

**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, Broadleaved 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>Hesperivax sparsiflora</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>Iliamna latibracteata</i>	California globe mallow	1B.2	G2G3	S2	None	None	Jun-Aug	Chaparral, Lower montane coniferous forest, North Coast coniferous forest, Riparian scrub	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>Noccaea 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 ssp. scouleri</i>	Scouler's catchfly	2B.2	G5T4T5	S2S3	None	None	(Mar-May)Jun-Aug(Sep)	Coastal bluff scrub, Coastal prairie, Valley and foothill grassland	Potential
<i>Spergularia canadensis var. occidentalis</i>	western sand-spurrey	2B.1	G5T4	S1	None	None	Jun-Aug	Marshes and swamps	No
<i>Sulcaria spiralis</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 var. 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 ssp. leiocarpa</i>	American glehnia	4.2	G5T5	S2S3	None	None	May-Aug	Coastal dunes	No
<i>Hemizonia congesta ssp. tracyi</i>	Tracy's tarplant	4.3	G5T4	S4	None	None	(Mar)May-Oct	Coastal prairie, Lower montane coniferous forest, North Coast coniferous forest	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>Mitellastrum 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>	trifoliolate laceflower	3.2	G5T5	S2S3	None	None	(May)Jun-Aug	Lower montane coniferous forest, North Coast coniferous forest	Potential

<b>Scientific Name</b>	<b>Common Name</b>	<b>CRPR</b>	<b>GRank</b>	<b>SRank</b>	<b>CESA</b>	<b>FESA</b>	<b>Blooming Period</b>	<b>Habitat</b>	<b>Habitat in Study Area</b>
<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

<b>Tree Layer</b>	
<i>Abies grandis</i>	grand fir
<i>Alnus rubra</i>	red alder
<i>Eucalyptus globulus</i>	blue gum
<i>Frangula purshiana</i>	casara
<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
<b>Shrub Layer</b>	
<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
<b>Herbaceous Layer</b>	
<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>Lysimachia 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

<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 var. palmatus</i>	western coltsfoot
<i>Plantago lanceolata</i>	English plantain
<i>Poa annua</i>	annual bluegrass
<i>Polygonum sp.</i>	knotweed
<i>Polypodium scolieri</i>	leather-leaf fern
<i>Polystichum munitum</i>	sword fern
<i>Prosartes sp.</i>	fairy bells
<i>Prunella vulgaris</i>	self-heal
<i>Ranunculus sp.</i>	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 sp.</i>	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 sp.</i>	sow thistle
<i>Stachys sp.</i>	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 sp.</i>	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 ssp. 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 Monterrey 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" (Mercel, 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

## References

- Allen, G. and J. Antos. 1988. Morphological And Ecological Variation Across A Hybrid Zone Between *Erythronium oregonum* and *E. revolutum* (Liliaceae). *Madroño*, Vol. 35, No. 1, pp. 32-38.
- Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken, editors. 2012. *The Jepson Manual: Vascular Plants of California*, second edition. University of California Press, Berkeley.
- Brinson, M.M. 1993. A Hydrogeomorphic Classification for Wetlands. U.S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, MS, USA. [Technical Report WRP-DE-4](#), U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.
- [CDFG] California Department of Fish and Game. 2018. "Protocol for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities" State of California.
- California Department of Fish and Wildlife, Natural Diversity Database. April 2018. Special Vascular Plants, Bryophytes, and Lichens List. Quarterly publication. 73 pp.
- CNPS (California Native Plants Society). 2018. *Inventory of Rare and Endangered Plants*. (on-line edition, v8-01a). California Native Plant Society. Sacramento, CA. Accessed March 2018.
- CNPS. [2021]. A Manual of California Vegetation, Online Edition. <http://www.cnps.org/cnps/vegetation/>; searched on [9, August, 2021]. California Native Plant Society, Sacramento, CA.
- Cal-IPC. 2006. California Invasive Plant Inventory. Cal-IPC Publication 2006-02 California Invasive Plant Council: Berkeley, CA. Available: [www.cal-ipc.org](http://www.cal-ipc.org).
- Circuit Rider Productions, Inc. (CRP). October 2003. *CALIFORNIA SALMONID STREAM HABITAT RESTORATION MANUAL, PART XI RIPARIAN HABITAT RESTORATION*, under a grant agreement with the California Department of Fish and Game.
- Coleman, Ronald A. 1995. *The Wild Orchids of California*. Comstock Publishing Associates a division of Cornell University Press. Ithaca, New York
- Hitchcock, C.L. and A. Cronquist. 1973. *Flora of the Pacific Northwest: An Illustrated Manual*. Seattle, Wash.: University of Washington Press. xix + 730 pp.
- Hickman, J.C., ed. 1993. *The Jepson Manual: Higher Plants of California*. University of California Press. Berkeley, CA

