

Botany and Wetland Assessment

SN Indianola LLC CO

Humboldt County

APN: 402-032-002, 402-032-035



**Prepared by
Hohman and Associates
November 29, 2023**

Setting

This document assesses potentially occurring special-status plants; and identifies potential impacts of wetland resources for parcels 402-032-002 & 402-032-035 owned by SN Indianola LLC CO. The property does not contain habitable structures or an existing road system.

The property is approximately 22.3 acres and is located in Section 17, Township 5 North, Range 1 East; HB&M, approximately 1,400' east of the Highway 101 and Indianola cutoff interchange on the Arcata South USGS 7.5' Quad. The property lies within the California Floristic Province, Northwestern California region, and North Coast sub-region. The project area is in the Fay Slough Cal Watershed (1110.000105). There are no rivers, sloughs, creeks, springs, or wet areas on the property. No areas of dune or coastal scrub habitat and no areas of true oak woodland or native coastal grassland are present within the study area.

Methods

Plants: Seasonally appropriate and floristically surveys for this project were conducted on 25 September 2021; 12 March and 4 July 2022. The surveys were conducted by Mr. James Regan. Mr. Regan holds a bachelors' degree in botany and has experience (20 years) working as a professional botanist in northern California. No plants considered sensitive, rare, threatened, or endangered (including candidate species) in the United States and/or The State of California were detected during seasonally appropriate surveys within the subject parcels. No un-common species included in CRPR 3 or 4 were detected during surveys. A list of sensitive plant species that have the potential to occur in this area is provided in Attachment A. This list is the result of a compilation of occurrence data from the California Native Plant Society (CNPS) and California Natural Diversity Database (CNDDB). Sources were queried for the Arcata South USGS 7.5' quadrangles and the 8 quadrangles immediately adjacent. Plant species with potential habitat within the project area are noted. All other species listed are described as existing in habitat types that are not found within the project area. Plant species ranked by the CNPS as California Rare Plant Rank (CRPR) 1 and 2 with potential habitat within the project area are considered the primary focus of seasonal surveys. CRPR list 3 and 4 plants are recorded and reported if found within the project area and will be considered for mitigation if appropriate. A complete list of species encountered and survey route map are provided in Attachment B.

Wetland: An assessment of potential impacts to adjacent watercourses or wetlands within the parcel boundary was conducted by interpretation of aerial photography and resource maps courtesy of Google Earth, the United States Geologic Survey (USGS) 7.5' Arcata South quadrangle map, Humboldt County Web GIS, and United States Fish and Wildlife Service (USFW) National Wetland Inventory. This assessment was supplemented by in field survey of the subject areas. In field survey was conducted on 12 March and 4 July 2022 by Mr. James Regan. Mr. Regan has a bachelor's degree in Botany and training and experience in wetland delineations and botanical survey and has conducted wetland surveys and delineations in Humboldt, Mendocino, and Trinity counties since 2008. No wetland or watercourse features were found within the mapped study area. All features are included on the attached Wetlands and Waters Plot Map as Attachment C.

I. Results Summary

No plants considered sensitive, rare, threatened, or endangered (including candidate species) in the United States and/or The State of California were detected during seasonally appropriate surveys within the subject parcels. No un-common species included in CRPR 3 or 4 were detected during surveys. No wetland or watercourse features were found within the mapped study area.

ATTACHMENT A

List of Potentially Occurring Sensitive Plant Species

Indianola 2022 – List of Potentially Occurring Sensitive Plant Species

| Scientific Name | Common Name | CRPR | GRank | SRank | CESA | FESA | Blooming Period | Habitat | Habitat in Study Area |
|---|-------------------------------|------|--------|-------|------|------|-----------------|--|-----------------------|
| <i>Abronia umbellata</i> var. <i>breviflora</i> | pink sand-verbena | 1B.1 | G4G5T2 | S2 | None | None | Jun-Oct | Coastal dunes | No |
| <i>Astragalus pycnostachyus</i> var. <i>pycnostachyus</i> | coastal marsh milk-vetch | 1B.2 | G2T2 | S2 | None | None | (Apr)Jun-Oct | Coastal dunes, Coastal scrub, Marshes and swamps | No |
| <i>Cardamine angulata</i> | seaside bittercress | 2B.2 | G4G5 | S3 | None | None | (Jan)Mar-Jul | Lower montane coniferous forest, North Coast coniferous forest | Potential |
| <i>Carex arcta</i> | northern clustered sedge | 2B.2 | G5 | S1 | None | None | Jun-Sep | Bogs and fens, North Coast coniferous forest | No |
| <i>Carex leptalea</i> | bristle-stalked sedge | 2B.2 | G5 | S1 | None | None | Mar-Jul | Bogs and fens, Marshes and swamps, Meadows and seeps | Potential |
| <i>Carex lyngbyei</i> | Lyngbye's sedge | 2B.2 | G5 | S3 | None | None | Apr-Aug | Marshes and swamps | No |
| <i>Carex praticola</i> | northern meadow sedge | 2B.2 | G5 | S2 | None | None | May-Jul | Meadows and seeps | Potential |
| <i>Castilleja ambigua</i> var. <i>humboldtiensis</i> | Humboldt Bay owl's-clover | 1B.2 | G4T2 | S2 | None | None | Apr-Aug | Marshes and swamps | No |
| <i>Castilleja litoralis</i> | Oregon coast paintbrush | 2B.2 | G3 | S3 | None | None | Jun | Coastal bluff scrub, Coastal dunes, Coastal scrub | No |
| <i>Chloropyron maritimum</i> ssp. <i>palustre</i> | Point Reyes salty bird's-beak | 1B.2 | G4?T2 | S2 | None | None | Jun-Oct | Marshes and swamps | No |
| <i>Collinsia corymbosa</i> | round-headed Chinese-houses | 1B.2 | G1 | S1 | None | None | Apr-Jun | Coastal dunes | No |
| <i>Erysimum menziesii</i> | Menzies' wallflower | 1B.1 | G1 | S1 | CE | FE | Mar-Sep | Coastal dunes | No |
| <i>Erythronium oregonum</i> | giant fawn lily | 2B.2 | G5 | S2 | None | None | Mar-Jun(Jul) | Cismontane woodland, Meadows and seeps | Potential |
| <i>Erythronium revolutum</i> | coast fawn lily | 2B.2 | G4G5 | S3 | None | None | Mar-Jul(Aug) | Bogs and fens, Broadleafed upland forest, North Coast coniferous forest | Potential |
| <i>Fissidens pauperculus</i> | minute pocket moss | 1B.2 | G3? | S2 | None | None | | North Coast coniferous forest | Potential |
| <i>Gilia capitata</i> ssp. <i>pacifica</i> | Pacific gilia | 1B.2 | G5T3 | S2 | None | None | Apr-Aug | Chaparral, Coastal bluff scrub, Coastal prairie, Valley and foothill grassland | Marginal |
| <i>Gilia millefoliata</i> | dark-eyed gilia | 1B.2 | G2 | S2 | None | None | Apr-Jul | Coastal dunes | No |

