



Biological Resources Assessment

2427 Elizabeth Road (APN: 511-491-021)

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LIST OF ABBEVIATIONS

Army Corps	U.S Army Corps of Engineers
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
ESA	Endangered Species Act
FP	Fully Protected
G	Global Rarity Rank
MBTA	Migratory Bird Treaty Act
S	State Rarity Rank
SMA	Streamside Management Area
SMAWO	Humboldt County Streamside Management Areas and Wetlands Ordinance
SSC	Species of Special Concern
USDA, NRCS	United States Department of Agriculture, Natural Resource Conservation Service
Water Board	State Water Resources Control Board
WL	Watch List

SUMMARY

This report was prepared for 2427 Elizabeth Road (APN: 511-491-021) to provide information on biological resources needed to complete the environmental review of the project. The project includes a Zone Reclassification Petition to allow for subsequent sub-division and new residential development.

The parcel includes an existing residence and shop, open grassy fields, Sitka spruce forest, and riparian habitat along a tributary of Rose Creek.

No special status plants were observed on the parcel. Much of the undeveloped part of the property is Sitka spruce forest, which is considered a sensitive plant community by the California Department of Fish and Wildlife (CDFW). The spruce forest has potential for a special status wildlife including northern spotted owl, fisher, Humboldt mountain beaver, North American porcupine, and northern red-legged frog. A variety of birds listed by CDFW or that are protected by the Migratory Bird Treaty Act (MBTA) could nest in the trees and other woody vegetation on the property. Bats could also roost in trees on the property.

The proposed new undeveloped lot includes a mowed park-like area that has limited wildlife potential except for nesting birds and has enough potential building area to avoid Sitka spruce forest and the Streamside Management Area (SMA). Provided impacts to nesting birds are avoided by conducting any removal of trees or other woody vegetation outside the nesting season or conducting pre-construction nesting bird surveys, the project has a less than significant potential to impact sensitive biological resources.

1. INTRODUCTION

This biological assessment was conducted at 2427 Elizabeth Lane (APN: 511-491-021) to collect information on biological resources required to complete environmental review of the project. This report addresses special status plants, sensitive natural communities, special status wildlife, and aquatic resources.

The project includes a Zone Reclassification Petition to allow for the sub-division of the 14.98-acre parcel to allow for smaller lot sizes and potential additional residential development.

2. DEFINITIONS

2.1. Special Status Plants

Special status plants include those listed as rare, threatened, or endangered under the federal Endangered Species Act (ESA), the California Endangered Species Act (CESA), and those with considered to meet the criteria of rare or endangered under California Environmental Quality Act (CEQA) Guideline §15380 (d). In practice, plants with CRPRs of 1A, 1B, 2A, and 2B are considered to meet the criteria. Plants with CRPRs of 3 and 4 are generally not considered to

meet the criteria or warrant special consideration unless there are special attributes of the population.

2.2. Special Status Natural Communities

Special status natural communities are communities with limited distribution that may be vulnerable to environmental impacts. Updated information on California natural communities, including rarity rankings, is provided in *A Manual of California Vegetation Online Edition* (CNPS 2023a). Natural communities with G or S ranks of 3 or lower are considered sensitive by CDFW.

2.3. Special Status Wildlife

Special status wildlife includes those listed or proposed for listing under the ESA and/or the CESA. CDFW Species of Special Concern (SSC), Fully Protected (FP), Watch List (WL), birds protected by the MBTA, Western Bat Working Group Priority Species, and other species with local or biological significance are also given special consideration under CEQA.

2.4. Aquatic Resources

2.4.1. Waters of the United States

Waters of the United States are regulated by the U.S Army Corps of Engineers (Army Corps) under the Clean Water Act. Waters of the United States include, but are not limited to, territorial seas, waters used for interstate or foreign commerce and their tributaries, and adjacent waters, including wetlands.

Army Corps jurisdiction in waters such as creeks and rivers includes the area below the ordinary high water mark, which is the line on the bank established by fluctuations of water that leave physical characteristics such as a distinct line on the bank, shelving, destruction of terrestrial vegetation, and presence of debris.

The Army Corps defines wetlands as:

"... areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal conditions do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas."

This definition requires that an area has indicators of all three wetlands parameters (hydrophytic vegetation, hydric soil, and wetland hydrology) to be considered wetland.

2.4.2. Waters of the State

Waters of the state are regulated by the State Water Resources Control Board (Water Board) under the Porter-Cologne Water Quality Control Act. Waters of the state are defined as:

"... any surface water or groundwater, including saline waters, within the boundaries of the state."

The Water Board's definition of a wetland is:

"An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation."

This definition also requires that an area have all three parameters to be considered wetland.

2.4.3. McKinleyville Community Plan Wetland Areas

Under the McKinleyville Community Plan:

"Wetland Areas shall be defined according to the criteria utilized by the CA Dept. of Fish and Game (also included in the County's Open Space Implementation Standards). In summary, the definition requires that a given area satisfy at least one of the following three criteria:

- *the presence of at least periodic predominance of hydrophytic vegetation; or,*
- *predominately hydric soils; or,*
- *periodic inundation for seven (7) consecutive days"*

Using this one-parameter approach, areas are considered wetland if they have at least one of the three wetland parameters.

2.4.4. Streamside Management Areas

The Humboldt County Streamside Management Areas and Wetlands Ordinance (SMAWO) recognizes Streamside Management Areas (SMAs) along all streams and wetlands.

The SMAs for streams are defined as:

"One hundred (100) feet, measured as the horizontal distance from the top of bank or edge of riparian drip-line whichever is greater on either side of perennial streams."

"Fifty (50) feet, measured as the horizontal distance from the top of bank or edge of riparian drip-line whichever is greater on either side of intermittent streams."

The setbacks for wetlands are defined as:

Seasonal wetlands = fifty (50) feet

Perennial wetlands = one hundred fifty (150) feet

3. ENVIRONMENTAL SETTING

3.1. Project Location

The parcel is located off Elizabeth Lane in McKinleyville on the Arcata North USGS quadrangle (Sections 21 & 28, T7N, R1E) in Humboldt County (Figure 1).

3.2. Soil, Topography, and Hydrology

The soil types mapped in the project area are Lepoil-Candymountain complex and Lepoil-Espa-Candymountain complex (USDA, NRCS 2023). The soil is composed of marine deposits derived from sedimentary rock. The project area ranges from relatively flat to approximately 35% slopes. The elevation is approximately 300-400 feet above sea level. The eastern part of the project area includes a stream that drains into Rose Creek, a tributary of Strawberry Creek.

3.3. Vegetation

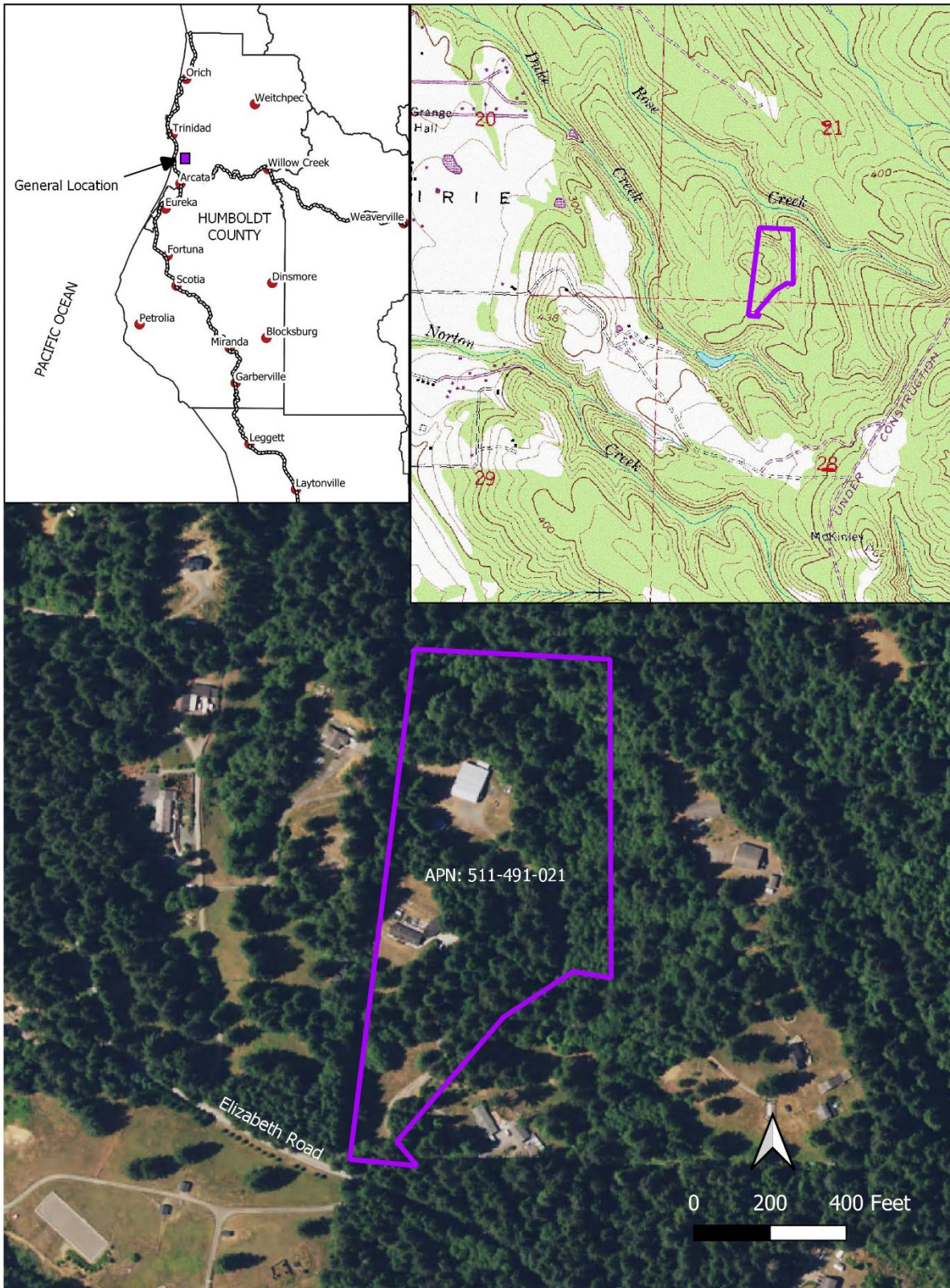
Much of the property is coniferous forest with a canopy of Sitka spruce (*Picea sitchensis*). Other trees in the canopy include Douglas-fir (*Pseudotsuga menziesii*), western red cedar (*Thuja plicata*), and western hemlock (*Tsuga heterophylla*). Common understory plants include huckleberry (*Vaccinium ovatum*), salal (*Gaultheria shallon*), sword fern (*Polystichum munitum*), and bracken fern (*Pteridium aquilinum* var. *pubescens*). The riparian habitat along the tributary of Rose Creek includes canopy of red alder (*Alnus rubra*). Understory vegetation includes red elderberry (*Sambucus racemosa* var. *racemosa*), salmonberry (*Rubus spectabilis*), and skunk cabbage (*Lysichiton americanum*). The mowed grassy fields are composed of non-native grasses and other herbaceous plants including sweet vernal grass (*Anthoxanthum odoratum*), rough cat's-ear (*Hypochaeris radicata*), and English daisy (*Bellis perennis*). There is also ruderal habitat associated with the developed areas on the parcel.