Humboldt County General Plan, Streamside Management Areas and Wetlands Ordinance §314-61.1

Humboldt County Weed Management Area. 2010. *Invasive Weeds of Humboldt County: A Guide for Concerned Citizens* (2nd Edition). Arcata, California.

Jepson Flora Project (eds.) 2020. Jepson eFlora, <https://ucjeps.berkeley.edu/eflora/> [accessed in 2021].

List of Vegetation Alliances and Associations. Vegetation Classification and Mapping Program, California Department of Fish and Game. Sacramento, CA. September 2010.

Mercel, M.K. and R.W. Lichvar. 2014. *Guide to Ordinary High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States*. US Army Corps of Engineers (ACOE), August 2014.

Munz, P. A. and D. D. Keck. 1970. *A California Flora*. University of California Press. Berkeley, CA.

Sawyer, J.O. ,T.Keeler-Wolf, and, J.M. Evens. 2009. *A Manual of California Vegetation, 2<sup>nd</sup> edition*. California Native Plant Society, Sacramento,CA.

Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at <http://websoilsurvey.nrcs.usda.gov/>. Accessed [8/2021].

US Army Corps of Engineers (ACOE). 1987. *Corps of Engineers Wetland Delineation Manual*. Wetlands Research Program Technical Report Y-87-1.

U.S. Army Corps of Engineers. 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)*, ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-10-3. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

U.S. Army Corps of Engineers 2020. National Wetland Plant List, version 3.5 <http://wetland-plants.usace.army.mil/> U.S. Army Corps of Engineers Engineer Research and Development Center Cold Regions Research and Engineering Laboratory, Hanover, NH

