendations adhered to

Common Name	Listing Status	General Habitat Description	Presence of Suitable Habitat on Parcel?	Potential Occurrence Based on Habitat?	Potentially Impacted by Project?	Comments
Townsend's big-eared bat	SSC	Primarily roosts in caves and cave-like roosting habitat; reported to use buildings in the northern and coastal portions of range. Very sensitive to disturbances. In California, occurs in all habitats from the Coast Range to Sierra Nevada foothills.	No	Low	No	No impacts expected; no old growth roosting habitat available
HERPETOFAUNA						
western pond turtle	SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams, and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation	No	Low	No	No impacts expected; no habitat present for this species
Pacific tailed frog	SSC	Occurs in cold, permanent streams in conifer-dominated habitats, more frequent in mature or late-successional stands	No	Low	No	No impacts expected; no habitat present for this species
northern red-legged frog	SSC	Humid forests, woodlands, grasslands, and stream sides in northwestern California, usually near dense riparian cover. Highly aquatic.	No	Low	No	No impacts expected; no habitat present for this species

Common Name	Listing Status	General Habitat Description	Presence of Suitable Habitat on Parcel?	Potential Occurrence Based on Habitat?	Potentially Impacted by Project?	Comments
foothill yellow-legged frog	SE, SSC	Partly-shaded, permanent shallow streams and riffles with a rocky substrate in a variety of habitats. Need at least some cobble-sized substrate for egg-laying	No	Low	No	No impacts expected; no habitat present for this species
southern torrent salamander	SSC	Found in cold, well-shaded, permanent streams seepages, springs in redwood, Douglas fir	No	Low	No	No impacts expected; no habitat present for this species

CODES:

State: FP Fully protected (legally protected), SC Candidate: (T)hreatened or (E)ndangered, SE Endangered (legally protected), SSC Species of special concern (no formal protection other than CEQA consideration), ST Threatened (legally protected).
 Federal: FE Endangered (legally protected), FT Threatened (legally protected), FP Proposed: (T)hreatened or (E)ndangered

Discussion of Potential Impacts

The potential for impacts from the proposed removal of forest habitat to subdivide the existing parcel into four, equally-sized parcels, include 3 bird species, and 2 mammal species. There is habitat present on the parcel for these species, although not optimal, and impacts are expected to be less than significant if mitigating measures are followed.

northern spotted owl

This is a Federal and State Threatened species. Although the 4 nearest ACs are equal to or greater than a mile south of the parcel, some foraging on the forested portions of the parcel may occur, but not expected due to nearby human presence. There is limited tree removal, which will have less than significant impacts if NSO forage in the area. There have been no surveys reported to the CNDDDB since 2020, when no NSO activity was detected at the two nearest ACs, and a decade since these pairs nested successfully.

Cooper’s hawk

This is a CDFW Watch List species. Some foraging may occur in the general area or on parcel, but no optimal nesting habitat is present. Preconstruction surveys for nesting birds will provide protections for this species, if present.

olive-sided flycatcher

This is a CDFW Species of Special Concern. There is foraging and nesting habitat available for this species, although it is typically more common in inland forested habitats. Preconstruction surveys for nesting birds will provide protections for this species, if present.

fisher

This is a CDFW Species of Special Concern. There are not expected to be old-growth characteristics present for reproduction and resting sites for this species, such as a broken top or cavity in large trees or snags, and large downed logs. Preconstruction surveys for such structures will provide protections for this species, if present.

Sonoma tree vole

This is a CDFW Species of Special Concern. This species is restricted to Douglas-fir habitats, and redwood habitats if some components of Douglas-fir is present, the main food source of this small, arboreal rodent. These same needles are used to construct large nests that can be detected from the ground. Preconstruction surveys for sign of nests will provide protections for this species, if present.

V. Conclusions and Mitigation Measures

Less than significant impacts to wildlife species are expected, however, we recommend the following mitigation measures be incorporated into the project:

- Any additional lighting will be minimal and directed downward to minimize light pollution for nocturnal species, including NSO
- Preconstruction surveys for nesting hawks and songbirds (Cooper's hawk, olive-sided flycatcher) will be required if ground-disturbing activity, vegetation, or tree removal occur during the nesting season (February 1 through September 15)
- Preconstruction surveys for Sonoma tree vole will be required if tree removal occurs during the reproductive season (February through September)
- Preconstruction surveys for fisher denning habitat structures (large live trees or snags with cavities or broken top; large downed logs) are required unless tree removal occurs outside of the denning season (July through September)

Development of the proposed project areas within proposed Parcel #4, which is not currently slated for development, could result in direct impacts to a seasonal wetland and Howell's montia habitat.

In order to avoid direct impacts, we recommend the following mitigation measures.

- If there is any development occurring on Parcel #4, it will require a full USACE Wetland Delineation to investigate the status and size of the potential herbaceous wetland found within the Survey Area.
- If there is any development occurring on Parcel #4, a seasonally appropriate floristic survey of the project area is recommended to determine the presence or absence and potential distribution of Howell's montia (CRPR 2B.2).II.