4. METHODS

4.1. Scoping

Lists of special status plants (Appendix A) and wildlife (Appendix B) that could potentially occur in or near the project area were generated by consulting (9 quadrangle search) the *California Natural Diversity Database* (CDFW 2023a, 2023b, 2023c) and the *CNPS Inventory of Rare and Endangered Plants* (CNPS 2023b). A list of special status natural communities that occur in Northern California queried from *A Manual of California Vegetation Online Edition* (CNPS 2023a) is provided in Appendix C.

Figure 1. Location Map.



While the CNDDDB is a useful tool to determine what special status species are likely to occur in the vicinity of a given project area and the types of habitats they are associated with, it cannot be used to determine if a species is absent from a project area. There are several special status species with CNDDDB records within approximately one mile of the project area:

Coast checkerbloom (*Sidalcea oregana* ssp. *eximia*), CRPR 1B.2

About 30 plants were recorded in roadside vegetation along Central Avenue in McKinleyville in 2001. Collections were made in the general area in the 1920's and 1930's.

Siskiyou checkerbloom (*Sidalcea malviflora* ssp. *patula*), CRPR 1B.2

There is a record near the Arcata airport from the 2000's with earlier collections also attributed to the same occurrence. There is also a 2007 record in roadside vegetation along Fieldbrook Road near the school. There is also a 2005 record in grassland vegetation adjacent to Humboldt Sanitation.

Northern clustered sedge (*Carex arcta*), CRPR 2B.2

There is a 1934 record from a swamp on Dows Prairie.

Running pine (*Lycopodium clavatum*), CRPR 4.2

There are several records in Sitka spruce and redwood forest understory in the Fieldbrook area.

Northern Spotted Owl (*Strix occidentalis caurina*) FT, CT

The closest NSO activity center are approximately 0.9 miles north of the project area (HUM 0836) and 0.8 miles southeast of the project area (HUM 0403).

Steelhead-northern California DPS winter-run (*Oncorhynchus mykiss irideus*), FT

Steelhead were observed in Strawberry Creek in 2004.

Coast cutthroat trout (*Oncorhynchus clarkii clarkii*), SSC

There is a 1969 record in Strawberry Creek.

Northern red-legged frog (*Rana aurora*), SSC

There is a 2010 record of egg masses at Beau Pre golf Course in McKinleyville.

Western pond turtle (*Emys marmorata*), SSC

Three individuals were observed in a pond in Fieldbrook in 2001.

Fisher (*Pekania pennanti*), SSC

There are two records of fisher crossing Murray Road in 2015 and 2016. One observation was just east of Central Ave in McKinleyville. The other observation was just west of Fieldbrook.

Humboldt Mountain beaver (*Aplodontia rufa humboldtiana*)

There is a 1952 record in the Strawberry Creek canyon. The exact location is unknown.

Long-eared myotis (*Myotis evotis*)

There is a 1972 record of one female 8.5 miles northeast of Arcata.

4.2. Site Visits/Botanical Survey

The parcel was visited on April 16 and June 15, 2023, to conduct the botanical survey, assess the habitat for special status wildlife, and identify aquatic resources. Mr. Wear has an M.A. in Biology and over 25 years of experience conducting botanical surveys, wetland delineations, and biological assessments in northern California.

The botanical survey was floristic and followed methods outlined in *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2018). Plant taxonomy generally follows *The Jepson Manual Vascular Plants of California, Second Edition* (Baldwin et. al. 2012), however the plant list may include more recent name changes. Plant communities were classified according to *A Manual of California Vegetation Online Edition* (CNPS 2023b).

5. RESULTS AND DISCUSSION

5.1. Special Status Plants

No special status plants were observed in the project area. A list of all plants recorded on the surveys is provided in Appendix D.

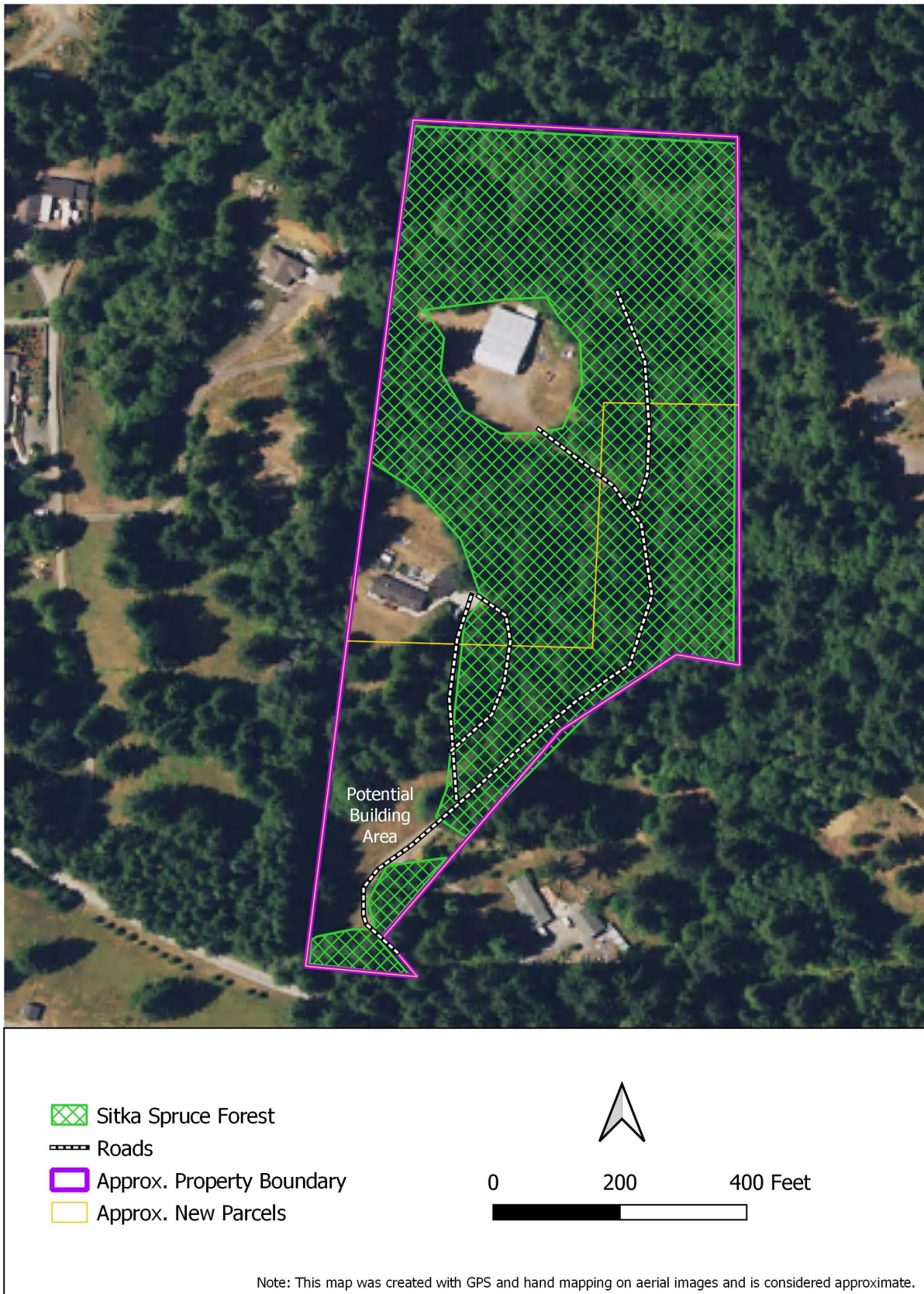
5.2. Special Status Natural Communities

The forest on the parcel is Sitka spruce forest and woodland (*Picea sitchensis* Forest and Woodland Alliance), which has a rarity ranking of G5 S2 and is considered a special status natural community by CDFW (Figure 2). The stand of spruce west of the driveway and south of the existing residence has a mowed park-like understory and was not included as a special status natural community because it lacks a natural forest understory.