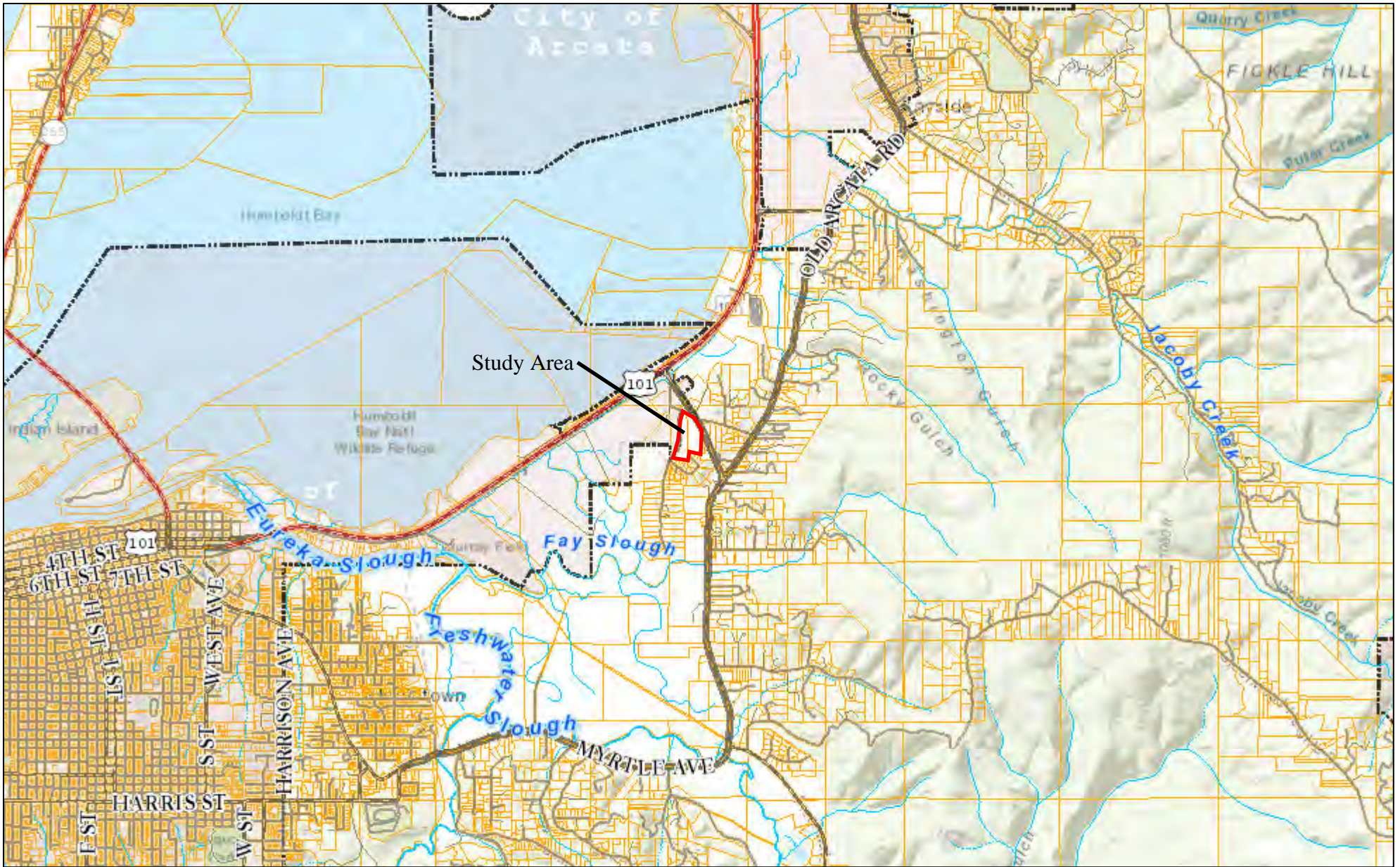
U. S. Fish and Wildlife Service. February 2019. National Wetlands Inventory website. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. <http://www.fws.gov/wetlands/>

U.S.D.I – F.W.S. (United States Department of the Interior, Fish and Wildlife Service). 1996. *National List of Vascular Plant Species that Occur in Wetlands: 1996 National Summary*. Ecology Section, National Wetlands Inventory, FWS, report dated March 3, 1997. 209 pp.