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Appendix A: Photos



Photo 1. Proposed project area, proposed Parcel #1



Photo 2. Proposed project area, proposed Parcel #3



Photo 3. Hydrophytic vegetation on Parcel #4

Appendix B. Floristic Survey Results

Species Name	Common Name	Lifeform	Status	Family
<i>Lemna sp.</i>	duckweed	Perennial herb	native	ARACEAE
<i>Carduus pycnocephalus</i>	Italian thistle	Annual herb	invasive, non-native	ASTERACEAE
<i>Centaurea cyanus</i>	Batchelor's button	Annual herb	non-native	ASTERACEAE
<i>Cirsium vulgare</i>	Bullthistle	Perennial herb	invasive, non-native	ASTERACEAE
<i>Euchiton gymnocephalus</i>	Creeping cudweed	Perennial herb	non-native	ASTERACEAE
<i>Hypochaeris radicata</i>	Hairy cats ear	Perennial herb	invasive, non-native	ASTERACEAE
<i>Leontodon saxatilis</i>	Hawkbit	Annual herb	non-native	ASTERACEAE
<i>Leucanthemum vulgare</i>	Oxe eye daisy	Perennial herb	invasive, non-native	ASTERACEAE
<i>Alnus rubra</i>	Red alder	Tree, Shrub	native	BETULACEAE
<i>Brassica rapa</i>	Common mustard	Annual herb	invasive, non-native	BRASSICACEAE
<i>Sequoia sempervirens</i>	Coast redwood	Tree	native	CUPRESSACEAE
<i>Cyperus eragrostis</i>	Tall cyperus	Perennial grasslike herb	native	CYPERACEAE
<i>Pteridium aquilinum</i>	Western brackenfern	Fern	native	DENNSTAEDTIACEAE
<i>Polystichum munitum</i>	Western sword fern	Fern	native	DRYOPTERIDACEAE
<i>Gaultheria shallon</i>	Salal	Shrub	native	ERICACEAE
<i>Vaccinium ovatum</i>	Evergreen huckleberry	Shrub	native	ERICACEAE
<i>Vaccinium parvifolium</i>	Red huckleberry	Shrub	native	ERICACEAE
<i>Cytisus scoparius</i>	Scotch broom	Shrub	invasive, non-native	FABACEAE
<i>Lotus corniculatus</i>	Bird's foot trefoil	Perennial herb	invasive, non-native	FABACEAE
<i>Trifolium dubium</i>	Shamrock	Annual herb	non-native	FABACEAE
<i>Trifolium repens</i>	White clover	Perennial herb	non-native	FABACEAE
<i>Vicia sativa ssp. sativa</i>	Common vetch	Annual herb, Vine	non-native	FABACEAE
<i>Vicia tetrasperma</i>	Four seeded vetch	Annual herb	non-native	FABACEAE
<i>Juncus bufonius var. bufonius</i>	Toad rush	Annual grasslike herb	native	JUNCACEAE
<i>Juncus effusus</i>	Common bog rush	Perennial grasslike herb	native	JUNCACEAE

<i>Mentha pulegium</i>	Pennyroyal	Perennial herb	invasive, non-native	LAMIACEAE
<i>Prunella vulgaris var. vulgaris</i>	Self heal	Perennial herb	non-native	LAMIACEAE
<i>Linum bienne</i>	Flax	Annual herb	non-native	LINACEAE
<i>Morella californica</i>	California wax myrtle	Shrub	native	MYRICACEAE
<i>Parentucellia viscosa</i>	Yellow parentucellia	Annual herb	invasive, non-native	OROBANCHACEAE
<i>Digitalis purpurea</i>	Foxglove	Perennial herb	invasive, non-native	PLANTAGINACEAE
<i>Plantago lanceolata</i>	Ribwort	Perennial herb	invasive, non-native	PLANTAGINACEAE
<i>Plantago major</i>	Common plantain	Perennial herb	non-native	PLANTAGINACEAE
<i>Veronica americana</i>	American brooklime	Perennial herb	native	PLANTAGINACEAE
<i>Agrostis capillaris</i>	Colonial bentgrass	Perennial grass	non-native	POACEAE
<i>Anthoxanthum odoratum</i>	Sweet vernal grass	Annual, Perennial grass	invasive, non-native	POACEAE
<i>Cortaderia jubata</i>	Andean pampas grass	Perennial grass	invasive, non-native	POACEAE
<i>Cynosurus echinatus</i>	Dogtail grass	Annual grass	invasive, non-native	POACEAE
<i>Dactylis glomerata</i>	Orchardgrass	Perennial grass	invasive, non-native	POACEAE
<i>Festuca arundinacea</i>	Reed fescue	Perennial grass	invasive, non-native	POACEAE
<i>Festuca bromoides</i>	Brome fescue	Annual grass	non-native	POACEAE
<i>Festuca perennis</i>	Italian rye grass	Annual, Perennial grass	invasive, non-native	POACEAE
<i>Gastridium phleoides</i>	Nit grass	Annual grass	non-native	POACEAE
<i>Holcus lanatus</i>	Common velvetgrass	Perennial grass	invasive, non-native	POACEAE
<i>Ranunculus repens</i>	Crowfoot, creeping buttercup	Perennial herb	invasive, non-native	RANUNCULACEAE
<i>Frangula purshiana ssp. purshiana</i>	Cascara sagrada	Shrub	native	RHAMNACEAE
<i>Aphanes occidentalis</i>	Ladie's mantle	Annual, Perennial herb	native	ROSACEAE
<i>Rubus armeniacus</i>	Himalayan blackberry	Shrub	invasive, non-native	ROSACEAE
<i>Rubus parviflorus</i>	Thimbleberry	Vine, Shrub	native	ROSACEAE
<i>Rubus ursinus</i>	California blackberry	Vine, Shrub	native	ROSACEAE
<i>Athyrium filix-femina</i>	Common ladyfern	Fern	native	WOODSIACEAE

Appendix C. NRCS Soil Report

Appendix D. Wetland Data Sheet