| Scientific Name | Common Name | CRPR | GRank | SRank | CESA | FESA | Blooming Period | Habitat | Habitat in Study Area |
|--|-----------------------------|------|-------|-------|------|------|-----------------------|---|-----------------------|
| <i>Hesperis matronalis</i> var. <i>brevifolia</i> | short-leaved evax | 1B.2 | G4T3 | S3 | None | None | Mar-Jun | Coastal bluff scrub, Coastal dunes, Coastal prairie | Marginal |
| <i>Lilium latibracteata</i> | California globe mallow | 1B.2 | G2G3 | S2 | None | None | Jun-Aug | Chaparral, Lower montane coniferous forest, North Coast coniferous forest, Riparian scrub | Potential |
| <i>Lasthenia californica</i> ssp. <i>macrantha</i> | perennial goldfields | 1B.2 | G3T2 | S2 | None | None | Jan-Nov | Coastal bluff scrub, Coastal dunes, Coastal scrub | No |
| <i>Lathyrus japonicus</i> | seaside pea | 2B.1 | G5 | S2 | None | None | May-Aug | Coastal dunes | No |
| <i>Lathyrus palustris</i> | marsh pea | 2B.2 | G5 | S2 | None | None | Mar-Aug | Bogs and fens, Coastal prairie, Coastal scrub, Lower montane coniferous forest, Marshes and swamps, North Coast coniferous forest | No |
| <i>Layia carnosa</i> | beach layia | 1B.1 | G2 | S2 | CE | FT | Mar-Jul | Coastal dunes, Coastal scrub | No |
| <i>Lilium occidentale</i> | western lily | 1B.1 | G1G2 | S1 | CE | FE | Jun-Jul | Bogs and fens, Coastal bluff scrub, Coastal prairie, Coastal scrub, Marshes and swamps, North Coast coniferous forest | Potential |
| <i>Monotropa uniflora</i> | ghost-pipe | 2B.2 | G5 | S2 | None | None | Jun-Aug(Sep) | Broadleafed upland forest, North Coast coniferous forest | Potential |
| <i>Montia howellii</i> | Howell's montia | 2B.2 | G3G4 | S2 | None | None | (Feb)Mar-May | Meadows and seeps, North Coast coniferous forest, Vernal pools | Potential |
| <i>Nocca fendleri</i> ssp. <i>californica</i> | Kneeland Prairie pennycress | 1B.1 | G5?T1 | S1 | None | FE | May-Jun | Coastal prairie | No |
| <i>Oenothera wolfii</i> | Wolf's evening-primrose | 1B.1 | G2 | S1 | None | None | May-Oct | Coastal bluff scrub, Coastal dunes, Coastal prairie, Lower montane coniferous forest | Potential |
| <i>Packera bolanderi</i> var. <i>bolanderi</i> | seacoast ragwort | 2B.2 | G4T4 | S2S3 | None | None | (Jan-Apr)May-Jul(Aug) | Coastal scrub, North Coast coniferous forest | Potential |
| <i>Piperia candida</i> | white-flowered rein orchid | 1B.2 | G3? | S3 | None | None | (Mar)May-Sep | Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest | Potential |
| <i>Sidalcea malviflora</i> ssp. <i>patula</i> | Siskiyou checkerbloom | 1B.2 | G5T2 | S2 | None | None | (Mar)May-Aug | Coastal bluff scrub, Coastal prairie, North Coast coniferous forest | Potential |
| <i>Sidalcea oregana</i> ssp. <i>eximia</i> | coast checkerbloom | 1B.2 | G5T1 | S1 | None | None | Jun-Aug | Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest | Potential |

| Scientific Name | Common Name | CRPR | GRank | SRank | CESA | FESA | Blooming Period | Habitat | Habitat in Study Area |
|--|--------------------------|------|--------|-------|------|------|-----------------------|--|-----------------------|
| <i>Silene scouleri</i> ssp. <i>scouleri</i> | Scouler's catchfly | 2B.2 | G5T4T5 | S2S3 | None | None | (Mar-May)Jun-Aug(Sep) | Coastal bluff scrub, Coastal prairie, Valley and foothill grassland | Potential |
| <i>Spergularia canadensis</i> var. <i>occidentalis</i> | western sand-spurrey | 2B.1 | G5T4 | S1 | None | None | Jun-Aug | Marshes and swamps | No |
| <i>Sulcaria spiralifera</i> | twisted horsehair lichen | 1B.2 | G3G4 | S2 | None | None | | Coastal dunes, North Coast coniferous forest | Potential |
| <i>Trichodon cylindricus</i> | cylindrical trichodon | 2B.2 | G4G5 | S2 | None | None | | Broadleafed upland forest, Meadows and seeps, Upper montane coniferous forest | Potential |
| <i>Viola palustris</i> | alpine marsh violet | 2B.2 | G5 | S1S2 | None | None | Mar-Aug | Bogs and fens, Coastal scrub | Potential |
| | | | | | | | | | |
| <i>Angelica lucida</i> | sea-watch | 4.2 | G5 | S3 | None | None | Apr-Sep | Coastal bluff scrub, Coastal dunes, Coastal scrub, Marshes and swamps | No |
| <i>Astragalus rattanii</i> var. <i>rattanii</i> | Rattan's milk-vetch | 4.3 | G4T4 | S4 | None | None | Apr-Jul | Chaparral, Cismontane woodland, Lower montane coniferous forest | No |
| <i>Chrysosplenium glechomifolium</i> | Pacific golden saxifrage | 4.3 | G5? | S3 | None | None | Feb-Jun | North Coast coniferous forest, Riparian forest | Potential |
| <i>Coptis laciniata</i> | Oregon goldthread | 4.2 | G4? | S3? | None | None | (Feb)Mar-May(Sep-Nov) | Meadows and seeps, North Coast coniferous forest | No |
| <i>Eleocharis parvula</i> | small spikerush | 4.3 | G5 | S3 | None | None | (Apr)Jun-Aug(Sep) | Marshes and swamps | No |
| <i>Epilobium septentrionale</i> | Humboldt County fuchsia | 4.3 | G4 | S4 | None | None | Jul-Sep | Broadleafed upland forest, North Coast coniferous forest | No |
| <i>Fritillaria purdyi</i> | Purdy's fritillary | 4.3 | G4 | S4 | None | None | Mar-Jun | Chaparral, Cismontane woodland, Lower montane coniferous forest | No |
| <i>Glehnia littoralis</i> ssp. <i>leiocarpa</i> | American glehnia | 4.2 | G5T5 | S2S3 | None | None | May-Aug | Coastal dunes | No |
| <i>Hemizonia congesta</i> ssp. <i>tracyi</i> | Tracy's tarplant | 4.3 | G5T4 | S4 | None | None | (Mar)May-Oct | Coastal prairie, Lower montane coniferous forest, North Coast coniferous forest | Potential |
| <i>Hosackia gracilis</i> | harlequin lotus | 4.2 | G3G4 | S3 | None | None | 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 | Yes |

| Scientific Name | Common Name | CRPR | GRank | SRank | CESA | FESA | Blooming Period | Habitat | Habitat in Study Area |
|---|---------------------------|------|-------|-------|------|------|------------------|---|-----------------------|
| | | | | | | | | coniferous forest, Valley and foothill grassland | |
| <i>Lathyrus glandulosus</i> | sticky pea | 4.3 | G3 | S3 | None | None | Apr-Jun | Cismontane woodland | No |
| <i>Lilium kelloggii</i> | Kellogg's lily | 4.3 | G3 | S3 | None | None | May-Aug | Lower montane coniferous forest, North Coast coniferous forest | Potential |
| <i>Lilium rubescens</i> | redwood lily | 4.2 | G3 | S3 | None | None | Apr-Aug(Sep) | Broadleafed upland forest, Chaparral, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest | Potential |
| <i>Listera cordata</i> | heart-leaved twayblade | 4.2 | G5 | S4 | None | None | Feb-Jul | Bogs and fens, Lower montane coniferous forest, North Coast coniferous forest | Potential |
| <i>Lycopodium clavatum</i> | running-pine | 4.1 | G5 | S3 | None | None | Jun-Aug(Sep) | Lower montane coniferous forest, Marshes and swamps, North Coast coniferous forest | Potential |
| <i>Mitellastris caulescens</i> | leafy-stemmed mitrewort | 4.2 | G5 | S4 | None | None | (Mar)Apr-Oct | Broadleafed upland forest, Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest | Potential |
| <i>Pityopus californicus</i> | California pinefoot | 4.2 | G4G5 | S4 | None | None | (Mar-Apr)May-Aug | Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest | Potential |
| <i>Pleuropogon refractus</i> | nodding semaphore grass | 4.2 | G4 | S4 | None | None | (Mar)Apr-Aug | Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest, Riparian forest | Potential |
| <i>Ribes laxiflorum</i> | trailing black currant | 4.3 | G5? | S3 | None | None | Mar-Jul(Aug) | North Coast coniferous forest | Potential |
| <i>Sidalcea malachroides</i> | maple-leaved checkerbloom | 4.2 | G3 | S3 | None | None | (Mar)Apr-Aug | Broadleafed upland forest, Coastal prairie, Coastal scrub, North Coast coniferous forest, Riparian woodland | Potential |
| <i>Tiarella trifoliata</i> var. <i>trifoliata</i> | trifoliate laceflower | 3.2 | G5T5 | S2S3 | None | None | (May)Jun-Aug | Lower montane coniferous forest, North Coast coniferous forest | Potential |

| Scientific Name | Common Name | CRPR | GRank | SRank | CESA | FESA | Blooming Period | Habitat | Habitat in Study Area |
|-------------------------|---------------------------|------|-------|-------|------|------|-----------------|--|-----------------------|
| <i>Usnea longissima</i> | Methuselah's beard lichen | 4.2 | G4 | S4 | None | None | | Broadleaved upland forest, North Coast coniferous forest | Potential |