## **Attachment A**

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



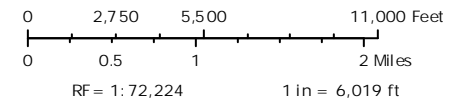
## Indianola General Location Map

Humboldt County Planning and Building Department

Printed: September 28, 2022 Web AppBuilder 2.0 for ArcGIS

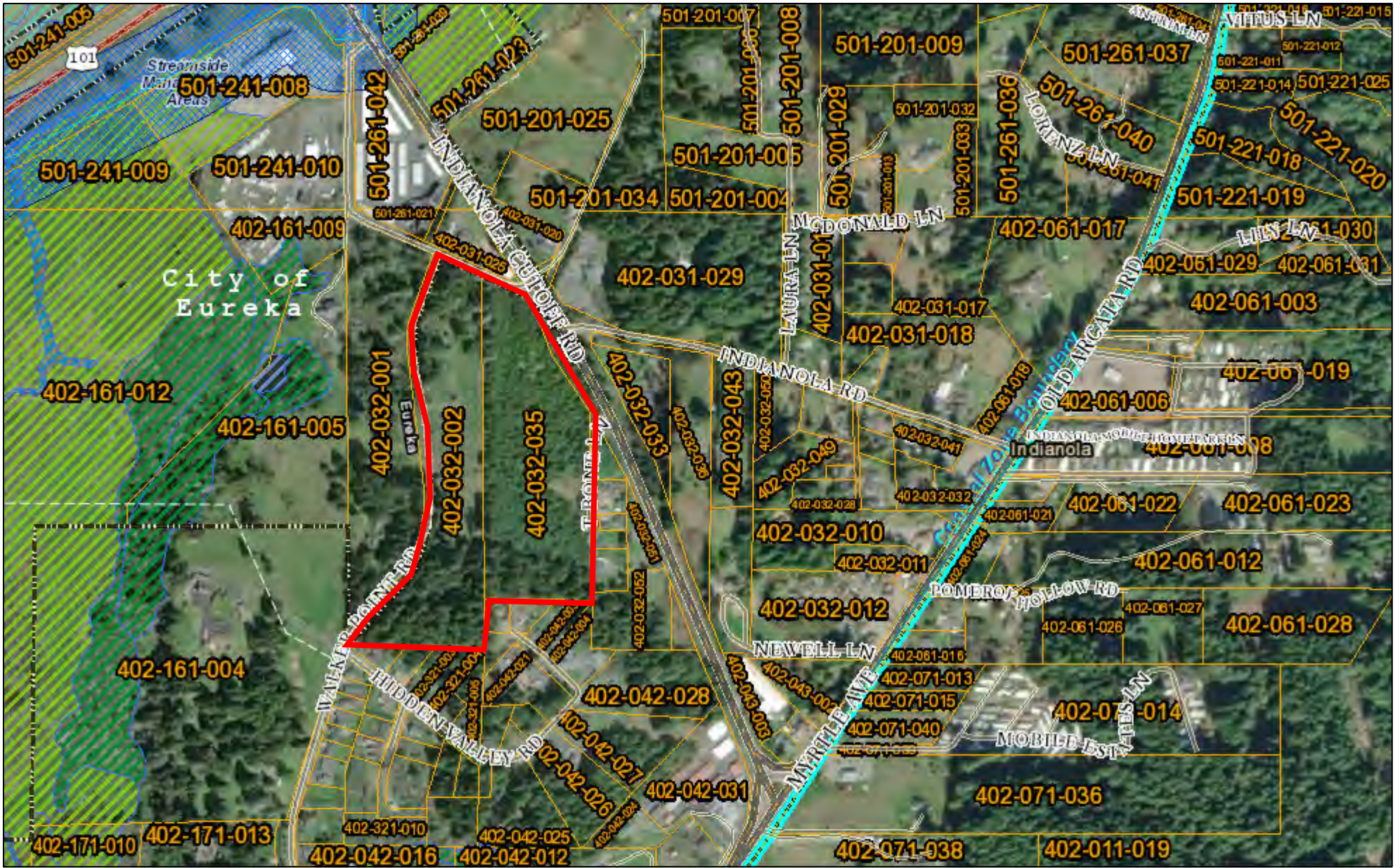
Map Disclaimer:  
While every effort has been made to assure the accuracy of this information, it should be understood that it does not have the force & effect of law, rule, or regulation. Should any difference or error occur, the law will take precedence.