5.3. Special Status Wildlife

Northern spotted owl (NSO) could potentially occur in the forested area on the property. A variety of other birds listed by CDFW or that are protected by the MBTA could potentially nest in trees or other vegetation. The forest on the property is also habitat for fisher (*Pekania pennanti*), Humboldt mountain beaver (*Aplodontia rufa humboldtiana*), and North American porcupine (*Erethizon dorsatum*). The trees are roosting habitat for hoary bat (*Lasiurus cinereus*) and long-eared myotis (*Myotis evotis*). The stream and uplands are potential habitat for northern red-legged frog (*Rana aurora*). Western bumble bee (*Bombus occidentalis*) or other bumble bees could nest in old rodent burrows or similar areas, but no evidence of nesting bumble bees was observed on the site visits.

Figure 2. Sitka Spruce Forest Map.



5.4. Aquatic Resources

No wetlands were observed on the parcel. The SMA for the tributary of Rose Creek was defined as 100-feet from dripline of the red alder associated with the stream (Figure 3).

6. IMPACT ASSESSMENT AND RECOMMENDATIONS

Although there is potential for sensitive wildlife in the Sitka spruce forest and riparian habitat on the property, the proposed new undeveloped parcel is predominantly a mowed grassy field and stand of spruce and other trees with a mowed park-like understory. This area is not habitat for NSO, fisher, or other special status wildlife except for birds that could nest in the trees. It is subject to an existing level of disturbance from mowing and maintenance, traffic, and other noise associated with the existing residence, shop, and neighboring properties. There will be a large enough building envelope to avoid impacts to Sitka spruce forest and the SMA.

Removal of any trees or other woody vegetation for new development should be conducted outside the nesting bird season which is from February through August, or nesting bird surveys should be conducted prior to tree or shrub removal. Otherwise, there is a less than significant risk of impacts to sensitive biological resources from the proposed project.

7. REFERENCES

Baldwin, B. C., D. H. Goldman, D. J. Keil, R. Patterson, and T.J. Roasatti. Eds. 2012. *The Jepson Manual, Vascular Plants of California, Second Edition*. University of California Press. Berkeley, CA.

California Department of Fish and Wildlife (CDFW). 2018. *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities*. <https://www.wildlife.ca.gov/Conservation/Survey-Protocols#377281280-plants>

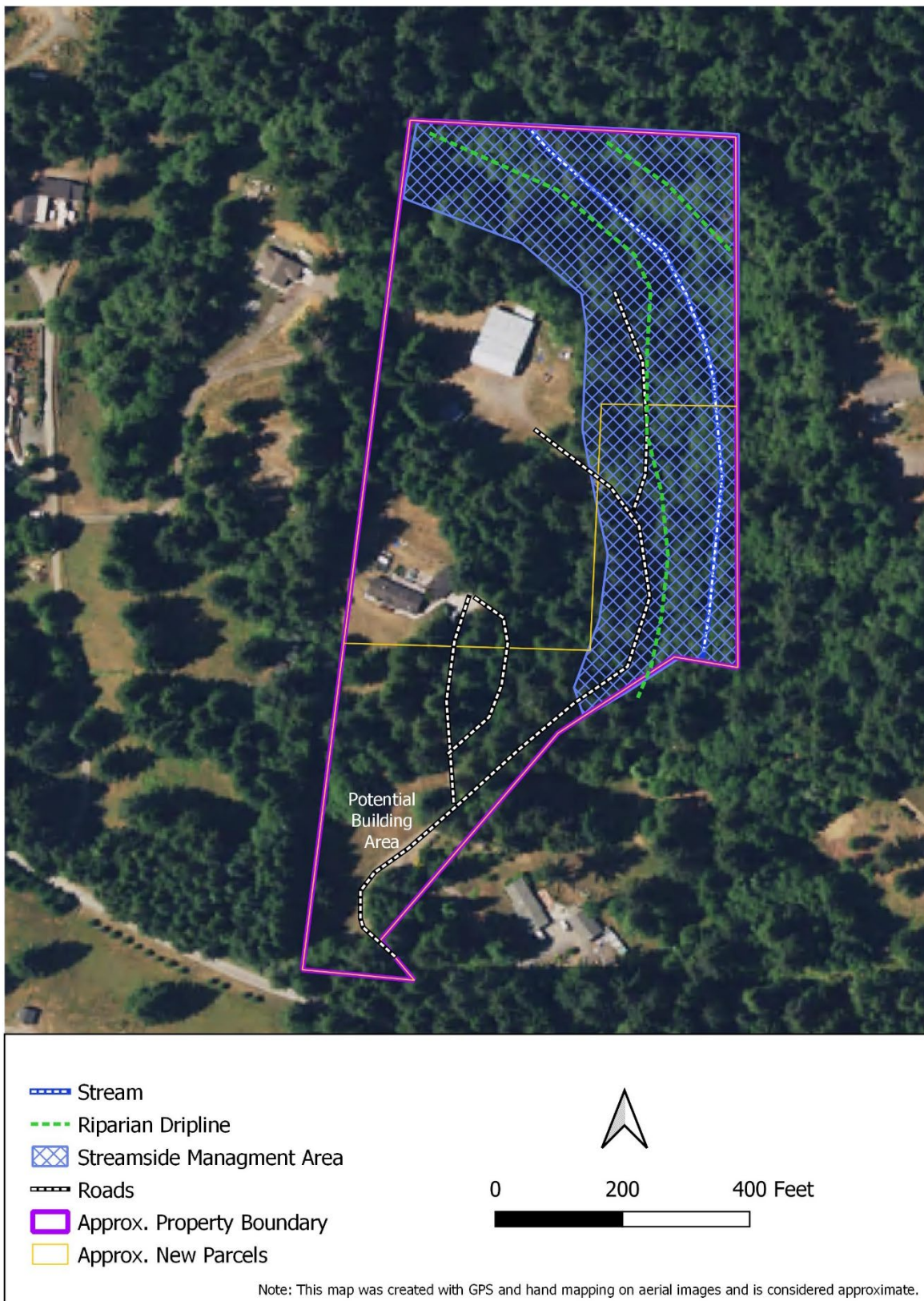
CDFW. 2023a. *CNDDDB BIOS*. Commercial Version [ds85]. <https://apps.wildlife.ca.gov/bios/>

CDFW 2023b *CNDDDB Rare Find 5*. Version 5.2.14. <https://apps.wildlife.ca.gov/rarefind/view/RareFind.aspx>

CDFW 2023c. *CNDDDB BIOS*. *Spotted Owl Observations* [ds704]. <https://apps.wildlife.ca.gov/bios/>

California Native Plant Society (CNPS). 2023a. *A Manual of California Vegetation Online Edition*. <https://vegetation.cnps.org/>

Figure 3. SMA Map.



CNPS. 2023b. *Inventory of Rare and Endangered Plants*. <http://www.rareplants.cnps.org>

United States Department of Agriculture, Natural Resource Conservation Service (USDA, NRCS). 2023. *Web Soil Survey*. <https://websoilsurvey.sc.egov.usda.gov>

APPENDIX A Special Status Plant Scoping List

Scientific Name Common Name	Listing Status	Blooming Period	Habitat	Potential to Occur in Project Area
<i>Abronia umbellata</i> var. <i>breviflora</i> pink sand-verbena	1B.1	Jun-Oct	Coastal dunes	None-no habitat
<i>Angelica lucida</i> sea-watch	4.2	Apr-Sep	Coastal bluff scrub, Coastal dunes, Coastal scrub, Marshes and swamps (coastal salt)	None-no habitat
<i>Astragalus pycnostachyus</i> var. <i>pycnostachyus</i> coastal marsh milk-vetch	1B.2	(Apr)Jun-Oct	Coastal dunes (mesic), Coastal scrub, Marshes and swamps (coastal salt, streamsides)	None-no habitat
<i>Astragalus rattanii</i> var. <i>rattanii</i> Rattan's milk-vetch	4.3	Apr-Jul	Chaparral, Cismontane woodland, Lower montane coniferous forest-Gravelly, Streambanks	None-no habitat
<i>Calamagrostis bolanderi</i> Bolander's reed grass	4.2	May-Aug	Bogs and fens, Broadleafed upland forest, Closed-cone coniferous forest, Coastal scrub, Marshes and swamps (freshwater), Meadows and seeps (mesic), North Coast coniferous forest-Mesic	Moderate-along stream
<i>Cardamine angulata</i> seaside bittercress	2B.2	(Jan)Mar-Jul	Lower montane coniferous forest, North Coast coniferous forest-wet areas-Streambanks	Moderate-along streams
<i>Carex arcta</i> northern clustered sedge	2B.2	Jun-Sep	Bogs and fens, North Coast coniferous forest (mesic)	Unlikely-no typical wetland habitat
<i>Carex leptalea</i> bristle-stalked sedge	2B.2	Mar-Jul	Bogs and fens, Marshes and swamps, Meadows and seeps (mesic)	Unlikely-no typical wetland habitat
<i>Carex lyngbyei</i> Lyngbye's sedge	2B.2	Apr-Aug	Marshes and swamps (brackish, freshwater)	Unlikely-no typical wetland habitat
<i>Carex praticola</i> northern meadow sedge	2B.2	May-Jul	Meadows and seeps (mesic)	Unlikely-no typical wetland habitat
<i>Castilleja ambigua</i> var. <i>humboldtiensis</i> Humboldt Bay owl's-clover	1B.2	Apr-Aug	Marshes and swamps (coastal salt)	None-no habitat
<i>Castilleja litoralis</i> Oregon coast paintbrush	2B.2	Jun	Coastal bluff scrub, Coastal dunes, Coastal scrub-Sandy	None-no habitat
<i>Chloropyron maritimum</i> ssp. <i>palustre</i> Point Reyes salty bird's-beak	1B.2	Jun-Oct	Marshes and swamps (coastal salt)	None-no habitat

