

**LIMITED BIOLOGICAL SCOPING  
SURVEY SUMMARY AND REDUCED BUFFER ANALYSIS**

FOR

420 NORTH HARBOR DRIVE  
FORT BRAGG, CA  
MENDOCINO COUNTY  
(APN 018-130-43)



*prepared by:*

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On February 26, 2021, a site visit was conducted by Teresa Spade of Spade Natural Resources Consulting at 420 North Harbor Drive, Fort Bragg (APN 018-130-43)(Figure 1). The purpose of the survey effort was to research and observe any potential for wetlands, special status plants, special status vegetation alliances, protected wildlife habitat, or streams or riparian areas that may be considered Environmentally Sensitive Habitat Areas according to the City of Fort Bragg Local Coastal Plan.

The area of a proposed wood fence is in the harbor, in the footprint of a temporary chain link fence, where dumping has occurred recently in the footprint of a demolished structure. The purpose of the fence is to protect the property from illegal dumping of trash. The fence would be built in a weedy area at the bottom of a hillslope where riparian vegetation is present nearby on the hill. The fence is not expected to result in detrimental impacts to natural resources of concern but will be placed within 100 feet of the riparian hillside associated with the Noyo River. The Noyo River is located roughly 450 feet to the west of the proposed fence and riparian area. The hillside riparian area is of low quality and does not afford the Noyo River any shading or other protections due to the presence of the working harbor and the distance between the riparian area and the water. The fence is expected to provide protection to the riparian area from illegal dumping at the bottom of the hill, and is therefore to be considered a protective device for the riparian zone.

### **Scoping:**

According to the California Native Plant Society Nine Quad Search, there are at the current time, 44 species of special status and uncommon plants that have a potential for presence at the site (Appendix A).

According to the California Natural Diversity Database search, in addition to special status plant species, there are several special status wildlife species with the potential for presence at the site (Appendix B). Of the wildlife species listed, there may be habitat on the site for western bumblebee, obscure bumblebee or migrating northern red legged frog near the project area. Additionally, nesting birds protected under the Migratory Bird Treaty Act may be present nearby.

According to the US Fish and Wildlife Wetlands Mapper, the Noyo River, a riverine water feature, is located roughly 450 feet west of the project area (Figure 2).

Lyons Location Map  
APN 018-130-43

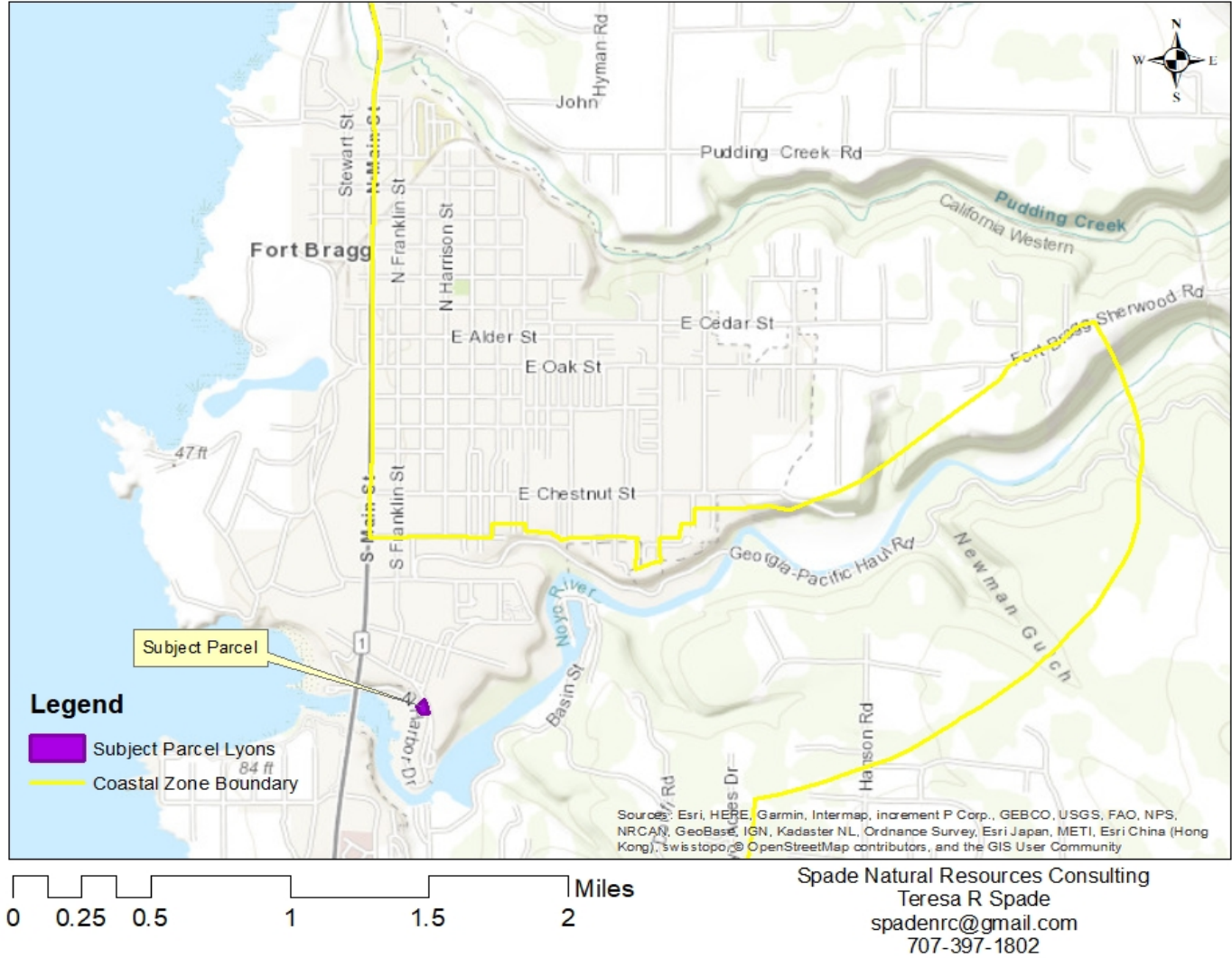


Figure 1. Location Map.