- |                           |                           |                           |
|---------------------------|---------------------------|---------------------------|
| <b>Highways and Roads</b> | — Private or Unclassified | — Intermittent            |
| — Principal Arterials     | — Major River or Stream   | — Subsurface              |
| — Minor Arterials         | <b>Blue Line Streams</b>  | — City Boundary           |
| — Major Collectors        | — Perennial 1-3           | — City Boundary (750K)    |
| — Minor Collectors        | — Perennial >4            | — Counties                |
| — Local Roads             |                           | — Parcels (no APN labels) |



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





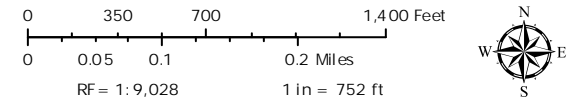
 **Indianola 2022**

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.

- |  |   |  |   |
|--|---|--|---|
| <b>Highways and Roads</b>  | — Private or Unclassified   | — Intermittent   | <span style="border: 2px solid red; padding: 2px;"> </span> Study Area      |
| <span style="border-bottom: 2px solid red;"> </span> Principal Arterials | <span style="border-bottom: 2px solid blue;"> </span> Major River or Stream | <span style="border-bottom: 2px dashed blue;"> </span> Subsurface      | <span style="border: 1px dashed gray; padding: 2px;"> </span> City Boundary |
| <span style="border-bottom: 2px solid orange;"> </span> Minor Arterials  | <b>Blue Line Streams</b>  | <span style="border-bottom: 2px solid gray;"> </span> Major Collectors | <span style="border: 1px solid gray; padding: 2px;"> </span> Counties       |
| <span style="border-bottom: 2px solid yellow;"> </span> Major Collectors | <span style="border-bottom: 2px solid blue;"> </span> Perennial 1-3         | <span style="border-bottom: 2px solid gray;"> </span> Minor Collectors | <span style="border: 1px solid yellow; padding: 2px;"> </span> Parcels      |
| <span style="border-bottom: 2px solid gray;"> </span> Minor Collectors   | <span style="border-bottom: 2px solid blue;"> </span> Perennial >4          | <span style="border-bottom: 2px solid gray;"> </span> Local Roads      | <span style="border: 2px dashed cyan;"> </span> Coastal Zone Boundary       |



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





U.S. Fish and Wildlife Service, National Standards and Support Team, wetlands\_team@fws.gov