Scientific Name Common Name	Listing Status	Blooming Period	Habitat	Potential to Occur in Project Area
<i>Chrysosplenium glechomifolium</i> Pacific golden saxifrage	4.3	Feb-Jun	North Coast coniferous forest, Riparian forest-Roadsides (sometimes), Seeps (sometimes), Streambanks	High-riparian habitat
<i>Collinsia corymbosa</i> round-headed collinsia	1B.2	Apr-Jun	Coastal dunes	None-no habitat
<i>Coptis laciniata</i> Oregon goldthread	4.2	(Feb)Mar-May(Sep-Nov)	Meadows and seeps, North Coast coniferous forest (streambanks)-Mesic	High-riparian habitat
<i>Eleocharis parvula</i> small spikerush	4.3	(Apr)Jun-Aug(Sep)	Marshes and swamps	Unlikely-no typical wetland habitat
<i>Epilobium septentrionale</i> Humboldt County fuchsia	4.3	Jul-Sep	Broadleafed upland forest, North Coast coniferous forest- Rocky (sometimes), Sandy (sometimes)	Unlikely-no typical habitat
<i>Erysimum menziesii</i> Menzies' wallflower	1B.1, CE, FT	Mar-Sep	Coastal dunes	None-no habitat
<i>Erythronium oregonum</i> giant fawn lily	2B.2	Mar-Jun(Jul)	Cismontane woodland, Meadows and seeps-Openings, Rocky, Serpentinite (sometimes)	Moderate-along stream
<i>Erythronium revolutum</i> coast fawn lily	2B.2	Mar-Jul(Aug)	Bogs and fens, Broadleafed upland forest, North Coast coniferous forest- Mesic, Streambanks	Moderate-along stream
<i>Fissidens pauperculus</i> minute pocket moss	1B.2		North Coast coniferous forest (damp coastal soil)-	Moderate-along stream
<i>Fritillaria purdyi</i> Purdy's fritillary	4.3	Mar-Jun	Chaparral, Cismontane woodland, Lower montane coniferous forest-Serpentinite (usually)	Unlikely-not typical habitat
<i>Gilia capitata ssp. pacifica</i> Pacific gilia	1B.2	Apr-Aug	Chaparral (openings), Coastal bluff scrub, Coastal prairie, Valley and foothill grassland	Unlikely-not typical habitat
<i>Gilia millefoliata</i> dark-eyed gilia	1B.2	Apr-Jul	Coastal dunes	None-no habitat
<i>Glehnia littoralis ssp. leiocarpa</i> American glehnia	4.2	May-Aug	Coastal dunes	None-no habitat
<i>Hemizonia congesta ssp. tracyi</i> Tracy's tarplant	4.3	(Mar-Apr)May-Oct	Coastal prairie, Lower montane coniferous forest, North Coast coniferous forest-	Unlikely-not typical habitat

Scientific Name Common Name	Listing Status	Blooming Period	Habitat	Potential to Occur in Project Area
			Openings, Serpentinite (sometimes)	
<i>Hesperavex sparsiflora</i> var. <i>brevifolia</i> short-leaved evax	1B.2	Mar-Jun	Coastal bluff scrub (sandy), Coastal dunes, Coastal prairie	None-no habitat
<i>Hosackia gracilis</i> harlequin lotus	4.2	Mar-Jul	Broadleafed upland forest, Cismontane woodland, Closed-cone coniferous forest, Coastal bluff scrub, Coastal prairie, Coastal scrub, Marshes and swamps, Meadows and seeps, North Coast coniferous forest, Valley and foothill grassland- Wetlands-Roadsides	High-grassy areas, along roads
<i>Iliamna latibracteata</i> California globe mallow	1B.2	Jun-Aug	Chaparral (montane), Lower montane coniferous forest, North Coast coniferous forest (mesic), Riparian scrub (streambanks)- Burned areas (often)	Unlikely-not typical habitat, maybe along stream
<i>Lasthenia californica</i> ssp. <i>macrantha</i> perennial goldfields	1B.2	Jan-Nov	Coastal bluff scrub, Coastal dunes, Coastal scrub	None-no habitat
<i>Lathyrus glandulosus</i> sticky pea	4.3	Apr-Jun	Cismontane woodland	Unlikely-not typical habitat
<i>Lathyrus japonicus</i> seaside pea	2B.1	May-Aug	Coastal dunes	None-no habitat
<i>Lathyrus palustris</i> marsh pea	2B.2	Mar-Aug	Bogs and fens, Coastal prairie, Coastal scrub, Lower montane coniferous forest, Marshes and swamps, North Coast coniferous forest-Mesic	Unlikely-not typical wetland habitat, maybe along streams
<i>Layia carnosa</i> beach layia	1B.1,CE, FT	Mar-Jul	Coastal dunes, Coastal scrub (sandy)	None-no habitat
<i>Lilium kelloggii</i> Kellogg's lily	4.3	(Feb)May- Aug	Lower montane coniferous forest, North Coast coniferous forest- Openings, Roadsides	Moderate-along roads
<i>Lilium occidentale</i> western lily	1B.1, CE, FE	Jun-Jul	Bogs and fens, Coastal bluff scrub, Coastal prairie, Coastal scrub, Marshes and	Unlikely-typically in wetlands in coastal prairies, more open

Scientific Name Common Name	Listing Status	Blooming Period	Habitat	Potential to Occur in Project Area
			swamps (freshwater), North Coast coniferous forest (openings)	spruce with water table near surface
<i>Listera cordata</i> heart-leaved twayblade	4.2	Feb-Jul	Bogs and fens, Lower montane coniferous forest, North Coast coniferous forest	High-forest understory
<i>Lycopodium clavatum</i> running-pine	4.1	Jun- Aug(Sep)	Lower montane coniferous forest (mesic), Marshes and swamps, North Coast coniferous forest (mesic)- Edges (often), Openings, Roadsides	High-forest understory
<i>Mitellastrum caulescens</i> leafy-stemmed mitrewort	4.2	(Mar)Apr- Oct	Broadleafed upland forest, Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest-Mesic, Roadsides (sometimes)	High-along stream
<i>Monotropa uniflora</i> ghost-pipe	2B.2	Jun- Aug(Sep)	Broadleafed upland forest, North Coast coniferous forest	Moderate-forest understory
<i>Montia howellii</i> Howell's montia	2B.2	(Feb)Mar- May	Meadows and seeps, North Coast coniferous forest, Vernal pools-Roadsides (sometimes), Vernal Mesic	Unlikely-roads are rocked an to try, maybe in grassy areas
<i>Oenothera wolfii</i> Wolf's evening-primrose	1B.1	May-Oct	Coastal bluff scrub, Coastal dunes, Coastal prairie, Lower montane coniferous forest-Mesic (usually), Sandy	Unlikely-not typical habitat
<i>Packera bolanderi</i> var. <i>bolanderi</i> seacoast ragwort	2B.2	(Jan- Apr)May- Jul(Aug)	Coastal scrub, North Coast coniferous forest- Roadsides (sometimes)	Moderate-roadcuts
<i>Piperia candida</i> white-flowered rein orchid	1B.2	(Mar- Apr)May- Sep	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest- Serpentinite (sometimes)	Moderate-forest understory
<i>Pityopus californicus</i> California pinefoot	4.2	(Mar- Apr)May- Aug	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest-	Moderate-forest understory