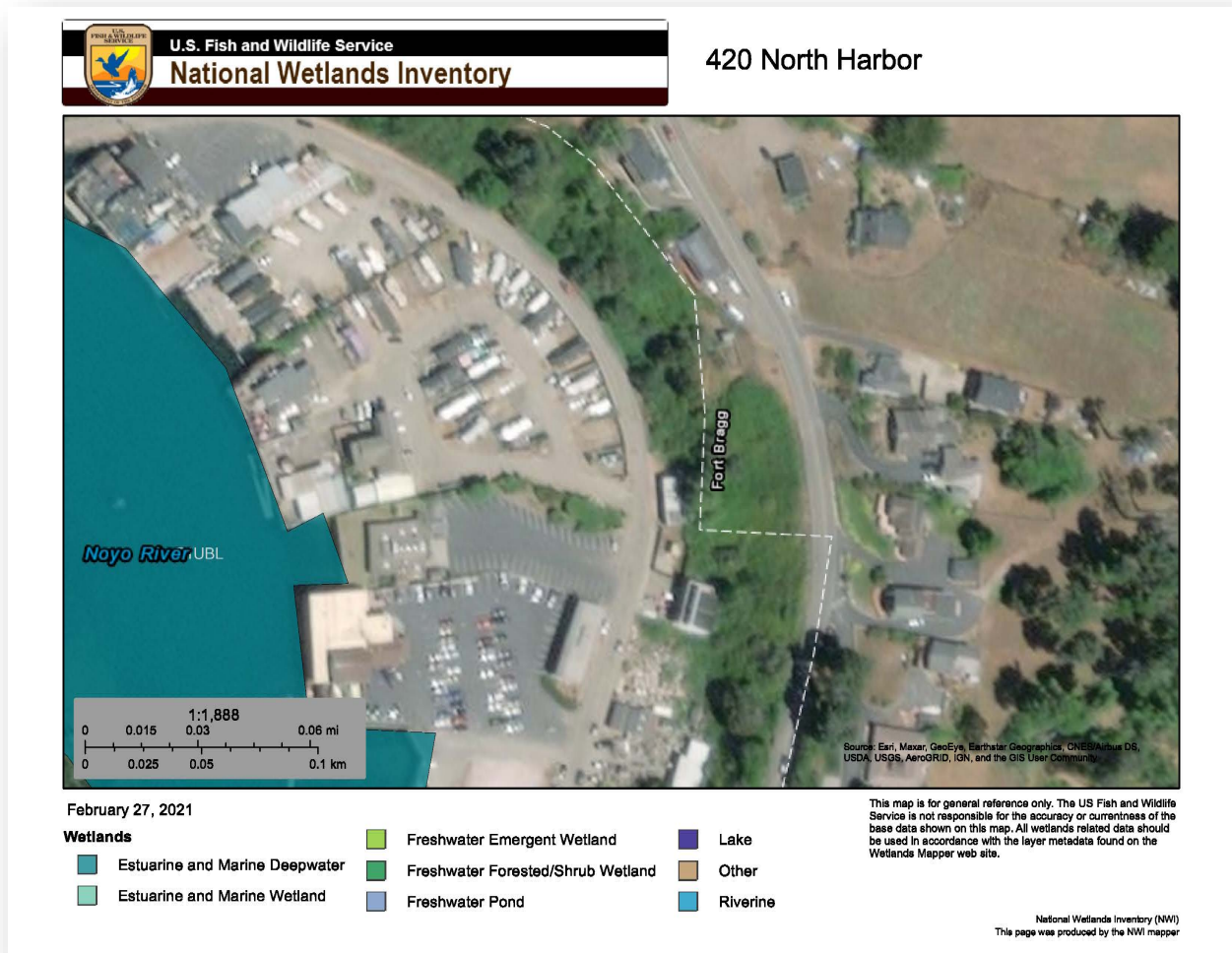


Figure 2. US Fish and Wildlife Service Wetlands Map.

## Scoping Survey Findings

I visited the site on February 26, 2021. This was a one-time visit to observe vegetation alliances, potential wetlands, and potential wildlife habitat. My findings are as follows:

### Special Status Plants

No special status plants were observed during the site visit, however special status plants may be present and observable during other times of the year, when they are in bloom and otherwise identifiable. It is unlikely that special status vegetation species are present within the area proposed for the fence as this is a

weedy ruderal area that has been highly impacted by the developed, working harbor. Due to the low likelihood of special status plant impacts because of the location and proposed low impact development, no additional botanical studies are recommended.

### **Vegetation Alliances**

Figure 3 shows the Wild Oats and Annual Brome Grassland in the vicinity of the proposed fence and Figure 4 shows the vegetation types observed on the property. These include Wild Oats and Annual Brome Grassland, Himalayan Blackberry Riparian Scrub, Red Alder Forest and Coastal Thimbleberry Brambles, and Willow Riparian Scrub. Overall the hillside is vegetated mostly by non-native, invasive Himalaya blackberry, with a remnant red alder tree, with some thimbleberry in and near the understory of the alder. A small area of willow is found to the north of the proposed fence, separated by a patch of Himalaya blackberry.

The hillside vegetation types, including Himalayan Blackberry Riparian Scrub, Red Alder Forest and Coastal Thimbleberry Brambles, and Willow Riparian Scrub that are located adjacent to the proposed fence are all considered riparian scrub type vegetation. Riparian areas are generally protected under the Coastal Act for the value they provide to anadromous fish streams. In this case there is too much separation between the Noyo River and the subject hillside for it to convey any shading or other protective values. Riparian areas may also be considered wetlands under the Coastal Act as the vegetative parameter of these areas may be dominated by hydrophytic vegetation species. Overall the hillside may experience some seasonal moisture given the presence of many plants there that can tolerate it. For this reason, the hillside, is presumed to be a wetland and riparian area. Although fences are not listed as an allowable use in the buffer of a wetland or riparian area, fences are commonly required in the buffer area for wetlands and riparian areas to provide protection of these resources. For this reason the proposed fence is appropriate in the buffer area to the hillside wetland and riparian zone.

Avoidance measures are recommended to prevent impacts to the wetland and riparian areas during fence construction.





Figure 3. Wild Oats and Annual Brome Grassland in the vicinity of the proposed fence.

Lyons Vegetation Map  
APN 018-130-43



Figure 4. Vegetation map.

### **Special Status Wildlife Habitat**

The project area wetland/riparian hillside has a low potential for habitat for special status bumblebees, migrating northern red-legged frog, and nesting birds protected under the Migratory Bird Treaty Act. Avoidance measures are recommended to ensure the project does not result in detrimental impacts to these protected wildlife species:

#### **Recommended Avoidance Measures:**

##### **1. Protection of adjacent wetland/riparian hillside during fence building**

No heavy equipment shall be used in the building of the fence. No vegetation removal shall occur within the adjacent riparian/wetland hillside during construction activities, with the exception being that invasive Himalayan blackberry may be removed from the existing temporary fence and flat areas as needed for the fence construction. All materials storage and staging associated with the fence construction shall occur within the flat portions of the property, which are not part of the riparian area.

The biological scoping survey has been conducted to facilitate the issuance of a permit to build within the Coastal Zone in the City of Fort Bragg. This limited analysis does not constitute a full floristic survey or formal wetland delineation, and no species-specific wildlife surveys were performed. The determinations outlined in this scoping reflect the professional opinion of Spade Natural Resources Consulting. Agencies may need to be consulted to determine if they are in agreement.