ATTACHMENT B

List of Species Encountered and Survey Route Map

| | |
|--|--|
| Tree Layer | |
| <i>Abies grandis</i> | grand fir |
| <i>Alnus rubra</i> | red alder |
| <i>Eucalyptus globulus</i> | blue gum |
| <i>Frangula purshiana</i> | cascara |
| <i>Ilex aquifolium</i> | English holly |
| <i>Picea sitchensis</i> | Sitka spruce |
| <i>Pinus radiata</i> | Monterey pine |
| <i>Pseudotsuga menziesii</i> var. <i>menziesii</i> | Douglas-fir |
| <i>Salix babylonica</i> | weeping willow |
| <i>Salix scouleriana</i> | Scouler's willow |
| <i>Sequoia sempervirens</i> | coast redwood |
| <i>Thuja plicata</i> | western red cedar |
| Shrub Layer | |
| <i>Baccharis pilularis</i> | coyote brush |
| <i>Ceanothus thyrsiflorus</i> | blue blossom |
| <i>Cotoneaster</i> sp. | Cotoneaster |
| <i>Cytisus scoparius</i> | Scotch broom |
| <i>Gaultheria shallon</i> | salal |
| <i>Genista monspessulana</i> | French broom |
| <i>Lonicera involucrata</i> var. <i>ledebourii</i> | black twinberry |
| <i>Oemleria cerasiformis</i> | oso berry |
| <i>Prunus laurocerasus</i> | cherry laurel/ornamental |
| <i>Prunus</i> sp. | plum or cherry |
| <i>Rosa</i> sp. | rose |
| <i>Rubus armeniacus</i> | Himalayan blackberry |
| <i>Rubus parviflorus</i> | thimbleberry |
| <i>Rubus ursinus</i> | Pacific bramble or California blackberry |
| <i>Sambucus racemosa</i> var. <i>racemosa</i> | red elderberry |
| <i>Vaccinium ovatum</i> | evergreen huckleberry |
| <i>Vaccinium parvifolium</i> | red huckleberry |
| Herbaceous Layer | |
| <i>Agrostis</i> sp. | bent grass |
| <i>Allium triquetrum</i> | escaped ornamental onion |
| <i>Anthoxanthum occidentale</i> | vanilla grass |
| <i>Anthoxanthum odoratum</i> | sweet vernal grass |
| <i>Arctotheca calendula</i> | cape weed |
| <i>Asarum caudatum</i> | wild ginger |
| <i>Athyrium filix-femina</i> | lady fern |
| <i>Avena barbata</i> | slender wild oat |
| <i>Bellis perennis</i> | English daisy |
| <i>Briza maxima</i> | large quaking or rattlesnake grass |
| <i>Briza minor</i> | small quaking or rattlesnake grass |
| <i>Bromus sitchensis</i> var. <i>carinatus</i> | California brome |
| <i>Bromus laevipes</i> | woodland brome grass |
| <i>Cardamine californica</i> | California toothwort or milk maids |

| | |
|---------------------------------|--|
| <i>Cardamine hirsuta</i> | hairy bittercress |
| <i>Carex hendersonii</i> | Henderson's sedge |
| <i>Carex leptopoda</i> | short-scaled sedge |
| <i>Carex obnupta</i> | slough sedge |
| <i>Carex tumulicola</i> | foothill sedge |
| <i>Cerastium glomeratum</i> | mouse ear chickweed |
| <i>Cirsium vulgare</i> | bull thistle |
| <i>Claytonia perfoliata</i> | miner's lettuce |
| <i>Claytonia sibirica</i> | Siberian candyflower |
| <i>Conium maculatum</i> | poison hemlock |
| <i>Cortaderia jubata</i> | weedy pampas grass |
| <i>Crassula sp.</i> | pygmy weed |
| <i>Crepis capillaris</i> | smooth hawk's beard |
| <i>Crocsmia sp.</i> | crocsmia |
| <i>Cynosurus cristatus</i> | crested dogtail |
| <i>Cynosurus echinatus</i> | hedgehog dogtail grass |
| <i>Dactylis glomerata</i> | orchard grass |
| <i>Daucus carota</i> | wild carrot or Queen Anne's lace |
| <i>Delairea odorata</i> | cape ivy |
| <i>Epilobium ciliatum</i> | northern willow herb |
| <i>Erigeron canadensis</i> | horseweed |
| <i>Eschscholzia californica</i> | California poppy |
| <i>Euphorbia peplus</i> | petty spurge |
| <i>Festuca arundinacea</i> | tall fescue |
| <i>Fragaria chilensis</i> | beach strawberry |
| <i>Galium sp.</i> | bedstraw |
| <i>Geranium dissectum</i> | cut-leaved geranium |
| <i>Hedera helix</i> | English ivy |
| <i>Heracleum maximum</i> | cow parsnip |
| <i>Heuchera micrantha</i> | small-flowered alumroot |
| <i>Holcus lanatus</i> | common velvet grass |
| <i>Hydrocotyl ranunculoides</i> | marsh pennywort |
| <i>Hypericum perforatum</i> | Klamath weed or common St. John's-wort |
| <i>Hypericum sp.</i> | Ornamental |
| <i>Hypochaeris radicata</i> | hairy cat's-ear |
| <i>Iris douglasiana</i> | Douglas iris |
| <i>Juncus effusus</i> | common rush |
| <i>Lapsana communis</i> | nipplewort |
| <i>Lepidium didymum</i> | lesser wart-cress |
| <i>Leucanthemum vulgare</i> | ox-eye daisy |
| <i>Lonicera hispidula</i> | hairy honeysuckle |
| <i>Lupinus rivularis</i> | riverbank lupine |
| <i>Lysichiton americanus</i> | skunk cabbage |
| <i>Lysmachia arvensis</i> | scarlet pimpernel |
| <i>Maianthemum dilatatum</i> | false lily-of-the-valley |
| <i>Marah sp.</i> | wild cucumber |
| <i>Medicago sp.</i> | bur clover |
| <i>Narcissus sp.</i> | domestic daffodil |