Scientific Name Common Name	Listing Status	Blooming Period	Habitat	Potential to Occur in Project Area
			Mesic	
<i>Pleuropogon refractus</i> nodding semaphore grass	4.2	(Feb- Mar)Apr- Aug	Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest, Riparian forest- Mesic	High-riparian habitat
<i>Ribes laxiflorum</i> trailing black currant	4.3	Mar- Jul(Aug)	North Coast coniferous forest-Roadsides (sometimes)	High-along roads
<i>Sidalcea malachroides</i> maple-leaved checkerbloom	4.2	(Mar)Apr- Aug	Broadleafed upland forest, Coastal prairie, Coastal scrub, North Coast coniferous forest, Riparian woodland-Disturbed areas (often)	High-along roads, stream, edges
<i>Sidalcea malviflora ssp. patula</i> Siskiyou checkerbloom	1B.2	(Mar)May- Aug	Coastal bluff scrub, Coastal prairie, North Coast coniferous forest-often roadcuts- Roadsides (often)	Moderate-grassy areas
<i>Sidalcea oregana ssp. eximia</i> coast checkerbloom	1B.2	Jun-Aug	Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest	Moderate-grassy areas
<i>Silene scouleri ssp. scouleri</i> Scouler's catchfly	2B.2	(Mar- May)Jun- Aug(Sep)	Coastal bluff scrub, Coastal prairie, Valley and foothill grassland	Unlikely-not typical habitat
<i>Spergularia canadensis var. occidentalis</i> western sand-spurrey	2B.1	Jun-Aug	Marshes and swamps (coastal salt)	None-no habitat
<i>Sulcaria spiralifera</i> twisted horsehair lichen	1B.2		Coastal dunes (SLO Co.), North Coast coniferous forest (immediate coast)- Usually on conifers.	Unlikely-usually immediate coast
<i>Tiarella trifoliata var. trifoliata</i> trifoliolate laceflower	3.2	(May)Jun- Aug	Lower montane coniferous forest, North Coast coniferous forest- moist shady banks-Edges, Streambanks	High-riparian habitat
<i>Trichodon cylindricus</i> cylindrical trichodon	2B.2		Broadleafed upland forest, Meadows and seeps, Upper montane coniferous forest-exposed soil-Roadsides, Sandy	Unlikely-not typical habitat

Scientific Name Common Name	Listing Status	Blooming Period	Habitat	Potential to Occur in Project Area
<i>Usnea longissima</i> Methuselah's beard lichen	4.2		Broadleafed upland forest, North Coast coniferous forest- On tree branches; usually on old growth hardwoods and conifers	High-tree branches
<i>Viola palustris</i> alpine marsh violet	2B.2	Mar-Aug	Bogs and fens (coastal), Coastal scrub (mesic)	Unlikely-no typical wetland habitat

SPECIAL STATUS PLANT LISTING STATUS

Endangered Species Act (ESA)

FE: Federally Endangered

FT: Federally Threatened

FR: Federally Rare

California Endangered Species Act (CESA)

CE: California Endangered

CT: California Threatened

CR: California Rare

California Rare Plant Ranks

1A: Plants Presumed Extirpated in California and Either Rare or Extinct Elsewhere

1B: Plants Rare, Threatened, or Endangered in California and Elsewhere

2A: Plants Presumed Extirpated in California, But Common Elsewhere

2B: California Rare Plant Rank 2B: Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere

3. Review List: Plants about which more information is needed.

4. Watch List: Plants of limited distribution

Threat Ranks

0.1-Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)

0.2-Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)

0.3-Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

APPENDIX B Special Status Wildlife Scoping List

Scientific Name Common Name	Listing Status			Habitat	Potential to Occur on Parcel
	Federal	State	CDFW		Potential Impact
Amphibians					
<i>Ascaphus truei</i> Pacific tailed frog	-	-	SSC	Occurs in montane hardwood-conifer, redwood, Douglas-fir & ponderosa pine habitats. Restricted to perennial montane streams. Tadpoles require water below 15 degrees C.	Unlikely-occurs in streams with more permanent cool water.
<i>Plethodon elongatus</i> Del Norte salamander	-	-	WL	Old-growth associated species with optimum conditions in the mixed conifer/hardwood ancient forest ecosystem- Cool, moist, stable microclimate, a deep litter layer, closed multi-storied canopy, dominated by large, old trees.	Unlikely-usually in old growth forest
<i>Rana aurora</i> northern red-legged frog	-	-	SSC	Humid forests, woodlands, grasslands, and streamsides in northwestern California, usually near dense riparian cover- Generally near permanent water, but can be found far from water, in damp woods and meadows, during non-breeding season.	High- stream, also in upland areas
<i>Rana boylei</i> pop. 1 foothill yellow-legged frog - north coast DPS	-	CE	SSC	Partly shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Needs at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis.	Unlikely-usually streams with more permanent water
<i>Rhyacotriton variegatus</i> southern torrent salamander	-	-	SSC	Coastal redwood, Douglas-fir, mixed conifer, montane riparian, and montane hardwood-conifer habitats. Old growth forest. Cold, well-shaded, permanent streams and seepages, or within splash zone or on moss-covered rocks within trickling water.	Unlikely-occurs in cooler more permanent streams
Birds					
<i>Accipiter cooperii</i> Cooper's hawk	-	-	WL	Woodland, chiefly of open, interrupted or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks.	Moderate-potential nesting in trees
<i>Accipiter striatus</i> sharp-shinned hawk	-	-	WL	Ponderosa pine, black oak, riparian deciduous, mixed conifer, and Jeffrey pine habitats. Prefers riparian areas- North-facing slopes with	Unlikely-not typical nesting habitat

Scientific Name Common Name	Listing Status			Habitat	Potential to Occur on Parcel
	Federal	State	CDFW		Potential Impact
				plucking perches are critical requirements. Nests usually within 275 ft of water.	
<i>Ardea alba</i> great egret	-	-	-	Colonial nester in large trees- Rookery sites located near marshes, tide-flats, irrigated pastures, and margins of rivers and lakes.	Unlikely-usually nests closer to water
<i>Ardea herodias</i> great blue heron	-	-	-	Colonial nester in tall trees, cliffsides, and sequestered spots on marshes- Rookery sites in close proximity to foraging areas: marshes, lake margins, tide-flats, rivers and streams, wet meadows.	Unlikely-usually nests closer to water
<i>Asio flammeus</i> short-eared owl	-	-	SSC	Found in swamp lands, both fresh and salt; lowland meadows; irrigated alfalfa fields- Tule patches/tall grass needed for nesting/daytime seclusion. Nests on dry ground in depression concealed in vegetation.	Unlikely-not nesting habitat
<i>Asio otus</i> long-eared owl	-	-	SSC	Riparian bottomlands grown to tall willows and cottonwoods; also, belts of live oak paralleling stream courses- Require adjacent open land, productive of mice and the presence of old nests of crows, hawks, or magpies for breeding.	Unlikely-not typical nesting habitat
<i>Botaurus lentiginosus</i> American bittern	-	-	-	Freshwater and slightly brackish marshes. Also in coastal saltmarshes- Dense reed beds	None-no habitat
<i>Brachyramphus marmoratus</i> marbled murrelet	FT	CE	-	Feeds near-shore; nests inland along coast from Eureka to Oregon border and from Half Moon Bay to Santa Cruz- Nests in old-growth redwood-dominated forests, up to six miles inland, often in Douglas-fir.	Unlikely-parcel is not near late successional coniferous forest
<i>Cerorhinca monocerata</i> rhinoceros auklet	-	-	WL	Off-shore islands and rocks along the California coast- Nests in a burrow on undisturbed, forested and unforested islands, and probably in cliff caves on the mainland.	None-no habitat
<i>Chaetura vauxi</i> Vaux's swift	-	-	SSC	Redwood, Douglas-fir, and other coniferous forests. Nests in large hollow trees and snags. Often nests in flocks- Forages over most terrains and habitats but shows a preference for foraging over rivers and lakes.	Moderate-potential nesting in trees

Scientific Name Common Name	Listing Status			Habitat	Potential to Occur on Parcel
	Federal	State	CDFW		Potential Impact
<i>Charadrius montanus</i> mountain plover	-	-	SSC	Short grasslands, freshly plowed fields, newly sprouting grain fields, and sometimes sod farms (Short vegetation, bare ground, and flat topography. Prefers grazed areas and areas with burrowing rodents).	Unlikely-not typical habitat
<i>Charadrius nivosus</i> western snowy plover	FT	-	SSC	Sandy beaches, salt pond levees and shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting.	None-no habitat
<i>Circus hudsonius</i> northern harrier	-	-	SSC	Coastal salt and freshwater marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain cienagas- Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas.	Unlikely-no typical habitat
<i>Contopus cooperi</i> olive-sided flycatcher	-	-	SSC	Nesting habitats are mixed conifer, montane hardwood-conifer, Douglas-fir, redwood, red fir and lodgepole pine- Most numerous in montane conifer forests where tall trees overlook canyons, meadows, lakes or other open terrain.	Moderate-potential nesting in trees
<i>Coturnicops noveboracensis</i> yellow rail	-	-	SSC	Summer resident in eastern Sierra Nevada in Mono County- Summer resident in eastern Sierra Nevada in Mono County- Freshwater marshlands.	Unlikely-potential winter visitor, rarely observed in Humboldt County
<i>Egretta thula</i> snowy egret	-	-	-	Colonial nester, with nest sites situated in protected beds of dense tules- Rookery sites situated close to foraging areas: marshes, tidal-flats, streams, wet meadows, and borders of lakes.	Unlikely-usually nests closer to water
<i>Elanus leucurus</i> white-tailed kite	-	-	FP	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland- Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	Unlikely-not typical habitat
<i>Empidonax traillii</i> willow flycatcher	-	CE	-	Inhabits extensive thickets of low, dense willows on edge of wet meadows, ponds, or backwaters; 2000-8000 ft elevation- Requires	Unlikely-rarely seen in Humboldt County, potential occasional visitor,