## Appendix A. Scoping Tables

**Table 1. CNPS Nine Quad Search**

CNPS Inventory Results

<http://www.rareplants.cnps.org/result.html?adv=t&cnps=1A:1B:2A:2B...>



### Inventory of Rare and Endangered Plants

\*The database used to provide updates to the Online Inventory is under construction. [View updates and changes made since May 2019 here.](#)

### Plant List

44 matches found. [Click on scientific name for details](#)

**Search Criteria**

California Rare Plant Rank is one of [1A, 1B, 2A, 2B, 3, 4], Found in Quads 3912357, 3912356, 3912347, 3912346, 3912337 and 3912336; Community is one of [Broadleaved upland forest, Chaparral, Coastal prairie, Coastal scrub, Riparian forest, Riparian scrub, Riparian woodland]

[Modify Search Criteria](#)
[Export to Excel](#)
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[Modify Sort](#)
[Display Photos](#)

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
<a href="#">Agrostis blasdalei</a>	Blasdale's bent grass	Poaceae	perennial rhizomatous herb	May-Jul	1B.2	S2	G2
<a href="#">Angelica lucida</a>	sea-watch	Apiaceae	perennial herb	May-Sep	4.2	S3	G5
<a href="#">Astragalus agnicidus</a>	Humboldt County milk-vetch	Fabaceae	perennial herb	Apr-Sep	1B.1	S2	G2
<a href="#">Blennosperma nanum var. robustum</a>	Point Reyes blennosperma	Asteraceae	annual herb	Feb-Apr	1B.2	S2	G4T2
<a href="#">Calamagrostis bolanderi</a>	Bolander's reed grass	Poaceae	perennial rhizomatous herb	May-Aug	4.2	S4	G4
<a href="#">Calamagrostis crassiglumis</a>	Thurber's reed grass	Poaceae	perennial rhizomatous herb	May-Aug	2B.1	S2	G3Q
<a href="#">Calystegia purpurata ssp. saxicola</a>	coastal bluff morning-glory	Convolvulaceae	perennial herb	(Mar)Apr-Sep	1B.2	S2S3	G4T2T3
<a href="#">Campanula californica</a>	swamp harebell	Campanulaceae	perennial rhizomatous herb	Jun-Oct	1B.2	S3	G3
<a href="#">Carex californica</a>	California sedge	Cyperaceae	perennial rhizomatous herb	May-Aug	2B.3	S2	G5
<a href="#">Carex saliniformis</a>	deceiving sedge	Cyperaceae	perennial rhizomatous herb	May-Jun(Jul)	1B.2	S2	G2
<a href="#">Castilleja ambigua var. ambigua</a>	johnny-nip	Orobanchaceae	annual herb (hemiparasitic)	Mar-Aug	4.2	S3S4	G4T4
<a href="#">Castilleja litoralis</a>	Oregon coast paintbrush	Orobanchaceae	perennial herb (hemiparasitic)	Jun-Jul	2B.2	S3	G3
<a href="#">Castilleja mendocinensis</a>	Mendocino Coast paintbrush	Orobanchaceae	perennial herb (hemiparasitic)	Apr-Aug	1B.2	S2	G2
<a href="#">Ceanothus gloriosus var. exaltatus</a>	glory brush	Rhamnaceae	perennial evergreen shrub	Mar-Jun(Aug)	4.3	S4	G4T4
<a href="#">Ceanothus gloriosus var. gloriosus</a>	Point Reyes ceanothus	Rhamnaceae	perennial evergreen shrub	Mar-May	4.3	S4	G4T4
<a href="#">Chorizanthe howellii</a>	Howell's spineflower	Polygonaceae	annual herb	May-Jul	1B.2	S1	G1
<a href="#">Chrysosplenium glechonifolium</a>	Pacific golden saxifrage	Saxifragaceae	perennial herb	Feb-Jun(Jul)	4.3	S3	G5?
<a href="#">Clarkia amoena ssp. whitneyi</a>	Whitney's farewell-to-spring	Onagraceae	annual herb	Jun-Aug	1B.1	S1	G5T1
<a href="#">Erigeron supplex</a>	supple daisy	Asteraceae	perennial herb	May-Jul	1B.2	S2	G2
<a href="#">Erysimum concinnum</a>	bluff wallflower	Brassicaceae	annual / perennial herb	Feb-Jul	1B.2	S2	G3
<a href="#">Fritillaria roderickii</a>	Roderick's fritillary	Liliaceae	perennial bulbiferous herb	Mar-May	1B.1	S1	G1Q
<a href="#">Gilia capitata ssp. pacifica</a>	Pacific gilia	Polemoniaceae	annual herb	Apr-Aug	1B.2	S2	G5T3
<a href="#">Hesperis matronalis var. brevifolia</a>	short-leaved evax	Asteraceae	annual herb	Mar-Jun	1B.2	S2	G4T3
<a href="#">Horkelia marinensis</a>	Point Reyes horkelia	Rosaceae	perennial herb	May-Sep	1B.2	S2	G2
<a href="#">Hosackia gracilis</a>	harlequin lotus	Fabaceae	perennial rhizomatous herb	Mar-Jul	4.2	S3	G3G4
<a href="#">Iris longipetala</a>	coast iris	Iridaceae	perennial rhizomatous herb	Mar-May	4.2	S3	G3

<a href="#">Lasthenia californica ssp. bakeri</a>	Baker's goldfields	Asteraceae	perennial herb	Apr-Oct	1B.2	S1	G3T1
<a href="#">Lasthenia californica ssp. macrantha</a>	perennial goldfields	Asteraceae	perennial herb	Jan-Nov	1B.2	S2	G3T2
<a href="#">Lathyrus palustris</a>	marsh pea	Fabaceae	perennial herb	Mar-Aug	2B.2	S2	G5
<a href="#">Lilium maritimum</a>	coast lily	Liliaceae	perennial bulbiferous herb	May-Aug	1B.1	S2	G2
<a href="#">Lilium rubescens</a>	redwood lily	Liliaceae	perennial bulbiferous herb	Apr-Aug(Sep)	4.2	S3	G3
<a href="#">Mitellastrca caulescens</a>	leafy-stemmed mitrewort	Saxifragaceae	perennial rhizomatous herb	(Mar)Apr-Oct	4.2	S4	G5
<a href="#">Oenothera wolffii</a>	Wolf's evening-primrose	Onagraceae	perennial herb	May-Oct	1B.1	S1	G2
<a href="#">Packera bolanderi var. bolanderi</a>	seacoast ragwort	Asteraceae	perennial rhizomatous herb	(Jan-Apr)May-Jul(Aug)	2B.2	S2S3	G4T4
<a href="#">Piperia candida</a>	white-flowered rein orchid	Orchidaceae	perennial herb	(Mar)May-Sep	1B.2	S3	G3
<a href="#">Pityopus californicus</a>	California pinefoot	Ericaceae	perennial herb (achlorophyllous)	(Mar-Apr)May-Aug	4.2	S4	G4G5
<a href="#">Pleuropogon refractus</a>	nodding semaphore grass	Poaceae	perennial rhizomatous herb	(Mar)Apr-Aug	4.2	S4	G4
<a href="#">Sanguisorba officinalis</a>	great burnet	Rosaceae	perennial rhizomatous herb	Jul-Oct	2B.2	S2	G5?
<a href="#">Sidalcea malachroides</a>	maple-leaved checkerbloom	Malvaceae	perennial herb	(Mar)Apr-Aug	4.2	S3	G3
<a href="#">Sidalcea malviflora ssp. purpurea</a>	purple-stemmed checkerbloom	Malvaceae	perennial rhizomatous herb	May-Jun	1B.2	S1	G5T1
<a href="#">Triquetrella californica</a>	coastal triquetrella	Pottiaceae	moss		1B.2	S2	G2
<a href="#">Usnea longissima</a>	Methuselah's beard lichen	Parmeliaceae	fruticose lichen (epiphytic)		4.2	S4	G4
<a href="#">Veratrum fimbriatum</a>	fringed false-hellebore	Melanthiaceae	perennial herb	Jul-Sep	4.3	S3	G3
<a href="#">Viola palustris</a>	alpine marsh violet	Violaceae	perennial rhizomatous herb	Mar-Aug	2B.2	S1S2	G5

**Suggested Citation**

California Native Plant Society, Rare Plant Program. 2021. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website <http://www.rareplants.cnps.org> [accessed 22 February 2021].

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**Questions and Comments**

[rareplants@cnps.org](mailto:rareplants@cnps.org)

**Table 2. CNDDDB Search Fort Bragg Quad**



**Selected Elements by Common Name**  
**California Department of Fish and Wildlife**  
**California Natural Diversity Database**



Query Criteria: Quad> IS <(Fort Bragg (3912347))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
alpine marsh violet <i>Viola palustris</i>	PDVIO041G0	None	None	G5	S1S2	2B.2
angel's hair lichen <i>Ramalina thrausta</i>	NLLEC3S340	None	None	G5?	S2S3	2B.1
Baker's goldfields <i>Lasthenia californica</i> ssp. <i>bakeri</i>	PDAST5L0C4	None	None	G3T1	S1	1B.2
Blasdale's bent grass <i>Agrostis blasdalei</i>	PMPOA04060	None	None	G2	S2	1B.2
bluff wallflower <i>Erysimum concinnum</i>	PDBRA160E3	None	None	G3	S2	1B.2
Bolander's beach pine <i>Pinus contorta</i> ssp. <i>bolanderi</i>	PGPIN04081	None	None	G5T2	S2	1B.2
bunchberry <i>Cornus canadensis</i>	PDCOR01040	None	None	G5	S2	2B.2
California sedge <i>Carex californica</i>	PMCYP032D0	None	None	G5	S2	2B.2
coast lily <i>Lilium maritimum</i>	PMLIL1A0C0	None	None	G2	S2	1B.1
coastal bluff morning-glory <i>Calystegia purpurata</i> ssp. <i>saxicola</i>	PDCON040D2	None	None	G4T2T3	S2S3	1B.2
coastal triquetrella <i>Triquetrella californica</i>	NBMUS7S010	None	None	G2	S2	1B.2
dark-eyed gilia <i>Gilia millefoliata</i>	PDPLM04130	None	None	G2	S2	1B.2
deceiving sedge <i>Carex saliniformis</i>	PMCYP03BY0	None	None	G2	S2	1B.2
dwarf alkali grass <i>Puccinellia pumila</i>	PMPOA531L0	None	None	G4?	SH	2B.2
foothill yellow-legged frog <i>Rana boylei</i>	AAABH01050	None	Endangered	G3	S3	SSC
globose dune beetle <i>Coelus globosus</i>	IICOL4A010	None	None	G1G2	S1S2	
great burnet <i>Sanguisorba officinalis</i>	PDROS1L060	None	None	G5?	S2	2B.2
hair-leaved rush <i>Juncus supiniformis</i>	PMJUN012R0	None	None	G5	S1	2B.2
Howell's spineflower <i>Chorizanthe howellii</i>	PDPGN040C0	Endangered	Threatened	G1	S1	1B.2
Mendocino Coast paintbrush <i>Castilleja mendocinensis</i>	PDSCR0D3N0	None	None	G2	S2	1B.2



**Selected Elements by Common Name**  
**California Department of Fish and Wildlife**  
**California Natural Diversity Database**



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b>Mendocino dodder</b> <i>Cuscuta pacifica</i> var. <i>papillata</i>	PDCUS011A2	None	None	G5T1	S1	1B.2
<b>Mendocino Pygmy Cypress Forest</b> <i>Mendocino Pygmy Cypress Forest</i>	CTT83161CA	None	None	G2	S2.1	
<b>Menzies' wallflower</b> <i>Erysimum menziesii</i>	PDBRA160R0	Endangered	Endangered	G1	S1	1B.1
<b>North Coast phacelia</b> <i>Phacelia insularis</i> var. <i>continentis</i>	PDHYD0C2B1	None	None	G2T2	S2	1B.2
<b>northern red-legged frog</b> <i>Rana aurora</i>	AAABH01021	None	None	G4	S3	SSC
<b>obscure bumble bee</b> <i>Bombus caliginosus</i>	IHYM24380	None	None	G4?	S1S2	
<b>Oregon coast paintbrush</b> <i>Castilleja litoralis</i>	PDSCR0D012	None	None	G3	S3	2B.2
<b>Pacific gilia</b> <i>Gilia capitata</i> ssp. <i>pacifica</i>	PDPLM040B6	None	None	G5T3	S2	1B.2
<b>Pacific tailed frog</b> <i>Ascaphus truei</i>	AAABA01010	None	None	G4	S3S4	SSC
<b>perennial goldfields</b> <i>Lasthenia californica</i> ssp. <i>macrantha</i>	PDAST5L0C5	None	None	G3T2	S2	1B.2
<b>pink sand-verbena</b> <i>Abronia umbellata</i> var. <i>breviflora</i>	PDNYC010N4	None	None	G4G5T2	S2	1B.1
<b>Point Reyes blennosperma</b> <i>Blennosperma nanum</i> var. <i>robustum</i>	PDAST1A022	None	Rare	G4T2	S2	1B.2
<b>Point Reyes horkelia</b> <i>Horkelia marinensis</i>	PDROS0W0B0	None	None	G2	S2	1B.2
<b>purple-stemmed checkerbloom</b> <i>Sidalcea malviflora</i> ssp. <i>purpurea</i>	PDMAL110FL	None	None	G5T1	S1	1B.2
<b>pygmy cypress</b> <i>Hesperocyparis pygmaea</i>	PGCUP04032	None	None	G1	S1	1B.2
<b>pygmy manzanita</b> <i>Arctostaphylos nummularia</i> ssp. <i>mendocinoensis</i>	PDERI04280	None	None	G3?T1	S1	1B.2
<b>round-headed Chinese-houses</b> <i>Collinsia corymbosa</i>	PDSCR0H060	None	None	G1	S1	1B.2
<b>seacoast ragwort</b> <i>Packera bolanderi</i> var. <i>bolanderi</i>	PDAST8H0H1	None	None	G4T4	S2S3	2B.2
<b>short-leaved evax</b> <i>Hesperevax sparsiflora</i> var. <i>brevifolia</i>	PDASTE5011	None	None	G4T3	S3	1B.2
<b>southern torrent salamander</b> <i>Rhyacotriton variegatus</i>	AAAAJ01020	None	None	G3G4	S2S3	SSC
<b>Sphagnum Bog</b> <i>Sphagnum Bog</i>	CTT51110CA	None	None	G3	S1.2	