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|--|------------------------------|
| <i>Osmorhiza berteroi</i> | mountain sweet-cicely |
| <i>Oxalis pes-cepre</i> | Bermuda buttercup |
| <i>Parentucellia viscosa</i> | yellow parentucellia |
| <i>Paspalum dilatatum</i> | Dallis grass |
| <i>Petasites frigidus</i> var. <i>palmatus</i> | western coltsfoot |
| <i>Plantago lanceolata</i> | English plantain |
| <i>Poa annua</i> | annual bluegrass |
| <i>Polygonum</i> sp. | knotweed |
| <i>Polypodium scolieri</i> | leather-leaf fern |
| <i>Polystichum munitum</i> | sword fern |
| <i>Prosartes</i> sp. | fairy bells |
| <i>Prunella vulgaris</i> | self-heal |
| <i>Ranunculus</i> sp. | buttercup |
| <i>Raphanus sativus</i> | wild radish |
| <i>Rumex acetosella</i> | sheep sorrel |
| <i>Rumex crispus</i> | curly dock |
| <i>Rumex pulcher</i> | fiddle dock |
| <i>Sagina</i> sp. | pearlwort |
| <i>Sanicula crassicaulis</i> | Pacific snakeroot |
| <i>Scirpus microcarpus</i> | small-flowered bulrush |
| <i>Scrophularia californica</i> | coast figwort |
| <i>Senecio jacobaea</i> | tansy ragwort |
| <i>Senecio minimus</i> | toothed coast fireweed |
| <i>Silybum marianum</i> | milk thistle |
| <i>Soliva sessilis</i> | field burrweed |
| <i>Sonchus</i> sp. | sow thistle |
| <i>Stachys</i> sp. | hedge-nettle |
| <i>Stellaria media</i> | common chickweed |
| <i>Struthiopteris spicant</i> | deer fern |
| <i>Symphyotrichum chilense</i> | common California aster |
| <i>Taraxacum officinale</i> | dandelion |
| <i>Tellima grandiflora</i> | fringe cups |
| <i>Tolmiea menziesii</i> | youth-on-age |
| <i>Tradescantia</i> sp. | spiderwort |
| <i>Trifolium pratense</i> | red clover |
| <i>Trifolium repens</i> | white clover |
| <i>Trillium ovatum</i> | western trillium |
| <i>Typha latifolia</i> | broadleaf cattail |
| <i>Vicia sativa</i> ssp. <i>sativa</i> | common vetch or spring vetch |
| <i>Viola sempervirens</i> | evergreen violet |

Indianola 2022
Survey Route Map
APN#s 402-032-002 and
402-032-035
Humboldt County CA.

Legend

 3/12/22

 7/4/22

 9/25/21

 Study Area



Google Earth

ATTACHMENT C

**Wetlands and Waters
Delineation**

Indianola 2022

Prepared by
J. Regan Consulting
Eureka, CA.
October 2022

For
MAD RIVER PROPERTIES, INC.
MCKINLEYVILLE, CA.

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Attachment A: General Location Map, Humboldt County Parcel Map, Soils Report, USFWS Wetland Map, Wetland and Waters Plot Map
Attachment B: ACOE Plot Forms

Summary of Findings

The approximate 22.3-acre study area was surveyed in March and July of 2022, well-within the growing season in a year with below average rainfall.

No wetland or watercourse features were found within the mapped study area.

Recommendations

No wetlands or watercourses were detected within the study area, no recommendations for protection or mitigation measures are proposed.

Introduction

The study area was assessed and surveyed for the presence of jurisdictional waters of both the State of California and of the United States of America as required by the federal Clean Water Act (CWA) and California's Porter-Cologne Water Quality Control Act. Methodologies used are described in full below.

Any wetlands or watercourses located within the surveyed area may be considered jurisdictional by either California Department of Fish and Wildlife (CDFW), The United States Army Corps of Engineers (ACOE), or the California Coastal Commission (CCC).

This report is the result of in field survey, reviews of relevant scientific literature, and professional knowledge. This survey report is intended to satisfy any project needs for the identification, classification, and delineation of wetlands or waters for avoidance or mitigation during any development activities.

Setting

The approximately 22.3-acre study area is located in Humboldt County, California on the Arcata South USGS 7.5' quadrangle. The subject parcels are accessed by Walker Point Road and are located east of Highway 101, west of Old Arcata Road and south of Indianola Cutoff Road. The study area lies just northeast of the boundary for the City of Eureka (see General Location Map in Attachment A). The parcels included within the study area are listed below.

APN#s

402-032-002

402-032-035

The subject parcels and all areas of potential development occur **within** the California Coastal Zone.

Habitat within the mapped study area is composed of a mix of several vegetation communities. Within the western half of the study area the north end is dominated by mature grand fir (*Abies grandis*) with some Douglas' fir (*Pseudotsuga menziesii*), and Monterey pine (*Pinus radiata*). This mature timber has an understory of often dense blackberry (*Rubus ursinus* and *Rubus armeniacus*) with some young alder (*Alnus rubra*), *Cotoneaster* sp., holly (*Ilex aquifolium*), cascara (*Frangula purshiana*), and sapling fir and pine trees. Several plum trees (*Prunus* sp.) are present in this area as well. A small area dominated by red alder and blackberry is adjacent to the grand fir stand. To the south the vegetation transitions to an open field composed of non-native grasses and often weedy forbs. On the south end of the open grassland a small patch of red alder and blackberry quickly gives way to a varied stand of mature redwood (*Sequoia sempervirens*). This redwood forest contains many large mature redwood, Douglas' fir, and grand fir trees and may contain old growth individuals. Timber harvest has occurred within a portion of the mature stand and patches of young redwood and fir trees are present. The stand transitions to a younger but still mature, Douglas' fir dominated forest to the east (at the south end of the eastern parcel) with a more open canopy and weedy understory of sometimes dense English ivy (*Hedera helix*) and others. The remainder of the eastern parcel is composed of a dense redwood plantation (established after 2005). The dense canopy and closely spaced trees leave little understory vegetation within this community. A small grassy opening exists along the eastern boundary, this area is composed of non-native grasses and contains some weedy Scotch and French broom (*Cytisus scoparius* and *Genista monspessulana*).

There are no areas of wetlands previously mapped by the United States Fish and Wildlife Service (USFWS) wetland map, included in Attachment B, within the study area.

Project area base maps courtesy of Google Earth, Humboldt County Web GIS, USFWS Wetland Mapper, and USDA Web Soil Survey are included as attachments at the end of this report.

Methods

An assessment of potential impacts to adjacent watercourses or wetlands within 500 feet of the areas of potential development was conducted by interpretation of aerial photography and resource maps courtesy of Google Earth, the United States Geologic Survey (USGS) 7.5' Arcata South quadrangle map, Humboldt County Web GIS, and United States Fish and Wildlife Service (USFW) National Wetland Inventory. This assessment was supplemented by in field survey of the subject areas. In field survey was conducted on 12 March and 4 July 2022 by Mr. James Regan. Mr. Regan has a bachelor's degree in Botany and training and experience in wetland delineations and botanical survey and has conducted wetland surveys and delineations in Humboldt, Mendocino, and Trinity counties since 2008.

Any mapped watercourses were identified using the U.S. Army Corps of Engineers (ACOE) "Guide to Ordinary High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States" (Merzel, Licvar 2014).

Potential wetlands and wetland boundaries were assessed using guidelines outlined in the ACOE Wetland Delineation Manual Technical Report Y-87-1 (referred to as the 1987 manual) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western

Mountains, Valleys and Coast Region. These manuals provide technical guidelines for identifying wetlands, distinguishing them from non-wetlands, and provide methods for applying the technical guidelines. Three key provisions of the ACOE wetland definition include:

- i. Inundated or saturated soil conditions resulting from permanent or periodic inundation by ground or surface water.
- ii. A prevalence of vegetation typically adapted for life in saturated soil conditions (hydrophytic vegetation)
- iii. The presence of “normal circumstances”

Explicit in the ACOE definition is the consideration of three environmental parameters: Hydrology, Vegetation, and Soils. Positive wetland indicators of all three parameters are normally present in wetlands. The ACOE methodology requires one positive indicator from each parameter in order to make a positive wetland determination.

This wetland and waters evaluation also utilized techniques from the technical manual A Hydrogeomorphic Classification of Wetlands (Brinson 1993) wherein wetlands are classified by land position and hydrologic regime.

Areas which were obvious wetlands and areas sampled with three positive indicators of wetland setting are identified as wetlands and are included on the Wetland and Waters Plot Maps in Attachment A. Watercourses and wetlands were classified as either Seasonal (Intermittent and Ephemeral) or Perennial. ACOE wetland delineation forms were completed for each sampled plot. These forms are included as Attachment B.

Vegetation

The ACOE Manual (1987) directs that presence of a single individual of hydrophytic species does not mean that hydrophytic vegetation is present. However, hydrophytic vegetation is considered to be present if 50% of the dominant species have indicator status of OBL, FACW or FAC.

- Obligate (OBL)—usually occurs within a wetland (estimated probability 99%)
- Facultative-wet (FACW)—usually occurs in wetlands (estimated probability 67-99%)
- Facultative (FAC)—equally likely to occur in wetlands or non-wetlands (estimated probability 33-67%)
- Facultative-upland (FACU)—usually occurs in non-wetlands (estimated probability 1-33%)
- Upland (UPL)—occurs almost always in non-wetlands (estimated probability 99%)
- Non-Indicator (NI)—scored as an upland plant and calculated as such on wetland determination forms

Dominant species are determined by estimating those having the greatest percentage of cover using the “50/20” rule. The “50/20” rule entails that for each sample point and associated plant

community, dominant species are the most abundant species, when ranked in descending order of abundance and cumulatively totaled, that immediately exceed 50% of the total dominance measure for the stratum, plus any additional species comprising 20% or more of the total dominance measure for each stratum. Absolute cover contribution was estimated for each sample plot, due to layering of species and strata percent cover values may exceed 100%. For marginal sites the FAC neutral test and the Prevalence Index were also utilized, these calculations (shown on attached forms) further analyze vegetation community using all species in the plot not just the dominant species.

Soils

Current USDA soils maps were obtained from the USDA Web Soil Survey and are included in Attachment A. The project area falls into a soil map units labeled as: **Hookton-Tablebluff Complex 2-9% solpes and Lepoil-Candymountain Complex 2-15% slopes.** 3 soil pits were excavated during this investigation. Soil pits were used to determine whether areas contained soil processes indicative of a wetland condition.

Hydrology

Each observation point for determination and delineation of watercourse and wetland boundaries was examined for indicators of wetland hydrology. The entire study area was surveyed twice in 2022 with emphasis on indicators of wetland hydrology.

Indicators of wetland hydrology include drainage patterns, drift lines, sediment deposits, watermarks, and visual observations of saturated soils and/or inundation. Drainage patterns were determined by observing any signs of surface flow into or through the subject parcel throughout the survey period. Aerial imagery was used courtesy of Google Earth and Humboldt County Web GIS.

This study was conducted in March and July of 2022, a period with below average annual rainfall.

Results/Recommendations

Wetlands and Waters Delineation

The approximate 22.3-acre study area was surveyed in March and July of 2022, well-within the growing season in a year with below average rainfall.

No wetland or watercourse features were found within the mapped study area.

Table 1 below contains a summary of the results of the 3 wetland plots installed during this investigation.

Table 1 Wetland Plot Results

| Plot # | Vegetation | Soils | Hydrology | Wetland | Notes |
|--------|------------|-------|-----------|---------|---|
| 1 | - | - | - | No | Top of shallow swale below irrigation pipe |
| 2 | + | - | - | No | Midslope in small depressional feature |
| 3 | - | - | - | No | Low point in field, just above Alder and blackberry patch |

Plot locations are included on the included Wetlands and Waters Plot Map.

2022 is a year with below average rainfall.

Recommendations

No wetlands or watercourses were detected within the study area, no recommendations for protection or mitigation measures are proposed.

Conditions and Limitations

This report is based on conditions observed and recorded within the mapped study areas during field visits in 2022. This report has not been reviewed nor has concurrence with the conclusions been obtained. Verification by agencies may be necessary in the future. Land use practices and regulations can change thereby affecting conditions and delineation results described herein.

This report and accompanying maps and data should be transmitted to the appropriate agents for review and included in any application for permits necessary for completion of any proposed development projects on the subject property.

The location and extent of mapped features is approximate. Maps are not to scale. In field survey and monumentation of pertinent features for buffering or mitigation planning may be required prior to the initiation of permitted activities.

Significance of wetlands and the necessity for mitigation during development is decided by regional agents of the appropriate federal, state, and local agencies if and when the site is reviewed for permitting purposes.

This report was prepared for exclusive use; consultants are not liable for any actions arising out of the reliance of any third party on the information contained in this report.

Please feel free to call with any questions.

James Regan



Botanist/Wetland Delineator
707-845-0821

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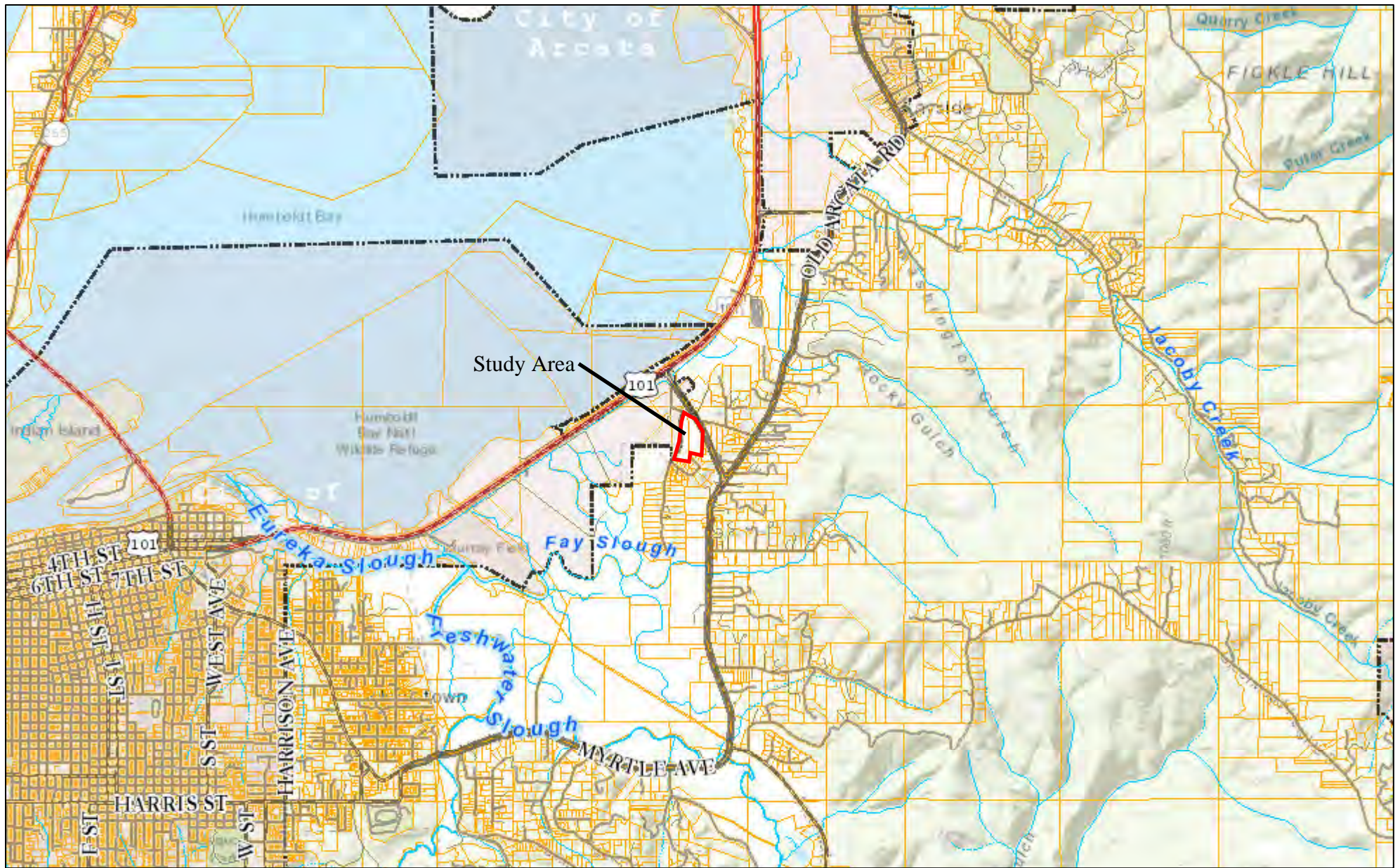
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Attachment A

General Location Map, Humboldt County Parcel Map, USFWS Wetland Map, USGS Soil Report, Wetland and Waters Plot Map



Indianola General Location Map

Humboldt County Planning and Building Department

Printed: September 28, 2022

Web AppBuilder 2.0 for ArcGIS

Map Disclaimer:
While every effort has been made to assure the accuracy of this information, it should be understood that it does not have the force & effect of law, rule, or regulation. Should any difference or error occur, the law will take precedence.

Highways and Roads

- Principal Arterials
- Minor Arterials
- Major Collectors
- Minor Collectors
- Local Roads

Blue Line Streams

- Perennial 1-3
- Perennial >4

Private or Unclassified

Major River or Stream

Intermittent

Subsurface

City Boundary

City Boundary (750K)

Counties

Parcels (no APN labels)

0 2,750 5,500 11,000 Feet

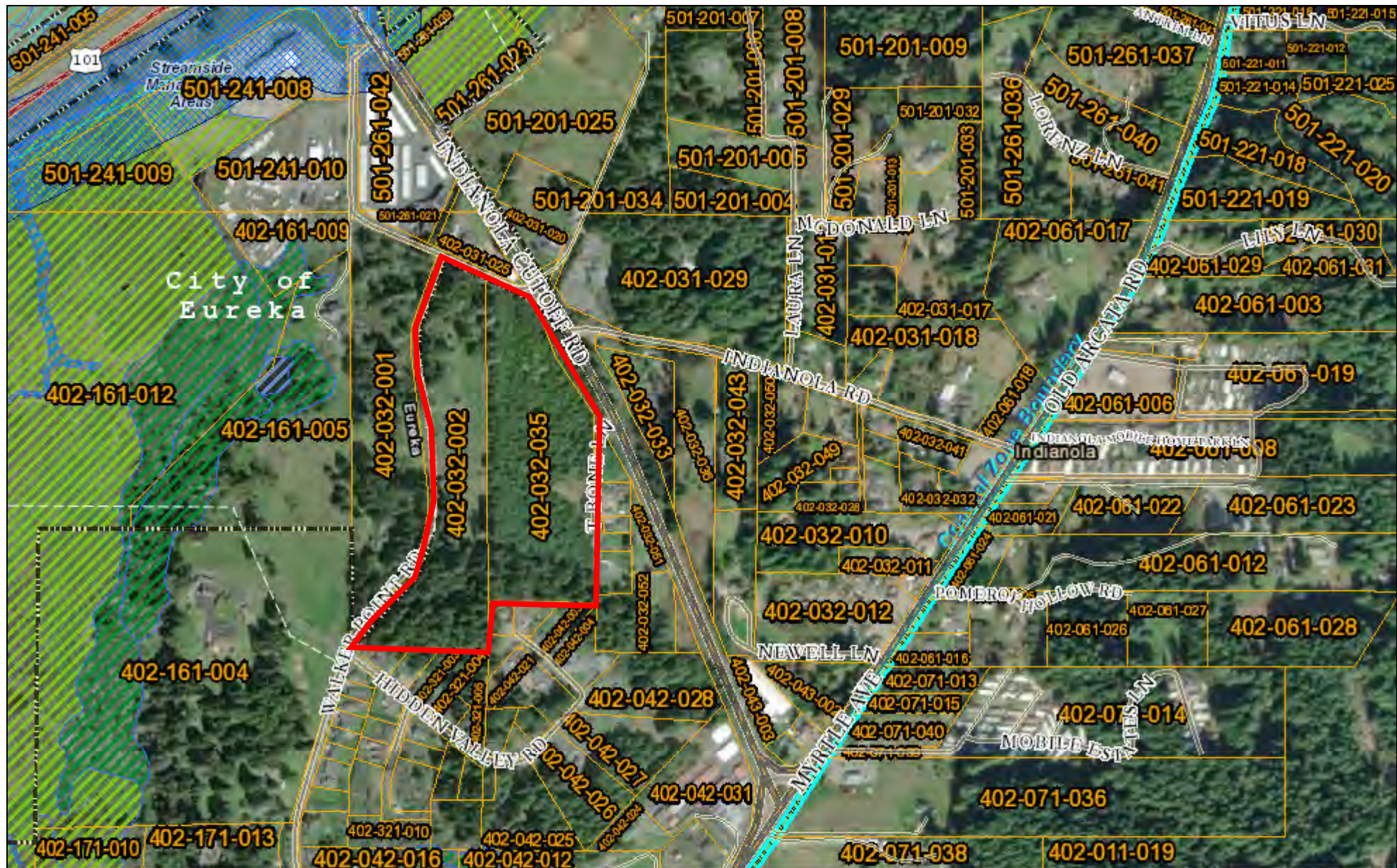
0 0.5 1 2 Miles

RF = 1:72,224

1 in = 6,019 ft



Sources: Humboldt County GIS
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community



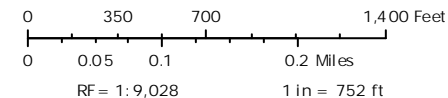
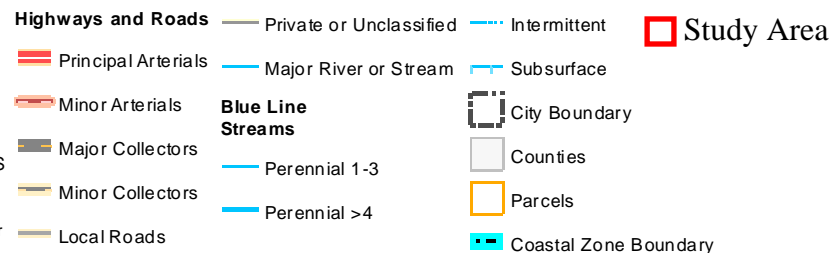
Indianola 2022

Humboldt County Planning and Building Department

Printed: September 28, 2022

Web AppBuilder 2.0 for ArcGIS

Map Disclaimer:
While every effort has been made to assure the accuracy of this information, it should be understood that it does not have the force & effect of law, rule, or regulation. Should any difference or error occur, the law will take precedence.



Sources: NRCS
Humboldt County GIS
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



September 28, 2022

Wetlands

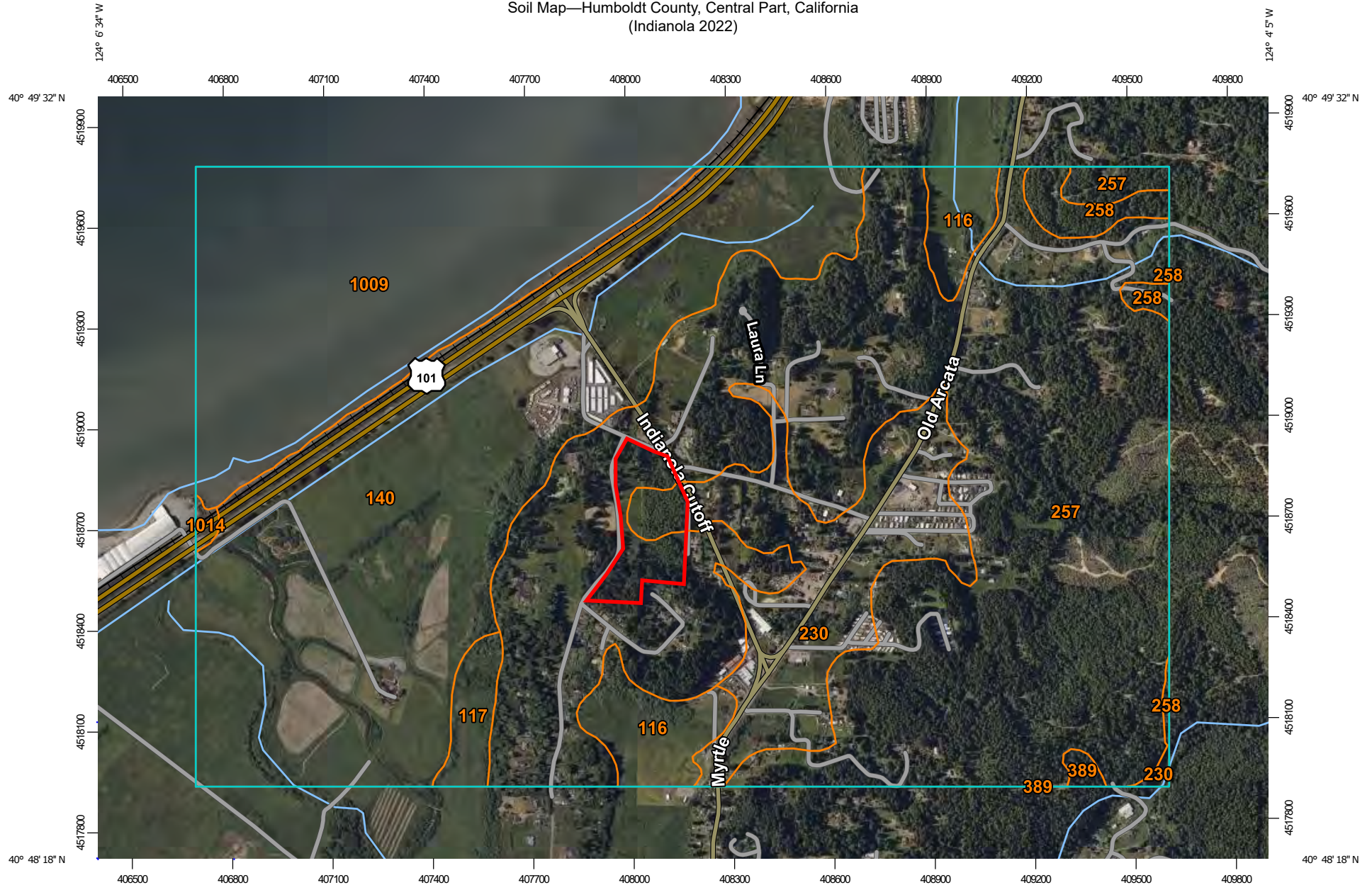
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond

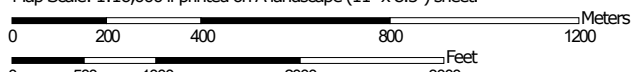
- Study Area
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.


Soil Map—Humboldt County, Central Part, California
(Indianola 2022)



Map Scale: 1:16,000 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

 Study Area



**Natural Resources
Conservation Service**

Web Soil Survey
National Cooperative Soil Survey
Page 15 of 25

9/28/2022
Page 1 of 3

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Humboldt County, Central Part, California

Survey Area Data: Version 7, Sep 6, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 1, 2022—Jun 19, 2022


The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.


Map Unit Legend

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|------------------------------------|--|----------------|----------------|
| 116 | Swainslough, 0 to 2 percent slopes | 42.2 | 3.2% |
| 117 | Swainslough-Occidental complex, 0 to 2 percent slopes | 13.9 | 1.0% |
| 140 | Occidental, 0 to 2 percent slopes | 345.6 | 25.9% |
| 230 | Hookton-Tablebluff complex, 2 to 9 percent slopes | 115.5 | 8.7% |
| 257 | Lepoil-Candymountain complex, 2 to 15 percent slopes | 593.4 | 44.5% |
| 258 | Lepoil-Espa-Candymountain complex, 15 to 50 percent slopes | 15.6 | 1.2% |
| 389 | Salmoncreek-Rootcreek complex, 30 to 50 percent slopes | 2.5 | 0.2% |
| 1009 | Hydraquents-Wassents mucky silt loam, strongly saline, 0-3 percent slopes, very frequently flooded | 201.6 | 15.1% |
| 1014 | Urban land-Anthraltic Xerorthents association, 0 to 2 percent slopes | 2.0 | 0.1% |
| Totals for Area of Interest | | 1,332.4 | 100.0% |

Indianola 2022
Wetlands and Waters Plot Map
APN#s 402-032-002 and
402-032-035
Humboldt County CA.

Legend

 Plot

 Study Area



Attachment B
ACOE Wetland Plot Forms

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Indianda 2022 City/County: Humboldt Co. Sampling Date: 9/25/21 + 3/12/22
 Applicant/Owner: Security Natl. ADN#s 402-032-002 + 402-032-035 State: CA Sampling Point: plot 1
 Investigator(s): James Regan Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave/flat Slope (%): 0-15%
 Subregion (LRR): A Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Hickson-Tahoe-Huff Complex 2-9% + Lepid - Conifer 2-15% NWI classification: NA
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | |
|--|-----------------------|--|
| Hydrophytic Vegetation Present? | Yes _____ No <u>X</u> | Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> |
| Hydric Soil Present? | Yes _____ No <u>X</u> | |
| Wetland Hydrology Present? | Yes _____ No <u>X</u> | |
| Remarks: <u>Below Average Rainfall</u> | | |

VEGETATION – Use scientific names of plants.

| Tree Stratum (Plot size: <u>10m²</u>) | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B) | | | | | | | | | | | | | | |
|--|--------------------|-------------------|------------------|--|-------------------|--------------|----------------------|----------------|-----------------------|----------------|-----------------------|------------------|------------------------|------------------|----------------------|----------------|---------------------------|--------------------|
| 1. <u>Abies grandis</u> | <u>15%</u> | <u>Y</u> | <u>FACU</u> | | | | | | | | | | | | | | | |
| 2. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | |
| <u>15%</u> = Total Cover | | | | Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>78</u></td> <td>x 3 = <u>234</u></td> </tr> <tr> <td>FACU species <u>40</u></td> <td>x 4 = <u>160</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>118</u></td> <td>(A) <u>394</u> (B)</td> </tr> </tbody> </table> Prevalence Index = B/A = <u>3.3</u> | Total % Cover of: | Multiply by: | OBL species <u>0</u> | x 1 = <u>0</u> | FACW species <u>0</u> | x 2 = <u>0</u> | FAC species <u>78</u> | x 3 = <u>234</u> | FACU species <u>40</u> | x 4 = <u>160</u> | UPL species <u>0</u> | x 5 = <u>0</u> | Column Totals: <u>118</u> | (A) <u>394</u> (B) |
| Total % Cover of: | Multiply by: | | | | | | | | | | | | | | | | | |
| OBL species <u>0</u> | x 1 = <u>0</u> | | | | | | | | | | | | | | | | | |
| FACW species <u>0</u> | x 2 = <u>0</u> | | | | | | | | | | | | | | | | | |
| FAC species <u>78</u> | x 3 = <u>234</u> | | | | | | | | | | | | | | | | | |
| FACU species <u>40</u> | x 4 = <u>160</u> | | | | | | | | | | | | | | | | | |
| UPL species <u>0</u> | x 5 = <u>0</u> | | | | | | | | | | | | | | | | | |
| Column Totals: <u>118</u> | (A) <u>394</u> (B) | | | | | | | | | | | | | | | | | |
| Sapling/Shrub Stratum (Plot size: <u>10m²</u>) | | | | | | | | | | | | | | | | | | |
| 1. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | |
| 2. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | |
| <u>_____</u> = Total Cover | | | | | | | | | | | | | | | | | | |
| Herb Stratum (Plot size: <u>1m²</u>) | | | | | | | | | | | | | | | | | | |
| 1. <u>Hieracium lonchitis</u> | <u>60%</u> | <u>Y</u> | <u>FAC</u> | Hydrophytic Vegetation Indicators: _____ Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Wetland Non-Vascular Plants ¹ _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. | | | | | | | | | | | | | | |
| 2. <u>Antroanthem odoratum</u> | <u>20%</u> | <u>Y</u> | <u>FACU</u> | | | | | | | | | | | | | | | |
| 3. <u>Rumex acetosella</u> | <u>5%</u> | _____ | <u>FACU</u> | | | | | | | | | | | | | | | |
| 4. <u>Agrostis sp. (Stolonifera or Capillaris)</u> | <u>10%</u> | _____ | <u>FAC</u> | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | |
| <u>95%</u> = Total Cover | | | | | | | | | | | | | | | | | | |
| Woody Vine Stratum (Plot size: <u>10m²</u>) | | | | | | | | | | | | | | | | | | |
| 1. <u>Rubus coccineus</u> | <u>8%</u> | <u>Y</u> | <u>FAC</u> | Hydrophytic Vegetation Present? Yes _____ No <u>X</u> | | | | | | | | | | | | | | |
| 2. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | |
| <u>8%</u> = Total Cover | | | | | | | | | | | | | | | | | | |
| % Bare Ground in Herb Stratum _____ | | | | | | | | | | | | | | | | | | |
| Remarks: _____ | | | | | | | | | | | | | | | | | | |

Sampling Point: Plot 1

HYDROLOGY

Primary Indicators (minimum of one required; check all that apply)

Western Mountains, Valleys, and Coast – Version 2.0

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Indiana 2022 City/County: Humboldt Co. Sampling Date: 9/15/21 + 3/12/22
 Applicant/Owner: Securix Natl. AON#s 402-032-002+402-032-035 State: CA Sampling Point: Plot 2
 Investigator(s): James Regan Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave/Flat Slope (%): 0-15%
 Subregion (LRR): A Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Hakaton-Tallgrass Complex 2-9Z + Lepid - Conifer 2-15Z NWI classification: NA
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <u>X</u> No _____ | Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> |
| Hydric Soil Present? Yes _____ No <u>X</u> | |
| Wetland Hydrology Present? Yes _____ No <u>X</u> | |
| Remarks: <u>Below Average Rainfall</u> | |

VEGETATION – Use scientific names of plants.

| Tree Stratum (Plot size: <u>10m²</u>) | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B) | | | | | | | | | | | | | | |
|---|---------------------|-------------------|------------------|---|-------------------|--------------|-------------------|-------------|--------------------|-------------|-------------------|-------------|--------------------|-------------|-------------------|-------------|----------------------|---------------------|
| 1. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | |
| 2. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | |
| = Total Cover | | | | Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> </table> Prevalence Index = B/A = _____ | Total % Cover of: | Multiply by: | OBL species _____ | x 1 = _____ | FACW species _____ | x 2 = _____ | FAC species _____ | x 3 = _____ | FACU species _____ | x 4 = _____ | UPL species _____ | x 5 = _____ | Column Totals: _____ | (A) _____ (B) _____ |
| Total % Cover of: | Multiply by: | | | | | | | | | | | | | | | | | |
| OBL species _____ | x 1 = _____ | | | | | | | | | | | | | | | | | |
| FACW species _____ | x 2 = _____ | | | | | | | | | | | | | | | | | |
| FAC species _____ | x 3 = _____ | | | | | | | | | | | | | | | | | |
| FACU species _____ | x 4 = _____ | | | | | | | | | | | | | | | | | |
| UPL species _____ | x 5 = _____ | | | | | | | | | | | | | | | | | |
| Column Totals: _____ | (A) _____ (B) _____ | | | | | | | | | | | | | | | | | |
| Sapling/Shrub Stratum (Plot size: <u>10m²</u>) | | | | | | | | | | | | | | | | | | |
| 1. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | |
| 2. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | |
| = Total Cover | | | | | | | | | | | | | | | | | | |
| Herb Stratum (Plot size: <u>1m²</u>) | | | | | | | | | | | | | | | | | | |
| 1. <u>Hedys lanatus</u> | <u>75%</u> | <u>Y</u> | <u>FAC</u> | Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% _____ Prevalence Index is >3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Wetland Non-Vascular Plants ¹ _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. | | | | | | | | | | | | | | |
| 2. <u>Agrostis sp. (Stolonifer or capillaris)</u> | <u>25%</u> | <u>Y</u> | <u>FAC</u> | | | | | | | | | | | | | | | |
| 3. <u>Anthoxanthum odoratum</u> | <u>5%</u> | <u>Y</u> | <u>FACU</u> | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | |
| 6. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | |
| 7. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | |
| 8. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | |
| 9. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | |
| 10. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | |
| 11. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | |
| = Total Cover | | | | | | | | | | | | | | | | | | |
| Woody Vine Stratum (Plot size: <u>10m²</u>) | | | | | | | | | | | | | | | | | | |
| 1. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | |
| 2. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | |
| = Total Cover | | | | | | | | | | | | | | | | | | |
| % Bare Ground in Herb Stratum _____ | | | | | | | | | | | | | | | | | | |
| Remarks: <u>NON-NATIVE, previously disturbed/mangrove pasture</u> | | | | | | | | | | | | | | | | | | |

Sampling Point: Plot Z

HYDROLOGY

Western Mountains, Valleys, and Coast – Version 2.0

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: Indiana 2022 City/County: Humboldt Co. Sampling Date: 9/15/21 + 3/12/22
 Applicant/Owner: Securix Natl. AONHS 402-032-002 + 402-032-035 State: CA Sampling Point: DA 3
 Investigator(s): James Regan Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave/Flat Slope (%): 0-15%
 Subregion (LRR): A Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Hickson-Tallbluff Complex 2-9Z + Legal - Contamin 2-15Z NWI classification: NA
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes _____ No <u>X</u> | Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> |
| Hydric Soil Present? Yes _____ No <u>X</u> | |
| Wetland Hydrology Present? Yes _____ No <u>X</u> | |
| Remarks: <u>Below Average Rainfall</u> | |

VEGETATION - Use scientific names of plants.

| Tree Stratum (Plot size: <u>10m²</u>) | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>40%</u> (A/B) |
|--|------------------|-------------------|------------------|--|
| 1. <u>Alnus robur</u> | <u>5%</u> | <u>Y</u> | <u>FAC</u> | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| Sapling/Shrub Stratum (Plot size: <u>10m²</u>) <u>5%</u> = Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: <u>143</u> (A) _____ (B) Prevalence Index = B/A = _____ |
| 1. <u>Sambucus racemosa</u> | <u>10%</u> | <u>Y</u> | <u>FACU</u> | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| Herb Stratum (Plot size: <u>1m²</u>) <u>10%</u> = Total Cover | | | | Hydrophytic Vegetation Indicators: _____ Dominance Test is >50% _____ Prevalence Index is <3.0 _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Wetland Non-Vascular Plants ¹ _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 1. <u>Antennaria odoratum</u> | <u>60%</u> | <u>Y</u> | <u>FACU</u> | |
| 2. <u>Holcus lanatus</u> | <u>30%</u> | <u>Y</u> | <u>FAC</u> | |
| 3. <u>Aurestis sp.</u> | <u>15%</u> | <u>Y</u> | <u>FAC</u> | |
| 4. <u>Leucanthemum vulgare</u> | <u>5%</u> | _____ | <u>FACU</u> | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| Woody Vine Stratum (Plot size: <u>10m²</u>) <u>110%</u> = Total Cover | | | | |
| 1. <u>Rubus ursinus</u> | <u>18%</u> | <u>Y</u> | <u>FACU</u> | Hydrophytic Vegetation Present? Yes _____ No <u>X</u> |
| 2. _____ | _____ | _____ | _____ | |
| % Bare Ground in Herb Stratum _____ = Total Cover | | | | |
| Remarks: <u>Middle of pasture above Alder + Rubus patch.</u> | | | | |

SOIL

Sampling Point: plot 3

[illegible]

HYDROLOGY

| Wetland Hydrology Indicators: | | |
|--|---|--|
| Primary Indicators (minimum of one required; check all that apply) | | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) | <input type="checkbox"/> Secondary Indicators (2 or more required) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) | <input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) | <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | | <input type="checkbox"/> Frost-Heave Hummocks (D7) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | | |
| Field Observations: | | |
| Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Depth (inches): _____ | Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Depth (inches): _____ | |
| Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (includes capillary fringe) | Depth (inches): _____ | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | |
| Remarks: | | |