September 28, 2022

**Wetlands**

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

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

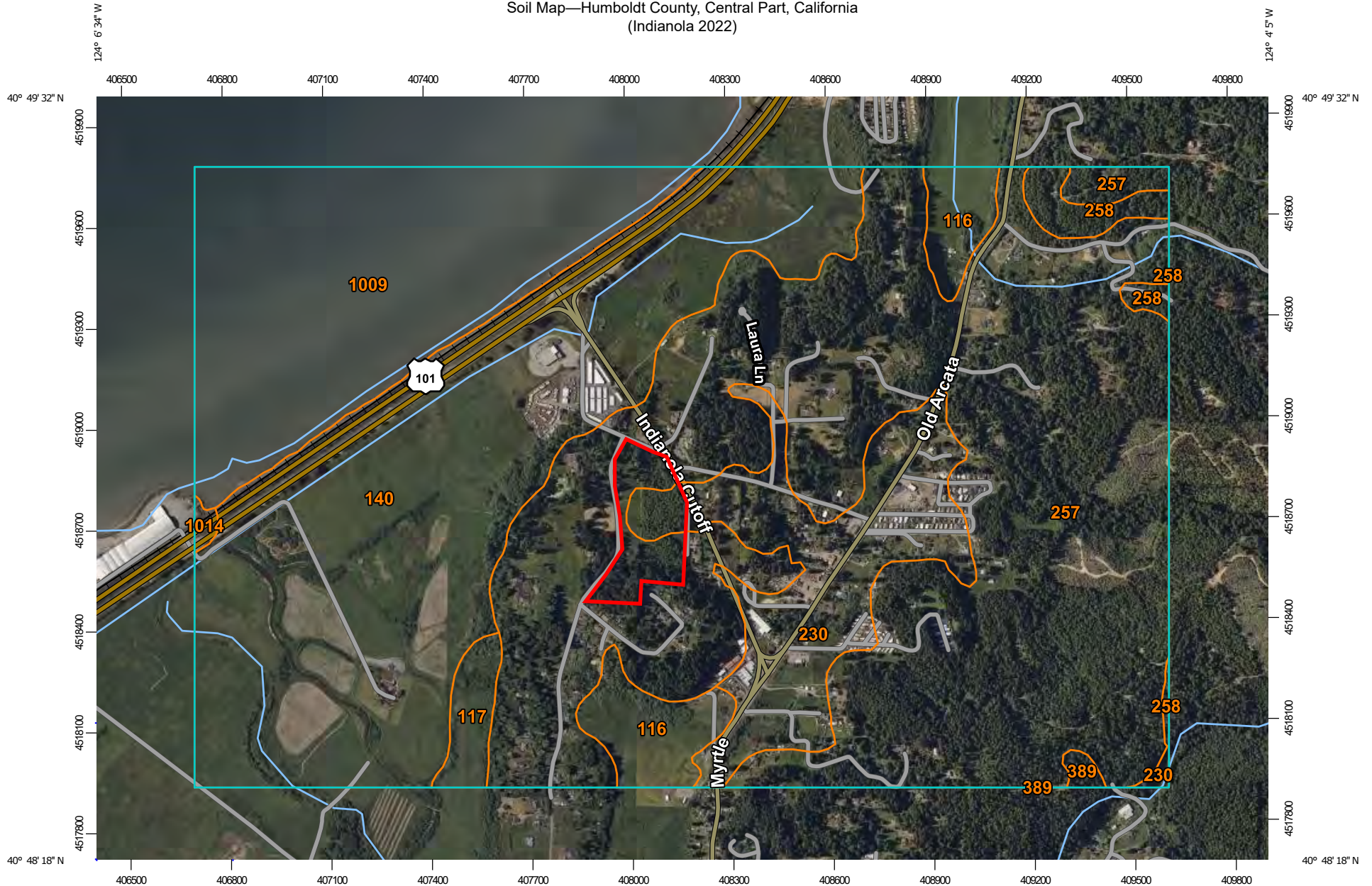
**Study Area**

- Lake
- Other
- Riverine

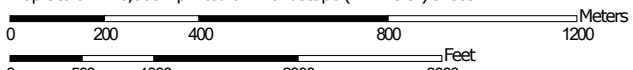
This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.




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

## 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%
<b>Totals for Area of Interest</b>		<b>1,332.4</b>	<b>100.0%</b>



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

**Legend**

- Plot
- 📍 Study Area



Google Earth



**Attachment B**  
**ACOE Wetland Plot Forms**

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

Project/Site: Indisinda 2022 City/County: Humboldt Co. Sampling Date: 9/25/21 + 3/12/22  
 Applicant/Owner: Security Natl. ADJ#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: Haskon-Tahbluff Complex 2-9% + Lepal -Cortina 2-15% NWI classification: NA  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No  (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  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 <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: <u>Below Average Rainfall</u>	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>10m<sup>2</sup></u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Abies grandis</u>	<u>15%</u>	<u>Y</u>	<u>FACU</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>4</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
4. _____	_____	_____	_____	
Sapling/Shrub Stratum (Plot size: <u>10m<sup>2</sup></u> )				Prevalence Index worksheet:
1. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species <u>0</u> x 1 = <u>0</u>
3. _____	_____	_____	_____	FACW species <u>0</u> x 2 = <u>0</u>
4. _____	_____	_____	_____	FAC species <u>78</u> x 3 = <u>234</u>
5. _____	_____	_____	_____	FACU species <u>40</u> x 4 = <u>160</u>
Herb Stratum (Plot size: <u>1m<sup>2</sup></u> )				UPL species <u>0</u> x 5 = <u>0</u>
1. <u>Helleborus</u>	<u>60%</u>	<u>Y</u>	<u>FAC</u>	Column Totals: <u>118</u> (A) <u>394</u> (B)
2. <u>Antroanthem odoratum</u>	<u>20%</u>	<u>Y</u>	<u>FACU</u>	Prevalence Index = B/A = <u>3.3</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. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
Woody Vine Stratum (Plot size: <u>10m<sup>2</sup></u> )				Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>
1. <u>Rubus ornaticus</u>	<u>8%</u>	<u>Y</u>	<u>FAC</u>	
2. _____	_____	_____	_____	
% Bare Ground in Herb Stratum _____				
Remarks: _____				