**Selected Elements by Common Name**  
**California Department of Fish and Wildlife**  
**California Natural Diversity Database**



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b>swamp harebell</b> <i>Campanula californica</i>	PDCAM02060	None	None	G3	S3	1B.2
<b>Ten Mile shoulderband</b> <i>Noyo intersessa</i>	IMGASC5070	None	None	G2	S2	
<b>tidewater goby</b> <i>Eucyclogobius newberryi</i>	AFCQN04010	Endangered	None	G3	S3	
<b>western bumble bee</b> <i>Bombus occidentalis</i>	IIHYM24250	None	Candidate Endangered	G2G3	S1	
<b>western pond turtle</b> <i>Emys marmorata</i>	ARAAD02030	None	None	G3G4	S3	SSC
<b>western snowy plover</b> <i>Charadrius nivosus nivosus</i>	ABNNB03031	Threatened	None	G3T3	S2	SSC
<b>white beaked-rush</b> <i>Rhynchospora alba</i>	PMCYP0N010	None	None	G5	S2	2B.2
<b>Whitney's farewell-to-spring</b> <i>Clarkia amoena ssp. whitneyi</i>	PDONA05025	None	None	G5T1	S1	1B.1

**Record Count: 49**



**Table 3. California Sensitive Natural Communities** A partial list of vegetation alliances occurring in coastal Mendocino County, is derived from the California Department of Fish and Wildlife’s “Sensitive Natural Communities,” (2019) (<https://www.wildlife.ca.gov/Data/VegCAMP/Natural-Communities>).

Scientific Name	Common Name	Global & State Rank
<b>Woodland and Forest Alliances and Stands</b>		
<i>Abies grandis</i> Alliance	Grand fir forest	G4 S2
<i>Abies grandis</i> – <i>Picea sitchensis</i> / <i>Gaultheria shallon</i> / <i>Polystichum munitum</i> Association	Grand fir forest	G1 S1
<i>Abies grandis</i> – <i>Tsuga heterophylla</i> / <i>Polystichum munitum</i> Association	Grand fir forest	G2 S1
<i>Acer macrophyllum</i> Alliance	Bigleaf maple forest	G4 S3
<i>Alnus rubra</i> Alliance	Red alder forest	G5 S4
<i>Arbutus menziesii</i> Alliance	Madrone forest	G4 S3
<i>Arbutus menziesii</i> – <i>Umbellularia californica</i> – ( <i>Notholithocarpus densiflorus</i> ) Association	Madrone forest	G3 S3?
<i>Eucalyptus spp</i> – <i>Ailanthus altissima</i> – <i>Robinia pseudoacacia</i> Association	Eucalyptus – tree of heaven – black locust groves semi natural	GNA SNA
<i>Hesperocyparis macrocarpa</i> Provisional Alliance	Monterey cypress semi-natural assn.	GNA SNA
<i>Hesperocyparis pigmaea</i> Alliance	Mendocino pygmy cypress woodland	G1 S1
<i>Hesperocyparis sargentii</i> Alliance	Sargent cypress woodland	G3 S3
<i>Notholithocarpus densiflorus</i> Alliance	Tanoak forest	G4 S3
<i>Picea sitchensis</i> Alliance	Sitka spruce forest	G5 S2
<i>Pinus attenuata</i> Alliance	Knobcone pine forest	G4 S4
<i>Pinus contorta</i> ssp. <i>contorta</i> Alliance	Beach pine forest	G5 S3
<i>Pinus muricata</i> Alliance	Bishop pine – Monterey pine forest	G3? S3?
<i>Pinus muricata</i> – ( <i>Arbutus menziesii</i> ) / <i>Vaccinium ovatum</i> Association	Bishop pine – Monterey pine forest	G2 S2
<i>Pinus muricata</i> – <i>Chrysolepis chrysophylla</i> / <i>Arctostaphylos nummularia</i> Association	Bishop pine – Monterey pine forest	G2 S2
<i>Pinus muricata</i> – <i>Notholithocarpus densiflorus</i> Association	Bishop pine – Monterey pine forest	G3 S3
<i>Pinus muricata</i> / <i>Arctostaphylos glandulosa</i> Association	Bishop pine – Monterey pine forest	G2 S2
<i>Pinus radiata</i> plantations	Bishop pine – Monterey pine forest	GNR SNR
<i>Pseudotsuga menziesii</i> Alliance	Douglas fir forest	G5 S4
<i>Pseudotsuga menziesii</i> – <i>Chrysolepis chrysophylla</i> – <i>Notholithocarpus densiflorus</i> Association	Douglas fir forest	G3 S3
<i>Pseudotsuga menziesii</i> / <i>Baccharis pilularis</i> Association	Douglas fir forest	G4 S4?
<i>Pseudotsuga menziesii</i> - <i>Notholithocarpus densiflorus</i> Association	Douglas fir - tanoak forest	G3 S3
<i>Pseudotsuga menziesii</i> – <i>Notholithocarpus densiflorus</i> / <i>Rhododendron macrophyllum</i> Association	Douglas fir - tanoak forest	G2 S2
<i>Salix laevigata</i> Alliance	Red willow thickets	G3 S3
<i>Salix lucida</i> Alliance	Shining willow groves	G4 S3
<i>Sequoia sempervirens</i> Alliance	Redwood forest	G3 S3
<i>Sequoia sempervirens</i> – <i>Chrysolepis chrysophylla</i> / <i>Arctostaphylos glandulosa</i>	Redwood forest	G2 S2?
<i>Sequoia sempervirens</i> – <i>Hesperocyparis pigmaea</i>	Redwood forest	G1 S1
<i>Tsuga heterophylla</i> Alliance	Western hemlock forest	G5 S2
<i>Umbellularia californica</i> Alliance	California bay forest	G3 S3
<b>Shrubland Alliances and Stands</b>		
<i>Arctostaphylos (canescens, manzanita, stanfordiana)</i> Alliance	Hoary, common and Stanford manzanita chaparral	G3 S3
<i>Arctostaphylos nummularia</i> Alliance	Glossy leaf manzanita chaparral	G2G3 S2S3
<i>Arctostaphylos (sensitive, glandulosa)</i> Alliance	Glossy leaf manzanita chaparral	G2G3 S2S3
<i>Arctostaphylos glandulosa</i> Alliance	Eastwood manzanita chaparral	G4 S4
<i>Baccharis pilularis</i> Alliance	Coyote brush scrub	G5 S5
<i>Baccharis pilularis</i> – <i>Ceanothus thyrsiflorus</i>	Coyote brush scrub	G3 S3?

Scientific Name	Common Name	Global & State Rank
<i>Baccharis pilularis</i> – <i>Frangula californica</i> – <i>Rubus</i> spp.	Coyote brush scrub	G2 S2
<i>Baccharis pilularis</i> – <i>Holodiscus discolor</i>	Coyote brush scrub	G3 S3?
<i>Baccharis pilularis</i> – <i>Lupinus arboreus</i>	Coyote brush scrub	G3 S3?
<i>Baccharis pilularis</i> / <i>Carex obnupta</i> – <i>Juncus patens</i>	Coyote brush scrub	G3 S3?
<i>Baccharis pilularis</i> / <i>Danthonia californica</i>	Coyote brush scrub	G2 S2
<i>Baccharis pilularis</i> / <i>Deschampsia cespitosa</i>	Coyote brush scrub	G2 S1
<i>Baccharis pilularis</i> / <i>Dudleya farinosa</i>	Coyote brush scrub	G3 S3?
<i>Baccharis pilularis</i> / <i>Eriophyllum staechadifolium</i>	Coyote brush scrub	G3 S3
<i>Baccharis pilularis</i> / <i>Polystichum munitum</i>	Coyote brush scrub	G3 S3?
Broom ( <i>Cytisus scoparius</i> and Others)	Broom patches	GNA SNA
<i>Ceanothus cuneatus</i> Alliance	Wedge leaf ceanothus chaparral; Buck brush chaparral	G4 S4
<i>Ceanothus thyrsiflorus</i> Alliance	Blue blossom chaparral	G4 S4
<i>Ceanothus thyrsiflorus</i> – <i>Rubus ursinus</i>	Blue blossom chaparral	G3 S3?
<i>Ceanothus thyrsiflorus</i> – <i>Vaccinium ovatum</i> – <i>Rubus parviflorus</i>	Blue blossom chaparral	G3 S3?
<i>Chrysolepis chrysophylla</i>	Golden chinquapin thickets	G2 S2
<i>Corylus cornuta</i> var. <i>californica</i> Alliance	Hazelnut scrub	G3 S2?
<i>Frangula californica</i> Alliance	California coffee berry scrub	G4 S4
<i>Garrya elliptica</i> Provisional Alliance	Coastal silk tassel scrub	G3? S3?
<i>Diplacis aurantiacus</i> Alliance	Bush monkeyflower scrub	G3 S3?
<i>Holodiscus discolor</i> Alliance	Ocean spray brush	G4 S3
<i>Lupinus arboreus</i> scrub	Yellow bush lupine scrub	G4 S4
<i>Morella californica</i> Alliance	Wax myrtle scrub	G3 S3
<i>Rhododendron columbianum</i> Alliance	Western Labrador-tea thickets	G4 S2?
<i>Rhododendron occidentale</i> Provisional Alliance	Western azalea patches	G3 S2?
<i>Rosa californica</i> Alliance	California rose briar patches	G3 S3
<i>Rubus</i> ( <i>parviflorus</i> , <i>spectabilis</i> , <i>ursinus</i> ) Alliance	Coastal brambles	G4 S3
<i>Gaultheria shallon</i> , <i>Rubus parviflorus</i> , <i>Rubus spectabilis</i> Alliance	Coastal brambles	G4 S3
<i>Rubus armeniacus</i>	Himalayan blackberry – rattlebox – edible fig riparian scrub	GNR SNR
<i>Rubus armeniacus</i> - <i>Rubus ursinus</i>	Himalayan blackberry – rattlebox – edible fig riparian scrub	GNR SNR
<i>Salix hookeriana</i> Alliance	Coastal dune willow thickets	G4 S3
<i>Salix lasiolepis</i> Alliance	Arroyo willow thickets	G4 S4
<i>Salix lasiolepis</i> – <i>Baccharis pilularis</i> – <i>Rubus ursinus</i>	Arroyo willow thickets	G3 S3
<i>Salix lasiolepis</i> – <i>Salix lucida</i>	Arroyo willow thickets	G3 S3?
<i>Salix lucida</i> ssp. <i>lasiandra</i> / <i>Equisetum arvense</i>	Booth's Willow – Geyer's Willow – Yellow Willow thickets	GNR S2
<i>Salix sitchensis</i> Alliance	Sitka willow thickets	G4 S3?

<i>Toxicodendron diversilobum</i> Alliance	Poison oak scrub	G4 S4
<i>Toxicodendron diversilobum</i> – <i>Baccharis pilularis</i> – <i>Rubus parviflorus</i>	Poison oak scrub	G3 S3?
<i>Toxicodendron diversilobum</i> – <i>Diplacis aurantiacus</i>	Poison oak scrub	G3 S3?
<b>Herbaceous Alliances and Stands</b>		
<i>Abronia latifolia</i> – <i>Erigeron glaucus</i> Alliance	Dune mat	G3 S3
<i>Abronia latifolia</i> – <i>Leymus mollis</i>	Dune mat	G3 S3
<i>Agrostis stolonifera</i> Alliance	Bent grass – tall fescue meadows	GNA SNA
<i>Agrostis stolonifera</i> – <i>Festuca arundinacea</i>	Bent grass – tall fescue meadows	GNA SNA
<i>Agrostis stolonifera</i> – <i>Festuca arundinacea</i>	Bent grass – tall fescue meadows	GNA SNA
<i>Ammophila Arenaria</i> Alliance	European beach grass swards	GNA SNA
<i>Argentina egedii</i>	Pacific silverweed marshes	G4 S2
<i>Avena barbata</i>	Wild oats and annual brome grasslands	GNA SNA
<i>Avena fatua</i>	Wild oats and annual brome grasslands	GNA SNA

Scientific Name	Common Name	Global & State Rank
<i>Briza maxima</i>	Wild oats and annual brome grasslands	GNA SNA
<i>Bromus diandrus</i>	Wild oats and annual brome grasslands	GNA SNA
<i>Bromus diandrus – Avena spp.</i>	Wild oats and annual brome grasslands	GNA SNA
<i>Bromus diandrus – Mixed herbs</i>	Wild oats and annual brome grasslands	GNA SNA
<i>Bromus hordeaceus – (Vicia villosa – Lolium perenne) – Trifolium hirtum</i>	Wild oats and annual brome grasslands	GNA SNA
<i>Bromus hordeaceus – Aira caryophyllea</i>	Wild oats and annual brome grasslands	GNA SNA
<i>Bromus hordeaceus – Amsinckia menziesii – Hordeum murinum</i>	Wild oats and annual brome grasslands	GNA SNA
<i>Bromus hordeaceus – Bromus tectorum</i>	Wild oats and annual brome grasslands	GNA SNA
<i>Bromus hordeaceus – Dichelostemma multiflorum</i>	Wild oats and annual brome grasslands	GNA SNA
<i>Bromus hordeaceus – Erodium botrys</i>	Wild oats and annual brome grasslands	GNA SNA
<i>Bromus hordeaceus – Erodium botrys – Plagiobothrys fulvus</i>	Wild oats and annual brome grasslands	GNA SNA
<i>Bromus hordeaceus – Hordeum spp. – Medicago polymorpha</i>	Wild oats and annual brome grasslands	GNA SNA
<i>Bromus hordeaceus – Leontodon saxatilis</i>	Wild oats and annual brome grasslands	GNA SNA
<i>Bromus hordeaceus – Limnanthes douglasii</i>	Wild oats and annual brome grasslands	GNA SNA
<i>Bromus hordeaceus – Taeniatherum caput-medusae</i>	Wild oats and annual brome grasslands	GNA SNA
<i>Bromus hordeaceus – Vulpia myuros var. hirsuta</i>	Wild oats and annual brome grasslands	GNA SNA
<i>Hypochaeris glabra – Vulpia bromoides</i>	Wild oats and annual brome grasslands	GNA SNA
<i>Bolboschoenus maritimus</i> Alliance	Salt marsh bulrush marshes	G4 S3
<i>Brassica nigra</i>	Upland mustards and other ruderal forbs	GNA SNA
<i>Brassica nigra – Bromus diandrus</i>	Upland mustards and other ruderal forbs	GNA SNA
<i>Raphanus sativus</i>	Upland mustards and other ruderal forbs	GNA SNA
<i>Bromus carinatus</i> Alliance	California brome – blue wildrye prairie	G3 S3
<i>Elymus glaucus</i> Alliance	California brome – blue wildrye prairie	G3 S3
<i>Pteridium aquilinum – Grass</i>	California brome – blue wildrye prairie	G3 S3
<i>Calamagrostis nutkaensis</i> Alliance	Pacific reed grass meadows	G4 S2
<i>Calamagrostis nutkaensis – Carex (obnupta) – Juncus (patens)</i>	Pacific reed grass meadows	G2 S1S2
<i>Calamagrostis nutkaensis / Baccharis pilularis</i>	Pacific reed grass meadows	G2 S1S2
<i>Camassia quamash</i> Alliance	Small camas meadows	G4? S3?
<i>Carex obnupta</i> Alliance	Slough sedge swards	G4 S3
<i>Carex obnupta – Juncus patens</i> Alliance	Slough sedge swards	G3 S3?
<i>Carex pansa</i> Alliance	Sand dune sedge swaths	G4? S3?
<i>Conium maculatum</i> Alliance	Poison hemlock or fennel patches	GNA SNA
<i>Foeniculum vulgare</i> Alliance	Poison hemlock or fennel patches	GNA SNA
<i>Cortaderia (jubata, selloana)</i> Alliance	Pampas grass patches	GNA SNA
<i>Cynosurus echinatus – Bromus hordeaceus – Avena fatua</i> Alliance	Annual dogtail grasslands	GNA SNA
<i>Danthonia californica</i> Alliance	California oat grass prairie	G4 S3
<i>Danthonia californica – (Briza maxima – Vulpia bromoides)</i>	California oat grass prairie	G4 S3
<i>Danthonia californica – Aira caryophyllea</i>	California oat grass prairie	G4 S2?
<i>Darlingtonia californica</i>	California pitcher plant fens	G4 S3?
<i>Deschampsia caespitosa</i> Alliance	Tufted hair grass meadows	G5 S4?
<i>Deschampsia caespitosa – Anthoxanthum odoratum</i>	Tufted hair grass meadows	G5 S4?
<i>Deschampsia caespitosa – Danthonia californica</i>	Tufted hair grass meadows	G2 S2
<i>Deschampsia caespitosa – Horkelia marinensis</i>	Tufted hair grass meadows	G3 S1
<i>Distichlis spicata</i>	Salt grass flats	GNR S4
<i>Eleocharis macrostachya</i> Alliance	Pale spike rush marshes	G4 S4
<i>Elymus glaucus</i> Alliance	Blue wild rye meadows	G3? S3?
<i>Festuca rubra</i> Alliance	Red fescue grassland	G4 S3?
<i>Festuca idahoensis</i> Alliance	Idaho fescue grassland	G4 S3?
<i>Glyceria occidentalis</i>	Northwest manna grass marshes	G3? S3?
<i>Grindelia (stricta)</i> Provisional Alliance	Gum plant patches	G2G3 S2S3
<i>Heterotheca (sessiflora)</i> Alliance	Goldenaster patches	G3 S3

Scientific Name	Common Name	Global & State Rank
<i>Hordeum brachyantherum</i> Alliance	Meadow barley patches	G4 S3?
<i>Juncus articus</i> (var. <i>balticus</i> , <i>mexicanus</i> )	Baltic and Mexican rush marshes	G5 S4
<i>Juncus effusus</i> Alliance	Soft rush marshes	G4 S4?
<i>Juncus (oxymeris, xiphioides)</i> Provisional Alliance	Iris-leaf rush seeps	G2? S2?
<i>Juncus lescurii</i> Alliance	Salt rush swales	G3 S2?
<i>Juncus patens</i> Provisional Alliance	Western rush marshes	G4? S4?
<i>Lasthenia californica</i> – <i>Plantage erecta</i> – <i>Vulpia microstachys</i> Alliance	California goldfields – dwarf plantain – small fescue flower fields	G4 S4
<i>Leymus mollis</i> Alliance	Sea lyme grass patches	G4 S2
<i>Leymus triticoides</i> Alliance	Creeping rye grass turfs	G5 S3
<i>Mimulus (guttatus)</i> Alliance	Common monkey flower seeps	G4? S3?
<i>Nassella pulchra</i> Alliance	Purple needle grass grassland	G4 S3?
<i>Poa secunda</i> Alliance	Curley bluegrass grassland	G4 S3?
<i>Schoenoplectus acutus</i> Alliance	Hardstem bulrush marsh	G5 S4
<i>Schoenoplectus californicus</i> Alliance	California bulrush marsh	G5 S4?
<i>Scirpus microcarpus</i> Alliance	Small-fruited bulrush marsh	G4 S2
<i>Solidago canadensis</i> Provisional Alliance	Canada goldenrod patches	G4? S4?
<i>Woodwardia fimbriata</i>	Woodwardia thicket	G3 S3.2
<b>Aquatic Vegetation</b>		
<i>Azolla (filiculoides, mexicana)</i> Provisional Alliance	Mosquito fern mats	G4 S4
<i>Hydrocotyle (ranunculoides, umbellata)</i> Alliance	Mats of floating pennywort	G4 S3?
<i>Lemna (minor)</i> and Relatives Provisional Alliance	Duckweed blooms	G5 S4?
<i>Nuphar lutea</i> Provisional Alliance	Yellow pond-lily mats	G5 S3?
<i>Oenanthe sarmentosa</i> Alliance	Water-parsley marsh	G4 S2?
<i>Sarcocornia pacifica (Salicornia depressa)</i> Alliance	Pickleweed mats	G4 S3
<i>Scirpus microcarpus</i>	Small fruited bulrush marsh	G4 S2
<i>Sparganium (angustifolium)</i> Alliance	Mats of bur-reed leaves	G4 S3?
<i>Typha (angustifolia, domingensis, latifolia)</i> Alliance	Cattail marshes	G5 S5

## Appendix B. Reduced Buffer Analysis .

Policy OS- 1.9 Utilize the following criteria to establish buffer areas:

**a. Biological Significance of Adjacent Lands.**

Lands adjacent to a wetland, stream, or riparian habitat area vary in the degree to which they are functionally related to these habitat areas. Functional relationships may exist if species associated with such areas spend a significant portion of their life cycle on adjacent lands. The degree of significance depends upon the habitat requirements of the species in the habitat area (e.g., nesting, feeding, breeding, or resting).

Where a significant functional relationship exists, the land supporting this relationship shall also be considered to be part of the ESHA, and the buffer zone shall be measured from the edge of these lands and be sufficiently wide to protect these functional relationships. Where no significant functional relationships exist, the buffer shall be measured from the edge of the ESHA that is adjacent to the proposed development.

No functional relationships are noted. Lands adjacent to the wetlands/riparian area are disturbed ruderal areas and non-native grasslands.

**b. Sensitivity of Species to Disturbance.** The width of the buffer zone shall be based, in part, on the distance necessary to ensure that the most sensitive species of plants and animals will not be disturbed significantly by the permitted development. Such a determination shall be based on the following after consultation with the Department of Fish and Game or others with similar expertise:

(1 b-i ) Nesting, feeding, breeding, resting, or other habitat requirements of both resident and migratory fish and wildlife species;

(1 b-ii ) An assessment of the short-term and long-term adaptability of various species to human disturbance;

(1 b-iii ) An assessment of the impact and activity levels of the proposed development on the resource.

No sensitive plant or wildlife species were observed. Avoidance measures are recommended to ensure the riparian/wetland areas where wildlife species would be present would not be disturbed by the proposed development.

**c. Erosion susceptibility.** The width of the buffer zone shall be based, in part, on an assessment of the slope, soils, impervious surface coverage, runoff characteristics, erosion potential, and vegetative cover of the parcel proposed for development and adjacent lands. A sufficient buffer to allow for the interception of any additional material eroded as a result of the proposed development should be provided.

The building envelope is relatively flat with low potential for detrimental impacts to sensitive areas from construction related erosion.

**d. Use natural topography.** Where feasible, use hills and bluffs adjacent to Environmentally Sensitive Habitat Areas, to buffer these habitat areas. Where otherwise permitted, include habitat areas. Include bluff faces in the buffer area.

There are no topographical features that would apply as a buffer to the wetlands/riparian plant communities.

**e. Use existing man-made features.** Where feasible, use man-made features such as roads and dikes to buffer environmentally sensitive habitat areas.

There are no existing cultural features to utilize in the proposed improvement area.

Policy OS- 1.9 Utilize the following criteria to establish buffer areas:

**J: Lot Configuration and Location of Existing Development.** Where an existing subdivision or other development is largely built-out and the buildings are a uniform distance from a habitat area, at least that same distance shall be required as a buffer whenever any new development is permitted. However, if that distance is less than one hundred (100) feet, additional mitigation measures (e.g., planting of native vegetation) shall be provided to ensure additional protection.

Development at the harbor is generally a similar distance to the wetland/riparian hillside. The proposed fence placement constitutes a mitigation measure to protect the sensitive wetland and riparian area.

**g. Type and Scale of Development Proposed.** The type and scale of the proposed development will, to a large degree, determine the size of the buffer zone necessary to protect the ESHA. Such evaluations shall be made on a case-by-case basis depending upon the resources involved, the degree to which adjacent lands are already developed, and the type of development already existing in the area.

Required buffer areas shall be measured from the following points as applicable :

The outer edge of the canopy of riparian vegetation for riparian ESHA, or from the top of stream bank where no riparian vegetation exists. The upland edge of a wetland for a wetland ESHA.

- The outer edge of the plants that comprise the rare plant community for rare plant community ESHA.

The proposed development consists of placement of a wood fence. This type and scale of development is considered very low impact and with the recommended avoidance measures is not expected to result in impacts to the adjacent hillside riparian wetland.



*Policy OS- 1.10 Permitted Uses within ESHA Buffers. Development within an Environmentally Sensitive Habitat Area buffer shall be limited to the following uses:*

*a. Wetland Buffer.*

- i. Uses allowed within the adjacent Wetland ESHA pursuant to Policy OS-1.3.*
- ii. Nature trails and interpretive signage designed to provide information about the value and protection of the resources.*
- iii. Invasive plant eradication projects if they are designed to protect and enhance habitat values.*

Although protective fencing is not listed as an allowable use within the wetland buffer, it is a protective measure that is commonly required in wetland buffer areas.

*b. Riparian Buffer.*

- i. Uses allowed within the adjacent River and Stream ESHA pursuant to Policy OS- 1.5 .*
- ii. Uses allowed within the adjacent ESHA pursuant to Policy OS-1.6.*
- iii. Buried pipelines and utility lines.*
- iv. Bridges.*
- v. Drainage and flood control facilities .*

Although protective fencing is not listed as an allowable use within the riparian buffer, it is a protective measure that is commonly required in riparian buffer areas.

*c. Other types of ESHA Buffer.*

- i. Uses allowed within the adjacent ESHA pursuant to Policy OS-1.6.*
- ii. Buried pipelines and utility lines.*
- iii. Bridges.*
- iv. Drainage and flood control facilities .*

No development is proposed within ESHA buffers other than the Wetland/Riparian Buffers addressed above.