Scientific Name Common Name	Listing Status			Habitat	Potential to Occur on Parcel
	Federal	State	CDFW		Potential Impact
				dense willow thickets for nesting/roosting. Low, exposed branches are used for singing posts/hunting perches.	site lacks willow thickets
<i>Falco columbarius</i> merlin	-	-	WL	Seacoast, tidal estuaries, open woodlands, savannahs, edges of grasslands and deserts, farms and ranches- Clumps of trees or windbreaks are required for roosting in open country.	Unlikely-potential winter visitor, not in nesting range
<i>Falco peregrinus anatum</i> American peregrine falcon	-	-	FP	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures. Nest consists of a scrape or a depression or ledge in an open site.	Unlikely-not typical habitat
<i>Fratercula cirrhata</i> tufted puffin	-	-	SSC	Open-ocean bird; nests along the coast on islands, islets, or (rarely) mainland cliffs- Requires sod or earth into which the birds can burrow, on island cliffs or grassy island slopes.	None-no habitat
<i>Haliaeetus leucocephalus</i> bald eagle	-	CE	FP	Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water. Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter.	Unlikely-not typical habitat
<i>Hydrobates furcatus</i> fork-tailed storm-petrel	-	-	SSC	Colonial nester on small, offshore islets. Forages over the open ocean, usually well off-shore- Birds choose offshore islets which provide nesting crannies beneath rocks or sod for burrowing.	None-no habitat
<i>Icteria virens</i> yellow-breasted chat	-	-	SSC	Summer resident; inhabits riparian thickets of willow and other brushy tangles near watercourses- Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 ft of ground.	Unlikely-uncommon summer visitor
<i>Nannopterum auritum</i> double-crested cormorant	-	-	WL	Colonial nester on coastal cliffs, offshore islands, and along lake margins in the interior of the state- Nests along coast on sequestered islets, usually on ground with sloping	None-no habitat

Scientific Name Common Name	Listing Status			Habitat	Potential to Occur on Parcel
	Federal	State	CDFW		Potential Impact
				surface, or in tall trees along lake margins.	
<i>Numenius americanus</i> long-billed curlew	-	-	WL	Breeds in grassland in west-central North America-feeds on mudflats or similar substrates	None-no habitat
<i>Nycticorax nycticorax</i> black-crowned night heron	-	-	-	Colonial nester, usually in trees, occasionally in tule patches- Rookery sites located adjacent to foraging areas: lake margins, mud-bordered bays, marshy spots	Unlikely-not typical habitat
<i>Pandion haliaetus</i> 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.	Unlikely-not typical habitat
<i>Passerculus sandwichensis alaudinus</i> Bryant's savannah sparrow	-	-	SSC	Occupies low tidally influenced habitats, adjacent ruderal areas, moist grasslands within and just above the fog belt, and, infrequently, drier grasslands- Around Humboldt Bay, it breeds in extensive dairy pastures, especially in the taller grasses and rushes along roads and fences, and water conveyance canals.	Unlikely-not typical habitat
<i>Pelecanus occidentalis californicus</i> California brown pelican	-	-	FP	Colonial nester on coastal islands just outside the surf line. Nests on coastal islands of small to moderate size which afford immunity from attack by ground-dwelling predators. Roosts communally.	None-no habitat
<i>Poecile atricapillus</i> black-capped chickadee	-	-	WL	An uncommon resident restricted to Del Norte, Humboldt, and Siskiyou cos. in northern California. Occurs locally in montane riparian habitat from coast into mountainous areas inland; also found locally in the more arid Shasta Valley, Siskiyou Co. Occasionally wanders in winter	Unlikely-potential occasional visitor
<i>Ptychoramphus aleuticus</i> Cassin's auklet	-	-	SSC	Offshore islands with enough soil for burrowing. Will also nest in rock crevices, under buildings and in debris.	None-no habitat
<i>Rallus obsoletus</i> California Ridgway's rail	FE	CE	FP	Salt water and brackish marshes traversed by tidal sloughs in the vicinity of San Francisco Bay. Associated with abundant growths	None-no habitat

Scientific Name Common Name	Listing Status			Habitat	Potential to Occur on Parcel
	Federal	State	CDFW		Potential Impact
				of pickleweed, but feeds away from cover on invertebrates from mud-bottomed sloughs	
<i>Riparia riparia</i> bank swallow	-	CT	-	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert- Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	None-no habitat
<i>Sphyrapicus ruber</i> red-breasted sapsucker	None	None	-	Breeds in mixed coniferous and mixed deciduous-coniferous forests and woodlands. Requires standing snags or hollow trees for nesting cavity.	Moderate-occurs in conifer and hardwood habitats
<i>Strix occidentalis caurina</i> Northern Spotted Owl	FT	CT	-	Often old growth, but also occurs in younger stand with suitable nest trees and high density of woodrats.	Moderate-potential in forest
Fish					
<i>Acipenser medirostris</i> pop. 1 green sturgeon - southern DPS	FT	-	-	Rivers, bays, estuaries	None-no habitat
<i>Acipenser medirostris</i> pop. 2 green sturgeon - northern DPS	-	-	SSC	Rivers, bays, estuaries	None-no habitat
<i>Acipenser transmontanus</i> white sturgeon	-	-	SSC	Rivers, bays, estuaries	None-no habitat
<i>Entosphenus tridentatus</i> Pacific lamprey	-	-	SSC	Pacific Coast streams north of San Luis Obispo County, however regular runs in Santa Clara River.	None-no habitat
<i>Eucyclogobius newberryi</i> tidewater goby	FE	-	-	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River.	None-no habitat
<i>Lampetra richardsoni</i> western brook lamprey	-	-	SSC	Clear, cold, water in little disturbed watersheds, as well as clean gravel near cover (boulders, riparian vegetation, logs, etc.) for spawning	None-no habitat
<i>Oncorhynchus clarkii clarkii</i> coast cutthroat trout	-	-	SSC	Small coastal streams from the Eel River to the Oregon border.	None-no habitat
<i>Oncorhynchus kisutch</i> pop. 2	FT	CT	-	Rivers and streams	None-no habitat

Scientific Name Common Name	Listing Status			Habitat	Potential to Occur on Parcel
	Federal	State	CDFW		Potential Impact
coho salmon - southern Oregon / northern California ESU					
<i>Oncorhynchus mykiss</i> <i>irideus</i> pop. 16 steelhead - northern California DPS	FT	-	-	Rivers and streams	None-no habitat
<i>Oncorhynchus mykiss</i> <i>irideus</i> pop. 36 summer-run steelhead trout	-	CC	SSC	Rivers and streams	None-no habitat
<i>Oncorhynchus</i> <i>tshawytscha</i> pop. 17 chinook salmon - California coastal ESU	CT	-	-	Rivers and streams	None-no habitat
<i>Oncorhynchus</i> <i>tshawytscha</i> pop. 30 chinook salmon - upper Klamath and Trinity Rivers ESU	FC	CT	SSC	Rivers and streams	None-no habitat
<i>Spirinchus</i> <i>thaleichthys</i> longfin smelt	FC	CT	-	Rivers and streams	None-no habitat
<i>Thaleichthys pacificus</i> eulachon	FT	-	-	Rivers and streams	None-no habitat
Insects					
<i>Bombus caliginosus</i> obscure bumble bee	-	-	-	Coastal areas from Santa Barbara County to north to Washington state- Food plant genera include Baccharis, Cirsium, Lupinus, Lotus, Grindelia and Phacelia.	Moderate-nests in a variety of habitats, lacks typical nectar plants
<i>Bombus crotchii</i> Crotch bumble bee	-	-	-	Coastal California east to the Sierra- Cascade crest and south into Mexico- Food plant genera include Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum.	Moderate-nests in a variety of habitats, lacks typical nectar plants
<i>Bombus occidentalis</i> western bumble bee	-	-	-	Nests near ground under wood, in old rodent burrows. Forages on a variety of plants for nectar and pollen.	Moderate- nests in a variety of habitats and uses a variety of nectar plants
<i>Cicindela hirticollis</i> <i>gravida</i>	-	-	-	Inhabits areas adjacent to non- brackish water along the coast of	None-no habitat

Scientific Name Common Name	Listing Status			Habitat	Potential to Occur on Parcel
	Federal	State	CDFW		Potential Impact
sandy beach tiger beetle				California from San Francisco Bay to northern Mexico- Clean, dry, light-colored sand in the upper zone. Subterranean larvae prefer moist sand not affected by wave action.	
<i>Scaphinotus behrensi</i> Behrens' snail-eating beetle	-	-	-	Found in extreme NW CA along the coast.	None-no habitat
Mammals					
<i>Aplodontia rufa humboldtiana</i> Humboldt mountain beaver	-	-	-	Coast Range in southwestern Del Norte County and northwestern Humboldt County- Variety of coastal habitats, including coastal scrub, riparian forests, typically with open canopy and thickly vegetated understory.	Moderate-in riparian habitat
<i>Arborimus albipes</i> white-footed vole	-	-	SSC	Mature coastal forests in Humboldt and Del Norte counties. Prefers areas near small, clear streams with dense alder and shrubs.	Moderate-in riparian habitat
<i>Arborimus pomo</i> Sonoma tree vole	-	-	SSC	North coast fog belt from Oregon border to Sonoma County. In Douglas-fir, redwood & montane hardwood-conifer forests. Feeds almost exclusively on Douglas-fir needles. Will occasionally take needles of grand fir, hemlock or spruce.	Moderate-in conifers
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	-	-	SSC	Throughout California in a wide variety of habitats. Most common in mesic sites- Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance	Unlikely-no typical roosting habitat
<i>Enhydra lutris nereis</i> southern sea otter	FT	-	FP	Nearshore marine environments from about Ano Nuevo, San Mateo Co. to Point Sal, Santa Barbara Co.	None-no habitat
<i>Erethizon dorsatum</i> North American porcupine	-	-	-	Forested habitats in the Sierra Nevada, Cascade, and Coast ranges, with scattered observations from forested areas in the Transverse Ranges- Wide variety of coniferous and mixed woodland habitat.	Moderate-in forest and riparian habitat

Scientific Name Common Name	Listing Status			Habitat	Potential to Occur on Parcel
	Federal	State	CDFW		Potential Impact
<i>Eumetopias jubatus</i> Steller sea lion	-	-	-	Breeds on Ano Nuevo, San Miguel and Farallon islands, Point St. George, and Sugarloaf. Hauls-out on islands and rocks- Needs haul-out and breeding sites with unrestricted access to water, near aquatic food supply and with no human disturbance.	None-no habitat
<i>Lasiurus cinereus</i> hoary bat	-	-	-	Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding- Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water.	High-roosting in trees
<i>Myotis evotis</i> long-eared myotis	-	-	-	Found in all brush, woodland and forest habitats from sea level to about 9000 ft. Prefers coniferous woodlands and forests- Nursery colonies in buildings, crevices, spaces under bark, and snags. Caves used primarily as night roosts.	High-roosting in trees
<i>Pekania pennanti</i> Fisher	-	-	SSC	Intermediate to large-tree stages of coniferous forests and deciduous-riparian areas with high percent canopy closure. Uses cavities, snags, logs and rocky areas for cover and denning. Needs large areas of mature, dense forest.	High-in forest, nearby CNDDDB occurrences
Mollusks					
<i>Anodonta californiensis</i> California floater	-	-	-	Freshwater lakes and slow-moving streams and rivers- Generally in shallow water.	None-no habitat
<i>Littorina subrotundata</i> Newcomb's littorine snail	-	-	-	Salt/brackish water snail known only from Humboldt Bay in California- Salt/brackish water snail known only from Humboldt Bay in California.	None-no habitat
<i>Margaritifera falcata</i> western pearlshell	-	-	-	Aquatic- Prefers lower velocity waters.	None-no habitat
Reptiles					
<i>Emys marmorata</i> western pond turtle	-	-	SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation- Needs basking sites and suitable (sandy banks or grassy open	None-no habitat

	Listing Status				
<i>Scientific Name</i> Common Name	Federal	State	CDFW	Habitat	Potential to Occur on Parcel Potential Impact
				fields) upland habitat up to 0.5 km from water for egg-laying.	

Listing Status Codes:

Federal

FE=Endangered

FT=Threatened

FC=Candidate

California

CE=Endangered

CT=Threatened

CC=Candidate

CDFW

SSC = Species of Special Concern

WL = Watch List

FP = Fully Projected

APPENDIX C Special Status Natural Community Scoping List

Scientific Name	Common Name	Global rarity	State rarity
<i>Abies grandis</i>	Grand fir forest	G4	S2.1
<i>Abronia latifolia</i> - <i>Ambrosia chamissonis</i>	Dune mat	G3	S3
<i>Acer macrophyllum</i>	Bigleaf maple forest and woodland	G4	S3
<i>Acer negundo</i>	Box-elder forest and woodland	G5	S3
<i>Aesculus californica</i>	California buckeye groves	G3	S3
<i>Allium</i> spp. - <i>Streptanthus</i> spp. - <i>Hesperolinon</i> spp. <i>Serpentinite</i>	Onion - twistflower - dwarf-flax serpentine rock outcrop	G2G3	S2S3
<i>Alnus incana</i>	Mountain alder thicket	G4	S3
<i>Alnus viridis</i>	Sitka alder thickets	G5	S3?
<i>Alopecurus geniculatus</i>	Water foxtail meadows	G3?	S3?
<i>Arctostaphylos</i> (<i>bakeri</i> , <i>montana</i>)	Baker's or Mt. Tamalpais manzanita chaparral	G3	S3
<i>Arctostaphylos</i> (<i>canescens</i> , <i>manzanita</i> , <i>stanfordiana</i>)	Hoary, common, and Stanford manzanita chaparral	G3	S3
<i>Arctostaphylos glandulosa</i>	Eastwood manzanita chaparral	G4	S3
<i>Arctostaphylos</i> (<i>nummularia</i> , <i>sensitiva</i>) - <i>Chrysolepis chrysophylla</i>	Glossy leaf manzanita - Golden chinquapin chaparral	G2	S2
<i>Arctostaphylos patula</i> - <i>Arctostaphylos nevadensis</i>	Green leaf manzanita - Pinemat manzanita chaparral	G5	S3S4
<i>Bolboschoenus maritimus</i>	Salt marsh bulrush marshes	G4	S3
<i>Bromus carinatus</i> - <i>Elymus glaucus</i>	California brome - blue wildrye prairie	G3	S3
<i>Calamagrostis nutkaensis</i>	Pacific reed grass meadows	G4	S2
<i>Calocedrus decurrens</i>	Incense cedar forest and woodland	G4	S3
<i>Carex</i> (<i>aquatilis</i> , <i>lenticularis</i>)	Water sedge and lakeshore sedge meadows	G5	S3
<i>Carex barbarae</i>	White-root beds	G2?	S2?
<i>Carex echinata</i>	Star sedge fens	G4?	S3?
<i>Carex integra</i>	Small-fruited sedge meadows	G4?	S2?
<i>Carex luzulina</i>	Woodland sedge fens	G3	S2?
<i>Carex lyngbyei</i>	Lyngbye's sedge swathes	GNR	S1
<i>Carex nudata</i>	Torrent sedge patches	G3	S3
<i>Carex obnupta</i> - <i>Oenanthe sarmentosa</i> - <i>Scirpus microcarpus</i>	Slough sedge - Water-parsley - Small-fruited bulrush marsh	G4	S3
<i>Ceanothus</i> (<i>oliganthus</i> , <i>tomentosus</i>)	Hairy leaf - woolly leaf ceanothus chaparral	G3	S3
<i>Cephalanthus occidentalis</i>	Button willow thickets	G5	S2
<i>Chamaecyparis lawsoniana</i>	Port Orford cedar forest and woodland	G3	S3.1
<i>Chrysolepis sempervirens</i>	Bush chinquapin chaparral	G4	S3.3
<i>Corylus cornuta</i> var. <i>californica</i>	Hazelnut scrub	G3	S2?
<i>Darlingtonia californica</i>	California pitcher plant fens	G4?	S3
<i>Deschampsia cespitosa</i> - <i>Festuca rubra</i> Brackish Salt Marsh	Tufted hairgrass - Red fescue brackish salt marsh	GNR	S2
<i>Deschampsia cespitosa</i> - <i>Hordeum brachyantherum</i> - <i>Danthonia californica</i>	Coastal tufted hair grass - Meadow barley - California oatgrass meadow	GNR	S3

Scientific Name	Common Name	Global rarity	State rarity
<i>Diplacus aurantiacus</i>	Bush monkeyflower scrub	G3	S3?
<i>Equisetum</i> (arvense, variegatum, hyemale)	Field horsetail - scouringrush horsetail - variegated scouringrush wet meadow	GNR	S3S4
<i>Eriophyllum staechadifolium</i> - <i>Erigeron glaucus</i> - <i>Eriogonum latifolium</i>	Seaside woolly-sunflower - seaside daisy - buckwheat patches	G3	S3
<i>Festuca idahoensis</i> - <i>Danthonia californica</i>	Idaho fescue - California oatgrass grassland	GNR	S3
<i>Frangula californica</i> - <i>Rhododendron occidentale</i> - <i>Salix breweri</i>	California coffee berry - western azalea scrub - Brewer's willow	G3	S3
<i>Frankenia salina</i>	Alkali heath marsh	G4	S3
<i>Fraxinus latifolia</i>	Oregon ash groves	G4	S3.2
<i>Glyceria</i> ã—occidentalis	Northwest manna grass marshes	G3?	S3?
<i>Grindelia</i> (stricta)	Gum plant patches	G2G3	S2S3
<i>Hesperocyparis</i> (pigmaea, abramsiana, macrocarpa, goveniana)	California coastal cypress woodland	G2	S2
<i>Hesperocyparis</i> (sargentii, macnabiana)	Ultramafic cypress woodland	G3	S3
<i>Heterotheca</i> (oregona, sessiliflora)	Goldenaster patches	G3	S3
<i>Hydrocotyle</i> (ranunculoides, umbellata)	Mats of floating pennywort	G4	S3?
<i>Isoetes</i> (bolanderi, echinospora, howellii, nuttallii, occidentalis)	Quillwort beds	G3	S3?
<i>Juglans hindsii</i> and Hybrids	Hinds's™ walnut and related stands	G1	S1.1
<i>Juncus</i> (effusus, patens) - <i>Carex</i> (pansa, praegracilis)	Soft and western rush - Sedge marshes	G4?	S3S4
<i>Juncus</i> (oxymeris, xiphioides)	Iris-leaf rush seeps	G2?	S2?
<i>Lasthenia glaberrima</i>	Smooth goldfields vernal pool bottoms	G2	S2
<i>Leymus cinereus</i> - <i>Leymus triticoides</i>	Ashy ryegrass - Creeping wildrye turfs	G3	S3
<i>Leymus mollis</i>	Sea lyme grass patches	G4	S2
<i>Lupinus chamissonis</i> - <i>Ericameria ericoides</i>	Silver dune lupine - mock heather scrub	G3	S3
<i>Mimulus</i> (guttatus)	Common monkey flower seeps	G4?	S3?
<i>Nassella</i> spp. - <i>Melica</i> spp.	Needle grass - Melic grass grassland	G3G4	S3S4
<i>Notholithocarpus densiflorus</i>	Tanoak forest	G4	S3.2
<i>Nuphar lutea</i>	Yellow pond-lily mats	G5	S3?
<i>Picea sitchensis</i>	Sitka spruce forest and woodland	G5	S2
<i>Pinus balfouriana</i>	Foxtail pine woodland	G3	S3
<i>Pinus contorta</i> ssp. contorta	Beach pine forest and woodland	G5	S3
<i>Pinus muricata</i> - <i>Pinus radiata</i>	Bishop pine - Monterey pine forest and woodland	G3	S3.2
<i>Populus fremontii</i> - <i>Fraxinus velutina</i> - <i>Salix gooddingii</i>	Fremont cottonwood forest and woodland	G4	S3.2
<i>Populus trichocarpa</i>	Black cottonwood forest and woodland	G5	S3
<i>Pseudotsuga menziesii</i> - <i>Calocedrus decurrens</i>	Douglas fir - incense cedar forest and woodland	G3	S3
<i>Pseudotsuga menziesii</i> - <i>Notholithocarpus densiflorus</i>	Douglas fir - tanoak forest and woodland	G3	S3

Scientific Name	Common Name	Global rarity	State rarity
<i>Quercus garryana</i> (tree)	Oregon white oak woodland and forest	G4	S3
<i>Quercus lobata</i>	Valley oak woodland and forest	G3	S3
<i>Quercus lobata</i> Riparian	Valley oak riparian forest and woodland	G3	S3
<i>Quercus wislizeni</i> - <i>Quercus chrysolepis</i> (shrub)	Canyon live oak - Interior live oak chaparral	G4	S3S4
<i>Rhododendron columbianum</i>	Western Labrador-tea thickets	G4	S2
<i>Rubus spectabilis</i> - <i>Morella californica</i>	Salmonberry - Wax myrtle scrub	G4	S3
<i>Ruppia</i> (<i>cirrhusa</i> , <i>maritima</i>)	Ditch-grass or widgeon-grass mats	G4?	S2
<i>Salix gooddingii</i> - <i>Salix laevigata</i>	Goodding's willow - red willow riparian woodland and forest	G4	S3
<i>Salix hookeriana</i> - <i>Salix sitchensis</i> - <i>Spiraea douglasii</i>	Coastal dune willow - Sitka willow - Douglas spiraea thickets	G4	S3
<i>Salix lucida</i> ssp. <i>lasiandra</i>	Shining willow groves	G4	S3.2
<i>Sarcocornia pacifica</i> (<i>Salicornia depressa</i>)	Pickleweed mats	G4	S3
<i>Schoenoplectus</i> (<i>acutus</i> , <i>californicus</i>)	Hardstem and California bulrush marshes	GNR	S3S4
<i>Schoenoplectus americanus</i>	Common Three-square marsh	G5	S3.2
<i>Scirpus microcarpus</i>	Small-fruited bulrush marsh	G4	S2
<i>Selaginella</i> (<i>bigelovii</i> , <i>wallacei</i>)	Bushy spikemoss mats	G4	S3
<i>Sequoia sempervirens</i>	Redwood forest and woodland	G3	S3.2
<i>Sparganium</i> (<i>angustifolium</i>)	Mats of bur-reed leaves	G4	S3?
<i>Spartina foliosa</i>	California cordgrass marsh	G3	S3.2
<i>Stuckenia</i> (<i>pectinata</i>) - <i>Potamogeton</i> spp.	Pondweed mats	G3G5	S3?
<i>Torreyochloa pallida</i>	Floating mats of weak manna grass	G3	S3?
<i>Trifolium variegatum</i>	White-tip clover swales	G3?	S3?
<i>Tsuga heterophylla</i>	Western hemlock forest	G5	S2
<i>Umbellularia californica</i>	California bay forest and woodland	G4	S3
<i>Vaccinium uliginosum</i>	Bog blueberry wet meadows	G4	S3
<i>Vitis arizonica</i> - <i>Vitis girdiana</i>	Wild grape shrubland	G3	S3
<i>Zostera</i> (<i>marina</i> , <i>pacifica</i>) Pacific Aquatic	Eelgrass beds	GNR	S3

APPENDIX D Plant List

Scientific Name	Common Name
<i>Alnus rubra</i>	red alder
<i>Anthoxanthum odoratum</i>	sweet vernal grass
<i>Athyrium filix-femina</i>	lady fern
<i>Bellis perennis</i>	English daisy
<i>Buddleja</i> sp.	butterfly bush
<i>Cardamine oligosperma</i>	western bittercress
<i>Carex hendersonii</i>	Henderson's sedge
<i>Carex leptopoda</i>	short-scaled sedge
<i>Claytonia sibirica</i>	Siberian candyflower
<i>Cortaderia jubata</i>	pampas grass
<i>Cotoneaster panosa</i>	cotoneaster
<i>Crocoshia</i> sp.	crocoshia
<i>Dactylis glomerata</i>	orchard grass
<i>Danthonia californica</i>	California oatgrass
<i>Dicentra formosa</i>	Pacific bleeding heart
<i>Dryopteris expansa</i>	wood fern
<i>Frangula pushiana</i>	casara
<i>Fuschia</i> sp.	fushia
<i>Galium muricatum</i>	Humboldt bedstraw
<i>Galium</i> sp.	bedstraw
<i>Gaultheria shallon</i>	salal
<i>Geranium molle</i>	dovefoot geranium
<i>Geranium robertianum</i>	Robert's geranium
<i>Hedera helix</i>	English ivy
<i>Hypochaeris radicata</i>	hairy cat's-ear
<i>Ilex aquifolium</i>	English holly
<i>Iris douglasiana</i>	Douglas iris
<i>Leucanthemum vulgare</i>	ox-eye daisy
<i>Luzula comosa</i>	common wood rush
<i>Lysichiton americanum</i>	skunk cabbage
<i>Morella californica</i>	wax myrtle
<i>Oxalis corniculata</i>	creeping wood sorrel
<i>Oxalis oregana</i>	redwood sorrel
<i>Petasites frigidis</i> var. <i>palmatius</i>	western coltsfoot
<i>Picea sitchensis</i>	Sitka spruce
<i>Plantago lanceolata</i>	English plantain
<i>Plantago major</i>	common plantain
<i>Polystichum munitum</i>	sword fern
<i>Prunella vulgaris</i>	self-heal

Scientific Name	Common Name
<i>Pseudotsuga menziesii</i>	Douglas-fir
<i>Pteridium aquilinum</i> var. <i>pubescens</i>	bracken fern
<i>Ranunculus repens</i>	creeping buttercup
<i>Rhododendron macrophyllum</i>	California rose-bay
<i>Ribes menziesii</i>	canyon gooseberry
<i>Rosa</i> sp.	rose
<i>Rubus armeniacus</i>	Himalayan blackberry
<i>Rubus parviflorus</i>	thimbleberry
<i>Rubus spectabilis</i>	salmonberry
<i>Rubus ursinus</i>	California blackberry
<i>Sambucus racemosa</i> var. <i>racemosa</i>	red elderberry
<i>Stachys rigida</i>	rough hedgenettle
<i>Stellaria media</i>	common chickweed
<i>Struthiopteris spicant</i>	deer fern
<i>Taraxacum officinale</i>	dandelion
<i>Thuja plicata</i>	western red cedar
<i>Trifolium dubium</i>	little hop clover
<i>Trifolium repens</i>	white clover
<i>Trifolium subterraneum</i>	subterranean clover
<i>Trisetum cernuum</i>	nodding trisetum
<i>Tsuga heterophylla</i>	western hemlock
<i>Umbellularia californica</i>	California-bay
<i>Vaccinium ovatum</i>	evergreen huckleberry
<i>Vaccinium parvifolium</i>	red huckleberry
<i>Vancouveria</i> sp.	inside-out flower
<i>Viola sempervirens</i>	evergreen violet

APPENDIX E Photos



Photo 1. Riparian habitat with a canopy of red alder along the tributary of Rose Creek.



Photo 2. Sitka spruce forest with an understory of huckleberry, salal, and other native plants characteristic of the undisturbed portions of the parcel.



Photo 3. Stand of spruce trees west of the residence with mowed park-like understory.



Photo 4. Grassy field in the southern part of the property outside the Sitka spruce Forest and the SMA where new development could occur.