**SOIL**

Sampling Point: Plot 1

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-12"	10y 3/2-3/3	100					loamy clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks):
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes \_\_\_\_\_ No

Remarks:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

<b>Primary Indicators (minimum of one required; check all that apply)</b>		<b>Secondary Indicators (2 or more required)</b>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

**Field Observations:**

Surface Water Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	<b>Wetland Hydrology Present?</b> Yes _____ No <input checked="" type="checkbox"/>
Water Table Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	
Saturation Present? (includes capillary fringe)	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Shallow snake below old well head/nose bib.

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

Project/Site: Indiana 2022 City/County: Humboldt Co. Sampling Date: 9/25/21 + 3/12/22  
 Applicant/Owner: Securis 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: Hutton-Talbot Complex 2-9Z + eptal - Complex 2-15Z NWI classification: NA  
 Are climatic / hydrologic conditions on the site typical for this time of year? -Yes \_\_\_\_\_ No  (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  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 <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: <u>Below Average Rainfall</u>	

**VEGETATION – Use scientific names of plants.**

Stratum	Plot size	Absolute % Cover	Dominant Species?	Indicator Status	
<b>Tree Stratum</b> (Plot size: <u>10m<sup>2</sup></u> )					
1.					
2.					
3.					
4.					
					= Total Cover
<b>Sapling/Shrub Stratum</b> (Plot size: <u>10m<sup>2</sup></u> )					
1.					
2.					
3.					
4.					
5.					
					= Total Cover
<b>Herb Stratum</b> (Plot size: <u>1m<sup>2</sup></u> )					
1.	<u>Hedera lanata</u>	<u>75%</u>	<u>Y</u>	<u>FAC</u>	
2.	<u>Asarum sp. (Sideroxylon or caryophyllus)</u>	<u>25%</u>	<u>Y</u>	<u>FAC</u>	
3.	<u>Arthraxon odoratum</u>	<u>5%</u>		<u>FACU</u>	
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
					= Total Cover
<b>Woody Vine Stratum</b> (Plot size: <u>10m<sup>2</sup></u> )					
1.					
2.					
					= Total Cover
<b>% Bare Ground in Herb Stratum</b> _____ = Total Cover					

**Dominance Test worksheet:**  
 Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)  
 Total Number of Dominant Species Across All Strata: 2 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

**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: \_\_\_\_\_ (A) \_\_\_\_\_ (B)  
 Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**  
 Dominance Test is >50%  
 \_\_\_\_\_ Prevalence Index is <3.0<sup>1</sup>  
 \_\_\_\_\_ Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 \_\_\_\_\_ Wetland Non-Vascular Plants<sup>1</sup>  
 \_\_\_\_\_ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes  No \_\_\_\_\_

Remarks: NON-NATIVE, previously disturbed/managed pasture

**SOIL**

Sampling Point: Plot 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-12	10p 3/2-3/3	100					Clay loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

- Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**
- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Histosol (A1)                     | <input type="checkbox"/> Sandy Redox (S5)                         | <input type="checkbox"/> Indicators for Problematic Hydric Soils <sup>3</sup>   |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> Stripped Matrix (S6)                     | <input type="checkbox"/> 2 cm Muck (A10)  |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) | <input type="checkbox"/> Red Parent Material (TF2)  |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> Loamy Gleyed Matrix (F2)                 | <input type="checkbox"/> Very Shallow Dark Surface (TF12)   |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3)                     | <input type="checkbox"/> Other (Explain in Remarks):  |
| <input type="checkbox"/> Thick Dark Surface (A12)          | <input type="checkbox"/> Redox Dark Surface (F6)                  |   |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)          | <input type="checkbox"/> Depleted Dark Surface (F7)               | <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)          | <input type="checkbox"/> Redox Depressions (F8)                   |   |

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No

Remarks:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

- |   |  |
|---|--|
| <b>Primary Indicators (minimum of one required; check all that apply)</b>         | <b>Secondary Indicators (2 or more required)</b>                           |
| <input type="checkbox"/> Surface Water (A1)                                       | <input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> High Water Table (A2)                                    | <input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> Saturation (A3)  | <input type="checkbox"/> Drainage Patterns (B10)                           |
| <input type="checkbox"/> Water Marks (B1)   | <input type="checkbox"/> Dry-Season Water Table (C2)                       |
| <input type="checkbox"/> Sediment Deposits (B2)                                   | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)         |
| <input type="checkbox"/> Drift Deposits (B3)                                      | <input checked="" type="checkbox"/> Geomorphic Position (D2)               |
| <input type="checkbox"/> Algal Mat or Crust (B4)                                  | <input type="checkbox"/> Shallow Aquitard (D3)                             |
| <input type="checkbox"/> Iron Deposits (B5)                                       | <input type="checkbox"/> FAC-Neutral Test (D5)                             |
| <input type="checkbox"/> Surface Soil Cracks (B6)                                 | <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)                  |  |
| <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) |  |
| <input type="checkbox"/> Salt Crust (B11)   |  |
| <input type="checkbox"/> Aquatic Invertebrates (B13)                              |  |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                               |  |
| <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)            |  |
| <input type="checkbox"/> Presence of Reduced Iron (C4)                            |  |
| <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)               |  |
| <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)                  |  |
| <input type="checkbox"/> Other (Explain in Remarks)                               |  |

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_  
 Saturation Present? (includes capillary fringe) Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_

Wetland Hydrology Present? Yes \_\_\_\_\_ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

shallow depression

**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: Securis Natl. Forests 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-Talbot Complex 2-9% + legal - Contamin 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> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: <u>Below Average Rainfall</u>	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>10m<sup>2</sup></u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Alnus robur</u>	<u>5%</u>	<u>Y</u>	<u>FAC</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>5</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>40%</u> (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</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: <u>143</u> (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: <u>10m<sup>2</sup></u> )				
1. <u>Sambucus racemosa</u>	<u>10%</u>	<u>Y</u>	<u>FACU</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
Herb Stratum (Plot size: <u>1m<sup>2</sup></u> )				
1. <u>Antennaria adonidifolia</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>Aristida sp.</u>	<u>15%</u>	<u>Y</u>	<u>FAC</u>	
4. <u>Leucanthemum vulgare</u>	<u>5%</u>	<u>Y</u>	<u>FACU</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
Woody Vine Stratum (Plot size: <u>10m<sup>2</sup></u> )				
1. <u>Rubus ursinus</u>	<u>18%</u>	<u>Y</u>	<u>FACU</u>	
2. _____	_____	_____	_____	
% Bare Ground in Herb Stratum _____ = Total Cover				

Remarks: Middle of pasture above Alder + Rubus patch.

**SOIL**

Sampling Point: plot 3

**Profile Description: (Describe to the depth needed to document the Indicator or confirm the absence of indicators.)**

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-12"	10p 3/4-3/8	100					clay loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks):
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No

Remarks:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

<b>Primary Indicators (minimum of one required; check all that apply)</b>		<b>Secondary Indicators (2 or more required)</b>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

**Field Observations:**

Surface Water Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Water Table Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	
Saturation Present? (includes capillary fringe)	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: