PRELIMINARY BIOLOGICAL RESOURCE ASSESSMENT WITH PRELIMINARY BOTANICAL SURVEY FOR THE HANSON PROPERTY APNs 009-022-67, 011-055-20 & 011-055-21 LAKE COUNTY, CA

May 30, 2020

Prepared by

Northwest Biosurvey



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1.0 **PROJECT DESCRIPTION**

1.1 <u>Proposed Project</u>: This preliminary biological assessment and survey has been prepared at the request of the client. It covers 182 acres within three parcels. The preliminary assessment is limited to a review of current databases and literature combined with on-site mapping of vegetation types and other habitat characteristics. Vegetation types are mapped for the entire property. This assessment includes a Corps of Engineers protocol delineation of waters of the U.S.

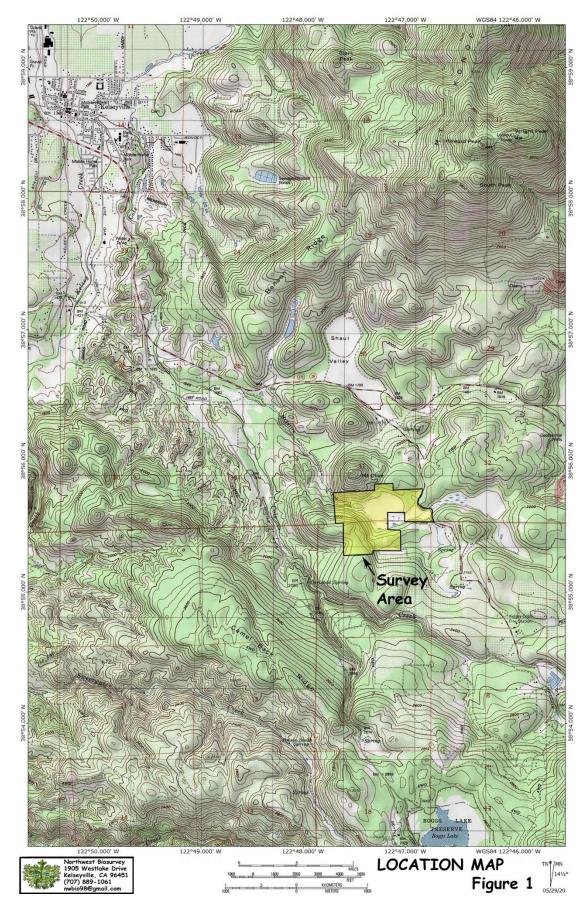
The assessment focused on the potential for the property to contain sensitive plant and animal species or sensitive habitats based on a comparison of the habitat requirements of known sensitive species in the region with the habitats present on the property. These are sensitive¹ species requiring mitigation under the California Environmental Quality Act or National Environmental Policy Act (NEPA). As used here, the terms sensitive plant or wildlife includes all state or federal rare, threatened, or endangered species and all species listed in the California Natural Diversity Database (CNDDB) list of "Special Status Plants, Animals, and Natural Communities".

This is a preliminary biological assessment with a client-requested submittal in spring of 2020. Consequently, it does not contain a complete <u>in-season</u>, floristic-level botanical <u>survey</u>, although the report contains a table of plant taxa identified during the spring surveys.

A delineation of waters of the U.S. was conducted due to the presence of wetlands and waterways within the property. Due to the fact that wetland delineations are prepared with a standard format for U.S. Army Corps of Engineers review, the delineation is provided separately in **Appendix C**.

1.2 <u>Location</u>: The project site is located on Highway 175 south of the intersection with Highway 29 on APNs 009-022-67, 011-055-20 & 21, Kelseyville, California (T12N R8W Sec. 4 & 5, T13N R8W Sec. 31, 32 & 33; Kelseyville, Calif. 7¹/₂ 'Topographic Map). A location map is provided in **Figure 1**.

¹ As used here, the term sensitive plant or wildlife includes all state or federal rare, threatened, or endangered species <u>and</u> all species listed in the California Natural Diversity Database (CNDDB) list of "Special Status Plants, Animals, and Natural Communities".



Hanson Preliminary Biological Resource Assessment, May 2020

2.0 ASSESSMENT METHODOLOGY

The basis of the biological resource assessment is a comparison of existing habitat conditions within the project boundaries to the geographic range and habitat requirements of sensitive plants and wildlife. It includes all sensitive species that occupy habitats similar to those found in the project area and whose known geographic ranges encompass it. The approach is conservative in that it tends to over-estimate the actual number of sensitive species potentially present. The analysis includes the following site characteristics:

- Location of the project area with regard to the geographic range of sensitive plant and wildlife species
- Location(s) of known populations of sensitive plant and wildlife species as mapped in the California Natural Diversity Database (CNDDB)
- Soils of the project area
- Elevation
- Presence or absence of special habitat features such as vernal pools and serpentine soils
- Plant communities existing within the project area

In addition to knowledge of the local plants and wildlife, the following computer databases were used to analyze the suitability of the site for sensitive species:

- California Department of Fish and Wildlife (CDFW), California Natural Diversity Database (CNDDB); RareFind 5, 2020
- California Native Plant Society's (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants of California (2020 edition)
- California Department of Fish and Wildlife, California Wildlife Habitat Relationships System (CWHR), Version 9.0

The **CNDDB** and **RareFind 5** databases consist of maps and records of all known populations of sensitive plants and wildlife in California. This data is continually updated by the CDFW with new sensitive species population data.

The **CNPS** database produces a list of sensitive plants potentially occurring at a site based on the various site characteristics listed above. While use of the CNPS inventory does not in itself eliminate the need for an in-season botanical survey, it can, when used in conjunction with other information, provide a very good indication of the suitability of a site as habitat for sensitive plant species. The **WHR database** operates on the same basis as the CNPS inventory. Input includes geographic area, plant community (including development stage), soil structure, and special features such as presence of water, snags, cover, and food (fruit, seeds, insects, etc.).

2.1 <u>Botanical Survey Methods</u>: A preliminary botanical survey was conducted for the project site. CNDDB information and maps for the Kelseyville quadrangle were referenced prior to the survey. Vegetation communities were identified based on the nomenclature of A *Manual of California Vegetation* (Sawyer et al. 2009) as modified by the California Native Plant Society (CNPS) and mapped on a 1"=250' aerial photo. Vegetation community names are based on an assessment of dominant cover species.

Plants occurring on the site were identified using The Jepson Manual of Higher Plants of California. Where necessary, species names were updated based on the 6th edition, CNPS Inventory of Rare and Endangered Plants of California. A map of the vegetation types is provided in **Figure 2**.

2.2 <u>Delineation Methods</u>: The delineation was conducted as prescribed in the Corps of Engineers Wetlands Delineation Manual, January 1987, and the Arid West 2008 Supplement. Plant taxonomy and nomenclature is from the Jepson Manual, Higher Plants of California, 2012. Other texts, such as Munz's A California Flora and Supplement, 1973, and Mason's Flora of the Marshes of California, 1957, were used as supplemental texts. The survey included use of lidar mapped overlays and an extensive foot survey.

2.3 <u>Field Assessment Dates</u>: Site visits for mapping and the delineation were made on February 26, March 3, and April 30, 2020.

2.4 <u>Biological Assessment Staff</u>: Field surveys, plant taxonomy, and the delineation were conducted by Steve Zalusky, Northwest Biosurvey principal biologist. Mr. Zalusky has a Master of Science Degree in Biology from the California State University at Northridge and a Bachelor of Science Degree in Zoology from the University of California at Santa Barbara. Mr. Zalusky has over 35 years of experience as a biologist in the government and private sectors.

Mr. Zalusky was assisted with fieldwork, mapping, and the delineation by Leigh Zalusky. Leigh Zalusky has a Bachelor of Science Degree in Engineering from the University of California, Davis. He has also developed extensive skills in plant taxonomy and ecology while managing and assisting in the development of the Seigler Valley Wetland Mitigation Bank and while assisting Northwest Biosurvey staff in field surveys and vegetation mapping over the past several years. Database review and report preparation were conducted by Danielle Zalusky, Northwest Biosurvey principal planner. Ms. Zalusky has 15 years of experience as a planner in local government and the private sector and 17 years as a field biologist. She has a Bachelor of Arts Degree all course work toward an M.A. Degree in Rural and Town Planning from Chico State University.

3.0 SITE CHARACTERISTICS

3.1 <u>Topography and Drainage:</u> The Hanson property is located in the Mayacamas Mountains within the Clear Lake Basin. It occupies a small mountain valley and the adjacent slopes between Camel Back Ridge and Mount Olive. The valley is at an elevation of approximately 2,040 feet msl (mean sea level). The property rises to an elevation of 2,280 feet msl on the ridgetop to the west. It drains to McIntire Creek which has its confluence with Kelsey Creek approximately three miles to the northwest. Kelsey Creek drains to Clear Lake through the Big Valley. The basin drains east to the Sacramento River via Cache Creek. The topography is shown in **Figure 1**.

3.2 **Soils:** The property contains the following soil types:

- Aiken-Sobrante Association, 5-15% slopes (soil unit 101):
- Aiken-Sobrante Association, 15-30% slopes (soil unit 102);

These map units are on hills and mountains. They contain Aiken loam (on north- and east-facing slopes) and Sobrante loam (on south- and west-facing slopes). The Aiken soil is very deep and well drained; it formed in material weathered from basalt. Permeability is relatively slow; surface runoff is medium, and the hazard of erosion is moderate. The Sobrante loam is moderated deep and well drained. It formed in material weathered from basalt. Permeability is moderate. Surface runoff is medium, and the hazard of erosion is moderate. These soil units occur within the wooded areas between the two wetlands and the woodland west of the main wetland.

- Benridge-Konocti association, 15-30% slopes (soil unit 112):
- Benridge-Konocti association, 30-50% slopes (soil unit 113):

These map units are on hills and mountains. They are comprised of 40% Benridge loam, 20-30% Konocti cobbly loam, and 15-20% Konocti stony loam. The Konocti soils are on the upper part of side slopes, on ridgetops, and in ravines. Some Rock outcrop and boulders are including in this association. Typical vegetation is brush on south-and east-facing slopes, and brush with scattered conifers and hardwoods on north- and west-facing slopes, including manzanita, chamise, and California scrub oak with some areas of knobcone pine. Both soils are moderately deep to very deep and well-drained. They formed in materials derived from volcanic ash, andesite, basalt, or dacite. Permeability is moderately slow, runoff is rapid, and the hazard of erosion is severe. These soils occur on the western parts of the property.

Bottlerock-Glenview-Arrowhead complex, 5-30% slopes (soil unit 117):

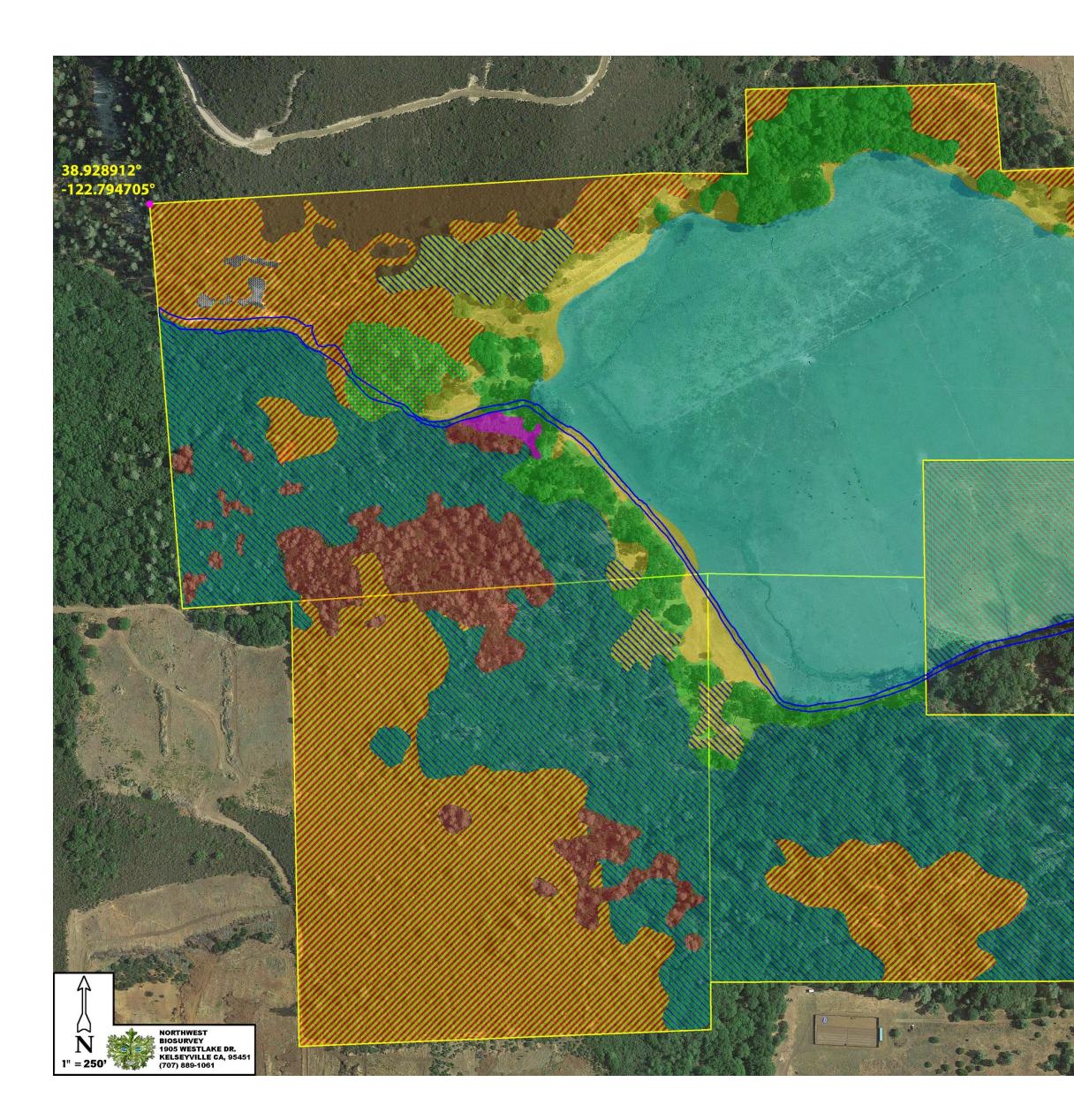
This map unit is on volcanic hills. Vegetation is mainly brush, including manzanita and ceanothus, with scattered conifers. The complex consists of about 50% Bottlerock extremely gravelly loam, 20% Glenview very gravelly loam, and 15% Arrowhead

extremely gravelly sandy loam. All soils are deep and well drained and formed in material weathered from obsidian. Permeability ranges from slow to moderately slow, runoff is rapid, and the hazard of erosion is moderate to severe. This soil complex is located in the woodland west of the highway.

• Clear Lake Variant clay, drained (soil unit 122):

This very deep soil is in basins. It formed under poorly drained conditions; however, drainage has been improved as a result of entrenchment of stream channels. The soil formed in lacustrine deposits derived from mixed rock sources. The soil consists of clay or clay loam to more than 72 inches in depth. Permeability of this soil is slow. Surface runoff is slow, and the hazard of erosion is slight. The soil is subject to rare periods of flooding and ponding during prolonged storms. The shrink-swell potential is high. Natural vegetation includes annual grasses, forbs, and scattered oaks. The soil occurs within the two wetlands on the property.

3.3 <u>Vegetation Types:</u> This project contains ten plant communities or vegetation types based on or derived from the "Standardized Classification" scheme described in the California Native Plant Society (CNPS) A Manual of California Vegetation. These vegetation types and other cover types are listed in **Table 1**. They are described below and shown in the vegetation map provided in **Figure 2**.



38.925677°

VEGETATION TYPES Interior Live Oak Woodland California Valley Oak Woodland California Black Oak Woodland Blue Oak Woodland Knob Cone Pine Forest Interior Live Oak Chaparral Chamise Chaparral Choke Cherry Thicket Wild Oat Grassland Baltic Rush Marsh Ruderal (disturbed areas) Dacite Barren

COVER TYPE	Total Acres of Cover Type on Property	Percent of Property Supporting Cover Type
Interior Live Oak Woodland	1.78	0.96
California Valley Oak Woodland	18.76	10.13
California Black Oak Woodland	45.70	24.68
Blue Oak Woodland	3.16	1.71
Knob Cone Pine Forest	7.71	4.16
Interior Live Oak Chaparral	43.22	23.35
Chamise Chaparral	3.49	1.89
Choke Cherry Thicket	0.29	0.16
Wild Oat Grassland	15.80	8.54
Baltic Rush Marsh	44.80	24.20
Ruderal (Disturbed Areas)	0.18	0.10
Dacite Barren	0.23	0.12
	185.12	100.00

TABLE 1. PLANT COMMUNITIES AND OTHER COVER TYPES PRESENT

Interior Live Oak Woodland:

Interior live oak woodland occupies the low slopes along McIntire Creek as it drains west from the central wetland. The community is dominated by Interior live oak trees (Quercus wislizeni var. wislizeni) but includes scattered California black oak (Quercus kelloggii) and California bay (Umbellularia californica). The shrub layer includes common manzanita (Arctostaphylos manzanita ssp. manzanita) and co-dominant poison oak (Toxicodendron diversilobum). The ground cover is primarily duff but includes some of the more mesic (moist soil) grasses from the adjacent wild oat grassland. These include hedgehog dogtail (Cynosurus echinatus) and blue wild rye (Elymus glaucus ssp. glaucus). Forbs include grand hounds' tongue (Cynoglossum grande) and bowl-tubed iris (Iris macrosiphon).

California Valley Oak Woodland:

Valley oak woodland is limited to flat terrain surrounding the central wetlands and consequently forms a narrow strip of woodland between the wetlands and upland forests and woodlands. The average diameter of the valley oaks (Quercus lobata) is approximately 20 inches wide although some trunks reach 60 inches diameter. Occasional interior live oaks occur in this woodland. The ground cover in spring is dominated by bulbous blue grass (Poa bulbosa), baby blue eyes (Nemophila

menziesii var. atomaria), rancher's fireweed (Amsinckia menziesii), cut-leaf geranium (Geranium dissectum), many-stemmed sedge (Cyperus eragrostis), pine violet (Viola lobata ssp. integrifolia), goose grass (Galium aparine), and field hedge parsley (Torilis arvensis).

California Black Oak Woodland:

This community includes an upper canopy of mature California black oak, with some trunks reaching 48" dbh (diameter at breast height). Ponderosa pine (*Pinus ponderosa*) is scattered throughout but does not reach a level of co-dominance. The shrub layer consists of poison oak, as well as common, Konocti, and Eastwood's manzanita (Arctostaphylos manzanita ssp. manzanita, A. manzanita ssp. elegans, and A. glandulosa ssp. glandulosa). California bay and birch-leaf mountain mahogany (Cercocarpus betuloides var. betuloides) are also present.

The ground cover includes California tule pea (Lathyrus jepsonii var. californicus), purple sanicle (Sanicula bipinnatifida), bowl-tubed iris, red larkspur (Delphinium nudicaule), green mule ears (Wyethia glabra), gray mule ears (Wyethia helenioides), and low-lying poison oak. Other species present include California fescue (Festuca californica), woodland brome (Bromus laevipes), grand hounds tongue, mountain sweet cicely (Osmorhiza berteroi), and big-flower agoseris (Agoseris grandiflora).

Blue Oak Woodland:

This community consists of moderate-aged blue oaks (Quercus douglasii). The canopy cover is 60%. The community is open and lacks a shrub layer. The ground cover is the same as that described for the interior live oak forest.

 Knobcone Pine Forest: While knobcone pine (Pinus attenuata) occur scattered throughout the chamise chaparral community, it provides a dominant tree canopy above this community on the steep slopes in the southwestern quarter of the property. The shrub canopy and ground cover layers are the same as those of the adjacent chamise chaparral community.

Interior Live Oak Chaparral:

This community occurs on south-facing slopes and ridges on the on the more exposed slopes surrounding the central wetland. It includes dominant interior live oak (Quercus wislizeni var. frutescens) as a shrub canopy to 15 feet canopy height. Chamise (Adenostoma fasciculatum), Konocti and Eastwood's manzanita, deerbrush (Ceanothus integerrimus), birch-leaf mountain mahogany, scrub oak (Quercus berberidifolia), and California bay are also present. Scattered ghost pines and knobcone pines are present in some areas. Ground cover consists of leaf litter and bare ground due to the density of the shrub canopy. Poison oak is also present.

Chamise Chaparral:

This xeric (dry soil) shrub community occupies the south-facing slopes of Mt. Olive along the northwestern edge of the property. The community is a dense and nearly homogenous canopy of chamise. As a consequence, the ground cover is primarily duff. Community edges support a ground cover similar to that of the interior live oak chaparral.

Choke Cherry Thicket:

The Choke Cherry Thicket community consists of a homogenous dense canopy of western choke cherry (*Prunus virginiana var. demissa*) along the southern bank of McIntire Creek. The ground cover here is leaf litter.

Wild Oat Grassland:

Grasslands are primarily limited to the valley bottoms surrounding the wetlands and below the surrounding woodlands and chaparral communities. The species mix varies with the amount of shade available from the adjacent valley oak woodlands and the saturation of soils adjacent to wetlands. The species mix includes: soft chess (Bromus hordeaceus), creeping wild rye (Elymus triticoides), annual bluegrass (Poa annua), bulbous bluegrass (Poa bulbosa), California brome (Bromus carinatus var. carinatus), hedgehog dogtail, annual dogtail (Cynosurus echinatus), California poppy (Eschscholzia californica), sun cup (Taraxia ovata), common yarrow (Achillea millefolium), and milkmaids (Cardamine californica var. californica).

Baltic Rush Marsh:

Baltic rush (Juncus balticus) forms a broad cover over most of the central wetland. While it can form a homogenous herb canopy, it is often interrupted by small, heterogenous islands of other wetland species depending on slight variations in ground elevations and hydrology. These other species occupy a wide range of hydrologic conditions. Tule or "bulrush" (Schoenopluctus acutus var. occidentalis) occupies the deepest areas, generally within excavated drainage ditches and depressions within the wetland. The edges of ponded water support, blunt spikerush (Eleocharis obtusa), and creeping spikerush (Eleocharis macrostachya). Areas of high saturation support Santa Barbara sedge (Carex barbarae) and Pacific bog rush (Juncus effusus var. pacificus). Other hydrophytic (wetland plants) include tall flat sedge (Cyperus eragrostis), and clustered field sedge (Carex praegracilis),

• Ruderal (disturbed areas):

At the time of the survey ruderal areas were limited to a pull-out along State Highway 175 and ranch roadway in the eastern half of the property.

Dacite Barren:

This white, rocky substrate is limited to an area of exposed dacite bedrock in the extreme northwestern corner of the property. It lacks vegetative cover.

4.0 PRE-SURVEY RESEARCH RESULTS

4.1 <u>CNPS Electronic Inventory Analysis</u>: A California Native Plant Society (CNPS) analysis was conducted for all plants with federal and state regulatory status, and all non-status plants on the CNPS Rare Plant Ranks 1B through 4. The query included all plants within this area of Lake County occurring within the plant communities identified on the project site. The inventory lists species potentially occurring at the site; these are listed in **Table 2**. These species were included in the list of potentially sensitive species specifically searched for during field surveys.

Note: The CNPS list is used to broaden the list of sensitive species considered during the subsequent field surveys; however, it must be used with discretion because the database search does not allow fine-tuning for specific soil types or for many specific habitats required by sensitive plant taxa (e.g. vernal pools or serpentine soils). Consequently, the CNPS list generated for a site may include several taxa for which the required habitat is not present.

4.2 <u>California Natural Diversity Database</u>: The California Natural Diversity Database (CNDDB) and CDFW RareFind 5 data and maps for the Kelseyville 7½⁴ quadrangle map were reviewed for this project. **Table 3** presents a list of sensitive plant and wildlife species known to occur in the quadrangle. In addition to listing the species present within the quadrangle, the table provides a brief descriptor of the habitat requirements and blooming season, along with an assessment of whether the project area contains the necessary habitat requirements for each species. **Appendix A** at the end of this report lists the species within the nine quadrangles in the vicinity of this property.

TABLE 2. CALIFORNIA NATIVE PLANT SOCIETY'S INVENTORY OF RARE AND ENDANGERED PLANTS

Selected CNPS Plants by Scientific Name:

Hanson Property

Scientific Name	Common Name	Family	Lifeform	CRPR	CESA*	FESA*	Blooming Period	Habitat
Amsinckia lunaris	bent-flowered fiddleneck	Boraginaceae	ann herb	1B.2	None	None	Mar-Jun	Coastal bluff scrub, Cismontane woodland, Valley and foothill grassland
Arctostaphylos manzanita ssp. elegans	Konocti manzanita	Ericaceae	per everg shrub	1B.3	None	None	(Jan)Mar- May(Jul)	Chaparral, Cismontane woodland, Lower montane coniferous forest; volcanic
Arctostaphylos stanfordiana ssp. raichei	Raiche's manzanita	Ericaceae	per everg shrub	1B.1	None	None	Feb-Apr	Chaparral, Lower montane coniferous forest (openings); rocky, often serpentinite
Astragalus breweri	Brewer's milk- vetch	Fabaceae	ann herb	4.2	None	None	Apr-Jun	Chaparral, Cismontane woodland, Meadows and seeps, Valley and foothill grassland (open, often gravelly); often serpentinite, volcanic
Azolla microphylla	Mexican mosquito fern	Azollaceae	ann / per herb	4.2	None	None	Aug	Marshes and swamps (ponds, slow water)
Brasenia schreberi	watershield	Cabombaceae	per rhizom herb (aquatic)	2B.3	None	None	Jun-Sep	Marshes and swamps (freshwater)
Calyptridium quadripetalum	four-petaled pussypaws	Montiaceae	ann herb	4.3	None	None	Apr-Jun	Chaparral, Lower montane coniferous forest; sandy or gravelly, usually serpentinite
Clarkia gracilis ssp. tracyi	Tracy's clarkia	Onagraceae	ann herb	4.2	None	None	Apr-Jul	Chaparral (openings, usually serpentinite)
Cordylanthus tenuis ssp. brunneus	serpentine bird's- beak	Orobanchaceae	ann herb (hemi- parasitic)	4.3	None	None	Jul-Aug	Closed-cone coniferous forest, Chaparral, Cismontane woodland; usually serpentinite
Cryptantha dissita	serpentine cryptantha	Boraginaceae	ann herb	1B.2	None	None	Apr-Jun	Chaparral (serpentinite)
Eriastrum brandegeeae	Brandegee's eriastrum	Polemoniaceae	ann herb	1B.1	None	None	Apr-Aug	Chaparral, Cismontane woodland; volcanic, sandy
Gratiola heterosepala	Boggs Lake hedge-hyssop	Plantaginaceae	ann herb	1B.2	SE	None	Apr-Aug	Marshes and swamps (lake margins), Vernal pools; clay

Scientific Name	Common Name	Family	Lifeform	CRPR	CESA*	FESA*	Blooming Period	Habitat
Harmonia hallii	Hall's harmonia	Asteraceae	ann herb	1B.2	None	None	Apr-Jun	Chaparral (serpentinite)
Hesperolinon adenophyllum	glandular western flax	Linaceae	ann herb	1B.2	None	None	May-Aug	Chaparral, Cismontane woodland, Valley and foothill grassland; usually serpentinite
Horkelia bolanderi	Bolander's horkelia	Rosaceae	per herb	1B.2	None	None	(May)Jun- Aug	Chaparral, Lower montane coniferous forest, Meadows and seeps, Valley and foothill grassland; edges, vernally mesic areas
Lasthenia burkei	Burke's goldfields	Asteraceae	ann herb	1B.1	SE	FE	Apr-Jun	Meadows and seeps (mesic), Vernal pools
Layia septentrionalis	Colusa layia	Asteraceae	ann herb	1B.2	None	None	Apr-May	Chaparral, Cismontane woodland, Valley and foothill grassland; sandy, serpentinite
Legenere limosa	legenere	Campanulaceae	ann herb	1B.1	None	None	Apr-Jun	Vernal pools
Leptosiphon acicularis	bristly leptosiphon	Polemoniaceae	ann herb	4.2	None	None	Apr-Jul	Chaparral, Cismontane woodland, Coastal prairie, Valley and foothill grassland
Limnanthes floccosa ssp. floccosa	woolly meadowfoam	Limnanthaceae	ann herb	4.2	None	None	Mar- May(Jun)	Chaparral, Cismontane woodland, Valley and foothill grassland, Vernal pools; vernally mesic
Lupinus sericatus	Cobb Mountain lupine	Fabaceae	per herb	1B.2	None	None	Mar-Jun	Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest
Micropus amphibolus	Mt. Diablo cottonweed	Asteraceae	ann herb	3.2	None	None	Mar-May	Broadleafed upland forest, Chaparral, Cismontane woodland, Valley and foothill grassland; rocky
Navarretia leucocephala ssp. pauciflora	few-flowered navarretia	Polemoniaceae	ann herb	1B.1	ST	FE	May-Jun	Vernal pools (volcanic ash flow)
Navarretia leucocephala ssp. plieantha	many-flowered navarretia	Polemoniaceae	ann herb	1B.2	SE	FE	May-Jun	Vernal pools (volcanic ash flow)
Orcuttia tenuis	slender Orcutt grass	Poaceae	ann herb	1B.1	SE	FT	May- Sep(Oct)	Vernal pools; often gravelly
Sidalcea oregana ssp. hydrophila	marsh checkerbloom	Malvaceae	per herb	1B.2	None	None	(Jun)Jul- Aug	Meadows and seeps, Riparian forest; mesic

Scientific Name	Common Name	Family	Lifeform	CRPR	CESA*	FESA*	Blooming Period	Habitat
Streptanthus barbiger	bearded jewelflower	Brassicaceae	ann herb	4.2	None	None	May-Jul	Chaparral (serpentinite)
Trichostema ruygtii	Napa bluecurls	Lamiaceae	ann herb	1B.2	None	None	Jun-Oct	Chaparral, Cismontane woodland, Lower montane coniferous forest, Valley and foothill grassland, Vernal pools

KEY FOR TABLE 2:

* See Table 3 for abbreviations

CNPS Rare Plant-Threat Rank Definitions:

CRPR= California Rare Plant Rank

- 1B.1 = Rare, threatened, or endangered in California and elsewhere; seriously threatened in California
- 1B.2 = Rare, threatened, or endangered in California and elsewhere; fairly threatened in California
- 1B.3 = Rare, threatened, or endangered in California and elsewhere; not very threatened in California
- 2A = Presumed extinct in California, but extant elsewhere
- 2B.1 = Rare, threatened, or endangered in Calif., but more common elsewhere; seriously threatened in Calif.
- 2B.2 = Rare, threatened, or endangered in Calif., but more common elsewhere; fairly threatened in Calif.
- 2B.3 = Rare, threatened, or endangered in Calif., but more common elsewhere; not very threatened in Calif.
- 3 = Plants about which we need more information (Review List)
- 3.1 = Plants about which we need more information (Review List); seriously threatened in California
- 3.2 = Plants about which we need more information (Review List); fairly threatened in California
- 3.3 = Plants about which we need more information (Review List); not very threatened in California
- 4.1 = Plants of limited distribution (watch list); seriously threatened in California
- 4.2 = Plants of limited distribution (watch list); fairly threatened in California
- 4.3 = Plants of limited distribution (watch list); not very threatened in California

State and Federal Status:

- CESA = California Endangered Species Act
- FESA = Federal Endangered Species Act
- FE/FT = Federal Endangered/Threatened
- SE/ST = State Endangered/Threatened

ann = annual per = perennial

everq = everqreen

rhizo = rhizomatous

TABLE 3. CNDDB SENSITIVE PLANT AND WILDLIFE SPECIES WITHIN THE KELSEYVILLE, CALIF. 71/2' QUADRANGLE

Habitat Type	Habitat Present
Northern Volcanic Ash Vernal Pool	no
Clear Lake Drainage Cyprinid/Catostomid Stream	no
Clear Lake Drainage Seasonal Lakefish Spawning Stream	no
Clear Lake Drainage Resident Trout Stream	no

Plant Species	Common Name	Habitat Requirements/ Fed-State-CNPS* Status	Blooming Season/Form	Habitat Present
Amsinckia lunaris	bent-flowered fiddleneck	Coastal bluff scrub, cismontane woodland, valley & foothill grassland;//1B.2	March-June ann. herb	habitat present in survey area
Arctostaphylos manzanita ssp. elegans	Konocti manzanita	Chaparral, cismontane woodland, lower montane conif. forest/volcanic;//1B.3	March-May everg. shrub	habitat present in survey area
Arctostaphylos stanfordiana ssp. raichei	Raiche's manzanita	Chaparral, lower montane coniferous forest/rocky, often serpentine;//1B.1	FebApril ann. herb	habitat present in survey area
Astragalus breweri	Brewer's milk-vetch	Chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland (open, often gravelly)/often serpentinite, volcanic;//4.2	April-June ann. herb	habitat present in survey area
Azolla microphylla	Mexican mosquito-fern	Marshes and swamps (ponds, slow water);//4.2	August ann./per. herb	habitat present in survey area
Brasenia schreiberi	watershield	Marshes & swamps/freshwater;//2.3	March-Sept; rhizom. herb	habitat present in survey area
Calyptridium quadripetalum	four-petaled pussypaws	Chaparral, lower montane coniferous forest/sandy or gravelly, usually serpentinite;//4.3	April-June ann. herb	poor habitat present in survey area
Clarkia gracilis ssp. tracyi	Tracy's clarkia	Chaparral (openings, usually serpentinite);//4.2	April-June ann. herb	poor habitat present in survey area
Cordylanthus tenuis ssp. brunneus	serpentine bird's-beak	Closed-cone coniferous forest, chaparral, cismontane woodland/usually serpentinite;//4.3	July-Aug. ann. herb	poor habitat present in survey area
Eriastrum brandegeeae	Brandegee's eriastrum	Chaparral, cismontane woodland, valley & foothill grassland/barren volcanic soils, often in open areas;/ /1B.1	April-Aug. ann. herb	habitat present in survey area
Gratiola heterosepala	Boggs Lake hedge-hyssop	Freshwater marsh, marshes & swamps (freshwater), vernal pools, sometimes lake margins/clay/SE/1B.2	April-Aug. ann. herb	moderate habitat present in survey area

Plant Species	Common Name	Habitat Requirements/ Fed-State-CNPS* Status	Blooming Season/Form	Habitat Present
Harmonia hallii	Hall's harmonia	Chaparral/serpentine hills & ridges, open rocky areas;/ /1B.2/G2/S2	April-June ann. herb	habitat not present in survey area
Hesperolinon adenophyllum	glandular western flax	Chaparral, cismontane woodland, valley & foothill grassland/usually serpentine chaparral;//1B.2	May-Aug. ann. herb	habitat not present in survey area
Horkelia bolanderi	Bolander's horkelia	Lower montane conif. forest, chaparral, meadows & seeps, valley & foothill grassland/grassy margins of vernal pools and meadows;//1B.2	June-Aug. per. herb	habitat present in survey area
Lasthenia burkei	Burke's goldfields	Meadows and seeps, vernal pools and swales; FE/SE/1B.1	April-June ann. herb	moderate habitat present in survey area
Layia septentrionalis	Colusa layia	Chaparral, cismontane woodland, valley & foothill grassland/sandy or serpentine;//1B.2	April-May, ann. herb	habitat not present in survey area
Legenere limosa	legenere	In beds of vernal pools;//1B.1	April-June ann. herb	habitat not present in survey area
Leptosiphon acicularis	bristly leptisiphon	Chaparral, cismontane woodland, coastal prairie, valley and foothill grassland;//4.2	April-July ann. herb	habitat present in survey area
Limnanthes floccosa ssp. floccosa	woolly meadowfoam	Chaparral, cismontane woodland, valley & foothill grassland, vernal pools/vernally mesic;//4.2	March-May (June) ann. herb	habitat not present in survey area
Micropus amphibolus	Mt. Diablo cottonweed	Broadleaved upland forest, chaparral, cismontane woodland, valley & foothill grassland /rocky;//3.2	March-May ann. herb	habitat present in survey area
Monardella viridis	green monardella	Broadleaved upland forest, chaparral, cismontane woodland;//4.3	June-Sept. rhizom. herb	habitat present in survey area
Navarretia leucocephala ssp. pauciflora	few-flowered navarretia	Volcanic ash flow vernal pools; FE/ST/1B.1	May-June ann. herb	habitat not present in survey area
Navarretia leucocephala ssp. plieantha	many-flowered navarretia	Volcanic ash flow vernal pools; FE/SE/1B.2	May-June ann. herb	habitat not present in survey area
Orcuttia tenuis	slender Orcutt grass	Vernal pools/often in gravelly substrate; FT/SE/1B.1	May-Oct. ann. herb	habitat not present in survey area

Plant Species	Common Name	Habitat Requirements/ Fed-State-CNPS* Status	Blooming Season/Form	Habitat Present
Potamogeton zosteriformis	eel-grass pondweed	Rooted submerged plant with long, thin leaves, may be 3- 4 feet long; occurs in marshes & swamps, ponds, lakes & streams;//2B.2	June-July ann. herb (aquatic)	moderate habitat present in survey area
Sidalcea oregana ssp. hydrophila	marsh checkerbloom	Marshes & seeps, riparian forest/wet soil of streambanks, meadows;/1B.2	July-Aug. per. herb	habitat present in survey area
Streptanthus barbiger	bearded jewelflower	Chaparral: serpentine;/-/4.2	May-July ann. herb	habitat not present in survey area
Trichostema ruygtii	Napa bluecurls	Chaparral, cismontane woodland, lower montane conif. forest, valley & foothill grassland, vernal pools;//1B.2	June-Oct. ann. herb	moderate habitat present in survey area

*See CNPS list for key

Wildlife Species	Common Name	Habitat Requirements, Status	Season Present	Habitat Present
Calasellus californica	an isopod	Aquatic: freshwater wells & springs. Known from Lake, Napa, Marin, Santa Cruz, and Santa Clara counties. One occurrence from Kelseyville in 1931; G2/S2	year-round	habitat not present in survey area
Linderiella occidentalis	California linderiella	Freshwater fairy shrimp found in seasonally ponded habitat types such as vernal pools, ephemeral drainages, stock ponds, reservoirs, ditches, and vehicle ruts; G3G4/S2S3	year-round	habitat not present in survey area
Bombus caliginosus	obscure bumble bee	A black and yellow bee found in California, Oregon, Washington. Food plant genera: Baccharis, Cirsium, Lupinus, Lotus, Grindelia, Phacelia; G3G4/CA-SNR	year-round	poor habitat present in survey area
Hydrochara rickseckeri	Ricksecker's water scavenger beetle	Aquatic beetle that lives in slow-flowing streams, shallow open water, springs, stagnant ponds, & vernal pools; G2/S2	year-round	habitat not present in survey area
Lavinia exilicauda chi	Clear Lake hitch	Found only in Clear Lake, Lake County and assoc. ponds. Spawns in streams flowing to Clear Lake; SSC/ST/G4/S1	year-round	habitat not present in survey area
Lavinia symmetricus ssp. 4	Clear Lake – Russian River roach	Closely-related species found either in tributaries to Clear Lake, Lake County, or the Russian River and its tributaries; SSC/G4(T2-Imperiled)/S2S3	year-round	habitat not present in survey area

Wildlife Species	Common Name	Habitat Requirements, Status	Season Present	Habitat Present
Rana boylii	foothill yellow-legged frog	Riparian/aquatic: partly-shaded, shallow streams & riffles with a rocky substrate in variety of habitats; SSC/SCT/G3/S2S3	year-round	habitat <u>may be</u> present in survey area
Taricha rivularis	red-bellied newt	Occurs near high to moderate gradient streams and rivers, riffles, pools. Burrows in soil or debris near water, emerges during fall rains to water to breed; SSC/G4/SNR	year-round	habitat may be present in survey area
Emys marmorata	western pond turtle	Aquatic turtle found in ponds, lakes, rivers, creeks, marshes & irrigation ditches with abundant vegetation and rocky or muddy bottoms; In woodland, forest, & grasslands; SSC/G3G4/S3	year-round	poor habitat present in survey area
Pandion haliaetus	osprey	Large, fish-bearing waters usually in mixed conifer habitats/typically nests are within 15 miles of good fish- producing body of water; WL/G5/S4	sometimes migratory	habitat <u>may be</u> present in survey area
Progne subis	purple martin	Open woodland near water. Nests in old woodpecker cavities in isolated trees, sometimes in human-made structures; SSC/G5/S3	migratory in winter	habitat <u>may be</u> present in survey area
Erethizon dorsatum	North American porcupine	Occurs in a wide variety of coniferous and mixed woodland habitats in Sierra Nevada, Cascade, and Coast Ranges; G5/S3	year-round	habitat <u>may be</u> present in survey area

Key:

SE/ST/SD=State Endangered/Threatened/Delisted SC/SCD=State Candidate for Listing/Delisting SSC=CDFW Species of Special Concern SFP=CDFW Fully Protected WL=CDFW Watch List FE/FT/FD=Federal Endangered/Threatened/Delisted FPE/FPT/FPD/FP=Federal Proposed Endangered/Threatened/Delisting FC=Federal Candidate

NatureServe Conservation Status:

G1/S1 = Global/State Critically Imperiled G2/S2 = Global/State Imperiled G3/S3 = Global/State Vulnerable G4/S4 = Global/State Apparently Secure G5/S5 = Global/State Secure SNR=Not rated **4.3** <u>Wildlife Habitat Analysis Results</u>: The Wildlife Habitat Relationships analysis lists a number of native species with sensitive <u>and</u> non-sensitive status as potentially occurring on the site based on the geographic location and wildlife habitats present. This list is included as **Appendix B**.

4.4 <u>Wildlife Assessment</u>: Based on the pre-survey research conducted for this study, a total of 14 sensitive wildlife species need to be accounted for within the project area. These consist of the species identified as present within the Kelseyville quadrangle by the CNDDB; these include a wide variety of animal species including insects, crustaceans, fish, amphibians, birds, and mammals. Many of the species listed in the CNDDB for this quadrangle are endemic to habitats that do not occur on or in the vicinity of the property, such as vernal pools or Clear Lake and its perennial tributaries. White-tailed kite, northern harrier, and pallid bat are added due to presence of appropriate habitat. Accepted protocol requires that all CNDDB species in the surrounding U.S.G.S. quadrangle be discussed even through suitable habitat may not occur on the site.

The following species would not occur within the project area because of the lack of appropriate habitat:

- Calasellus californica an Isopod (requires freshwater springs)
- Linderiella occidentalis California linderiella (not present in area)
- Hydrochara rickseckeri- Ricksecker's water scavenger beetle (habitat not present on property)
- Lavinia exilicauda chi Clear Lake hitch (habitat not present on property)
- Lavinia symmetricus ssp. 4- Clear Lake Russian River roach (habitat not present on property)

Habitat for the following species is poor to moderate on the site:

• Obscure bumble bee (Bombus oliginosus):

This bumblebee is native to the west coast; in the Coast Range it inhabits meadows. It is similar in appearance and co-exists with the common *Bombus vosnesenskii* and may be mistaken for this bee. *B. oliginosus* is threatened by climate change and loss of habitat and does not thrive in developed urban or agricultural areas. There is a low potential habitat for this species to occur here because of a lack of preferred food plants.

• Foothill yellow-legged frog (Rana boylii):

These frogs are relatively common along the shaded banks of perennial headwater streams. They are heavily dependent on the presence of perennial water and are

seldom far from pools where they can seek shelter from predation. The larvae require three to four months to mature, making most ephemeral (seasonal) streams unsuitable as breeding sites. There is a potential for this species to occur on the property within intermittent segments of McIntire Creek within the steep canyon west of the central wetland. This channel supports a boulder and pool channel structure which is ideal for this species.

Red-bellied newt (Taricha rivularis):

This species is often found under rocks, logs, soil or duff, or in rodent burrows in coastal woodlands and redwood forests. Newts occur near high-to-moderate gradient streams and rivers, in riffles, and pools. They usually breed in flowing water. These animals burrow in soil or debris near water and emerge to water during fall rains to breed; they may migrate up to a mile or more between terrestrial habitat and stream breeding sites. They have been identified in the Cobb Mountain area along Bottle Rock Road. There is a potential for this species to occur on the property within intermittent segments of McIntire Creek within the steep canyon west of the central wetland. This channel supports a boulder and pool channel structure which is ideal for this species.

Western pond turtle (Actinemys marmorata):

These turtles prefer slow or ponded water with sheltering vegetation but will range widely through less suitable habitat in search of these sites. Eggs are laid on land in sheltered nests. Young overwinter in the nest and emerge the following spring in Northern California. When present, pond turtles are readily observed basking along shorelines or on logs in shallow water. Intermittent ponded water along the northern edge of the wetland and along excavated drainage channels provides suitable seasonal habitat for this species. McIntire Creek would provide a seasonal transit corridor for this species through the McIntire Creek watershed and to longer duration ponds on the property east of State Highway 175.

Osprey (Pandion haliaetus):

This species occurs near large, fish-bearing waters in ponderosa pine or mixed conifer habitats where it feeds on open waters for fish, although it also takes small birds and mammals. It hunts over wide expanses of open water and usually nests in the tops of large isolated trees near shorelines. Nests are made on platforms of sticks on top of large snags, dead-topped trees, or man-made structures, usually within close proximity of large fish-producing water bodies. The stick nests constructed by this species are readily apparent when present. While this site may contain suitable nesting habitat for the osprey in taller trees in the woodlands or forest, fish are not present in McIntire Creek in the size and species makeup that would provide suitable prey for these raptors. Consequently, they are unlikely to be present. This species' sensitive status pertains to nesting pairs. Osprey no longer has sensitive status but is protected under the Migratory Bird Treaty Act and California Department of Fish and Game code.

• White-tailed kite (Elanus leucurus):

Usually found near agricultural areas, the kite prefers open terrain near woodlands and water. These raptors hunt over open country and prefer large, deciduous trees surrounded by expanses of grassland, meadows, farmland, and/or wetlands for nesting and roosting sites. They feed mostly on small diurnal mammals, but will sometimes eat birds, insects, amphibians, and reptiles. The extensive open wetland habitat and grasslands on this property provide ideal hunting habitat for these raptors. The adjacent valley oak woodlands provide very good nesting habitat. The California Fully Protected status of these raptors pertains to nesting pairs with an emphasis on protecting nesting habitat.

Northern harrier (Circus cyaneus hudsonius):

This raptor occurs in annual grassland and is also found at high elevations. It inhabits meadows, open grasslands and rangelands, and emergent wetlands but is seldom found in wooded or agricultural areas. Formerly called the "marsh hawk", it nests on the ground in dense shrubby vegetation in and near wetlands. The harrier feeds on insects and small mammals, birds, etc., and competes with the red-tailed hawk for food. It prefers habitat such as the broad, open grasslands and wetlands of the Sacramento Valley where this species is commonly seen. The extensive wetland and grassland habitat on the property provides ideal hunting habitat for these raptors. The availability of adjacent brushy nesting habitat is limited due to extensive cattle grazing. There is a high potential for these raptors to hunt here but a limited potential for nesting. These raptors nest from April to August and have California Species of Concern status during that period.

Pallid bat (Antrozous pallidus):

Optimal habitat for these bats consists of open, dry habitats with rocky areas in the southwestern U.S., but the bats are also found in oak savanna grasslands, and in open forest and woodlands with access to riparian and open water for feeding and drinking in northern California. These bats prefer the cool summer temperatures of caves, crevices, and mines as roosting sites where they are known to wedge themselves into small spaces, but they will also roost in buildings, bridges, and hollow trees. Foraging occurs over open country. The oak woodlands and pine forest on the property may provide moderate roosting habitat for this bat.

• North American porcupine (Erethizon dorsatum):

This species prefers conifer and hardwood forests and woodlands but is also found in forested wetlands and chaparral. It uses downed logs and debris, as well as snags and tree hollows, as cover. The porcupine breeds from September to November or December, giving birth in the spring. One offspring is reared a year. *E. dorsatum* is herbivorous; its diet consists of many parts of trees and other plants including bark, needles, flowers, roots, berries, leaves, and seeds. It is mostly nocturnal. This species is listed in the CNDDB as "G5" (Global Secure) and "SNR" (Species not Rated-California). It is therefore not a species with sensitive regulatory status although its local accounts are included in the database.

Raptors and passerines with non-sensitive status are likely to nest on the property due to the diverse woodland and forest habitats there. These birds would include red-tailed hawks, crows and ravens, Cooper's hawks, woodpeckers, yellow-breasted chats, and yellow warblers. Much of the wetlands and grasslands have been grazed since historical times. All nesting raptors are protected under the Migratory Bird Treaty Act and Fish and Game Code.

5.0 FIELD SURVEY RESULTS

5.1 <u>Plant Field Survey Results</u>: Table 4 presents a list of plant species that were identified during the springs surveys. <u>This list does not constitute a floristic-level botanical survey within the survey area, as no late season surveys were conducted</u>. This list contains 78 plant taxa, including native and introduced plants.

One plant taxon with sensitive status was identified during the site visits:

• Konocti manzanita (Arctostaphylos manzanita ssp. elegans; CNPS Rank 1B.3): Konocti manzanita occurs within the interior live oak chaparral and black oak woodland. Plants ranked 1B are considered by regulatory agencies to qualify as rare under Section 15380(d) of the California Environmental Quality Act (CEQA) and thus require consideration and subsequent mitigation during CEQA review.

TABLE 4.	PLANT TAXA	IDENTIFIABLE DURING SITE	VISITS
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Habit	Species	Common Name	Family	Origin
forb	Ligusticum apiifolium	celeryleaf licorice root	Apiaceae	N
forb	Torilis arvensis	field hedge parsley	Apiaceae	A
forb	Achillea millefolium	common yarrow	Asteraceae	N
forb	Agoseris grandiflora	California dandelion, big-flower agoseris	Asteraceae	N
forb	Artemesia douglasiana	mugwort	Asteraceae	N
forb	Centaurea solstitialis	yellow star thistle	Asteraceae	A
forb	Cynara cardunculus	artichoke thistle	Asteraceae	A
forb	Amsinckia menziesii	small-flowered fiddleneck, rancher's fireweed	Boraginaceae	N
forb	Cardamine californica var. californica	milkmaids	Brassicaceae	N
forb	Nasturtium officianale	watercress	Brassicaceae	N
forb	Cerastium glomeratum	mouse-ear chickweed, sticky mouse-ear	Caryophyllaceae	A
forb	Carex barbarae	Santa Barbara sedge	Cyperaceae	N
forb	Carex praegracilis	clustered field sedge	Cyperaceae	N
forb	Carex multicaulis	forest sedge, many-stem sedge	Cyperaceae	N
forb	Cyperus eragrostis	tall flat sedge	Cyperaceae	N
forb	Eleocharis macrostachya	creeping spikerush, pale spikerush	Cyperaceae	N
forb	Eleocharis obtusa	blunt spikerush	Cyperaceae	N
forb	Schoenopluctus acutus var. occidentalis	tule, bulrush	Cyperaceae	N
forb	Lotus corniculatus	bird's-foot trefoil	Fabaceae	A
forb	Lathyrus jepsonii var. californicus	California tule pea	Fabaceae	N
forb	Sanicula bipinnatifida	purple sanicle	Apiaceae	N
forb	Trifolium campestre	hop clover	Fabaceae	A
forb	Trifolium hirtum	rose clover	Fabaceae	A
forb	Trifolium subterraneum	subterranean clover	Fabaceae	A
forb	Geranium dissectum	cut-leaved geranium	Geraniaceae	A

Habit	Species	Common Name	Family	Origin
forb	Nemophila menziesii var. atomaria	baby blue eyes	Hydrophyllaceae	N
forb	Juncus balticus	Baltic rush	Juncaceae	N
forb	Juncus effusus var. pacificus	Pacific bog rush	Juncaceae	N
forb	Lemna aequinoctialis	duckweed	Lemnaceae	N
forb	Taraxia (Camissonia) ovata	sun cup	Onagraceae	N
forb	Eschscholzia californica	California poppy	Papaveraceae	N
forb	Rumex crispus	curly dock	Polygonaceae	A
forb	Ranunculus occidentalis	western buttercup	Ranunculaceae	N
forb	Galium porrigens var. porrigens	climbing bedstraw, graceful bedstraw	Rubiaceae	N
forb	Pedicularis densiflora	warrior's plume, Indian warrior	Scrophulariaceae	N
forb	Urtica dioica ssp. gracilis	stinging nettle	Urticaceae	N
forb	Viola lobata ssp. integrifolia	pine violet, delta leaved forest violet	Violaceae	N
grass	Alopecurus aegualis	short-awn foxtail	Poaceae	N
grass	Anthoxanthum odoratum	sweet vernal grass	Poaceae	N
grass	Bromus carinatus var. carinatus	California brome	Poaceae	N
forb	Galium aparine	goose grass, common bedstraw	Rubiaceae	N
grass	Bromus hordeaceus	soft chess	Poaceae	A
grass	Cynosurus echinatus	hedgehog dogtail, annual dogtail	Poaceae	A
grass	Elymus triticoides	creeping wild rye	Poaceae	N
grass	Festuca arundinacea	reed fescue, tall fescue	Poaceae	A
grass	Festuca perennis	perennial ryegrass, Italian rye grass	Poaceae	A
grass	Bromus laevipes	woodland brome	Poaceae	N
grass	Festuca californica	California fescue	Poaceae	N
grass	Hordeum brachyantherum ssp. brachyantherum	meadow barley, northern barley	Poaceae	N
grass	Poa annua	annual bluegrass	Poaceae	A
grass	Poa bulbosa	bulbous bluegrass	Poaceae	A
grass	Polypogon monspeliensis	rabbits-foot grass, annual beardgrass	Poaceae	A

Habit	Species	Common Name	Family	Origin
shrub	Toxicodendron diversilobum	poison oak	Anacardiaceae	N
shrub	Arctostaphylos glandulosa ssp. glandulosa	Eastwood's manzanita	Ericaceae	N
shrub	Arctostaphylos manzanita ssp. elegans	Konocti manzanita, CNPS Rank 1B.3	Ericaceae	N
shrub	Arctostaphylos manzanita ssp. manzanita	common manzanita	Ericaceae	N
shrub	Cercis occidentalis	western redbud	Fabaceae	N
forb	Osmorhiza berteroi	mountain sweet cicely	Apiaceae	N
shrub	Quercus berberidifolia	California scrub oak	Fagaceae	N
shrub	Quercus wislizeni var. frutescens	interior live oak	Fagaceae	N
shrub	Ceanothus integerrimus	deerbrush	Rhamnaceae	N
shrub	Amelanchier alnifolia var. semiintegrifolia	Pacific serviceberry	Rosaceae	N
forb	Delphinium nudicaule	red larkspur	Ranunculaceae	N
shrub	Prunus virginiana var. demissa	western chokecherry	Rosaceae	N
forb	Wyethia glabra	green mule ears, shining mule ears	Asteraceae	N
forb	Wyethia helenioides	gray mule ears	Asteraceae	N
shrub	Rubus armeniacus	Himalayan blackberry	Rosaceae	A
shrub	Cercocarpus betuloides var. betuloides	birch-leaf mountain mahogany	Rosaceae	N
shrub	Adenostoma fasciculatum	chamise	Rosaceae	N
tree	Quercus douglasii	blue oak	Fagaceae	N
tree	Quercus kelloggii	California black oak	Fagaceae	N
tree	Quercus lobata	California valley oak	Fagaceae	N
tree	Quercus wislizeni var. wislizeni	interior live oak	Fagaceae	N
tree	Umbellularia californica	California bay	Lauraceae	N
tree	Pinus attenuata	knobcone pine	Pinaceae	N
tree	Pinus ponderosa	ponderosa pine	Pinaceae	N
tree	Pinus sabiniana	ghost pine, foothill pine	Pinaceae	N
tree	Pseudotsuga menziesii var. menziesii	Douglas fir	Pinaceae	N

N = Native, A = Alien

6.0 SUMMARY AND RECOMMENDATIONS

6.1 Summary: This preliminary biological resource assessment involved the following analyses of sensitive plants and wildlife potentially occurring in the vicinity of the property.

- Review of current California Natural Diversity Database (CNDDB) mapping of known sensitive plant and wildlife populations within the region.
- An analysis of the suitability of the site for sensitive plants and wildlife using the California Native Plant Society Electronic Inventory of Rare and Endangered Vascular Plants of California, and the California Department of Fish and Wildlife's Wildlife Habitat Relationships System.
- A delineation of waters of the U.S. conducted according to the Corps of Engineers Wetlands Delineation Manual, January 1987 as updated by the Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, 2008.

Sensitive Plants: A total of 78 native and introduced plant taxa were identified on the property during the spring site visits. This does not constitute a floristic-level botanical survey within the survey area, as no late season surveys were conducted. Konocti manzanita (Arctostaphylos manzanita ssp. elegans), a CNPS Rank 1B.1 sensitive species, occurs within the black oak woodland and chaparral.

As used here, the term sensitive includes species having state or federal regulatory status, defined as Rare Plant Ranks 1B through 4 by the California Native Plant Society, or otherwise listed in the California Natural Diversity Database. Plants ranked 1B are considered by regulatory agencies to qualify as rare under Section 15380(d) of the California Environmental Quality Act (CEQA) and thus require consideration and subsequent mitigation during CEQA review.

Sensitive Wildlife: A total of fourteen sensitive wildlife species were assessed for potential occurrence at the site because of inclusion in the CNDDB database for the quadrangle. Several raptors were added due to the presence of potential habitat.

Possible habitat occurs for the following species within the property:

White-tailed kite

Western pond turtle

Northern harrier

Pallid bat

- Foothill yellow-legged frog
- Red-bellied newt

Possible Waters of U.S.: The total area of all delineated waters of the U.S. is 45.88 acres. Waters of the U.S. occurring within the survey area consist of wetlands and "other waters" including streams, pursuant of Corps of Engineers Definitions (see Appendix C, Delineation Report).

6.2 <u>Potential Impacts and Proposed Mitigation for Biological Resources</u>:

1. Sensitive Wildlife:

Construction involving removal of woodland or grading within wetlands or other waters of the U.S. has a potential to adversely impact the following sensitive wildlife species.

• Pallid bat

Potential Impacts: Removal of trees providing bat habitat during the maternity roosting season (April 1 through September 15) has the potential to result in an incidental take of pallid bats.

Proposed Mitigation: If work is proposed within blue oak woodland or portions of the interior live oak woodland within the project area during the maternity roosting season (April 1 through September 15), trees with features capable of supporting roosting bats shall be surveyed by a qualified biologist for bat roosts or evidence of bat roosting (guano, urine staining, dead bats) within 14 days of the start of project activities or removal of vegetation. If active roosts are discovered, an exclusion buffer would be established around the active roost by a qualified bat biologist.

Removal of trees and ground disturbing activities should be performed to the extent possible from September 16 through March 31, outside of the maternity roosting season. Following the felling of any tree or snag, it should be allowed to remain on the ground for 24 hours prior to chipping or removal to allow any bats to escape.

• White-tailed kite; Northern harrier

Potential Impacts: Clearing or grading within 200 feet of nesting raptors has a potential to result in nest abandonment and incidental take of raptors with sensitive or protected status.

Proposed Mitigation: Any vegetation clearing or grading within 200 feet of woodland habitat, or of wetland habitat (northern harrier), between February 15 and August 31 should be preceded by a survey for nests of

white-tailed kite conducted by a qualified biologist. In the event that this species (or other raptors protected under the Migratory Bird Act, or California Fish and Wildlife Code) are determined to be nesting within 200 feet (or less if deemed adequate) of proposed construction activities, construction should be delayed within the buffer until after August 31, or until fledging is completed as determined by a qualified biologist.

• Nesting Passerines (perching birds):

Potential Impacts: Vegetation removal during the breeding season has a potential to result in an incidental take of nests and nestlings. The California Department of Fish and Wildlife requires surveys for all nesting birds prior to vegetation removal during the nesting season (February 1 through August 31) to avoid destruction of nests in compliance with Section 3503 of the California Fish and Wildlife Code (*Protection of Birds' Nests*), which states the following: It is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto.

Proposed Mitigation: Prior to the commencement of vegetation clearing during the breeding season, a survey for nesting birds should be conducted by a qualified biologist. In the event that nesting birds are found, a buffer should be established around the nest site as determined by the biologist and clearing within the buffer should not occur until either fledging is complete, the nest is abandoned, or until the end of the breeding season. Practical implementation of this measure would require removal of approved trees and vegetation outside of the breeding season because presence of breeding birds is highly likely.

• Foothill yellow-legged frog, Red-bellied newt, Western pond turtle

Potential Impacts: Potential habitat for these sensitive wildlife species occurs along McIntire Creek and the surrounding wetland complex and they may be present. Loss of riparian or wetland habitat would potentially result in an incidental take of these California Species of Concern.

Proposed Mitigation: Grading and vegetation clearing within 50 feet of McIntire Creek or wetlands on the property should be avoided. In the

event that avoidance is not possible, work should be preceded by surveys for these species. If they are found to be present, a mitigation plan should be prepared and submitted to the California Department of Fish and Wildlife for review and approval prior to project-related disturbance within the defined habitat and buffer.

2. Sensitive Plant Populations:

Construction and/or vegetation clearing within the California black oak woodland or interior live oak shrub community has a potential to impact plants with sensitive regulatory status.

<u>Konocti manzanita</u>

Potential Impacts: Konocti manzanita, a CNPS Rank 1B.3 sensitive species pursuant to Section 15380(d) of the CEQA Guidelines, occurs as scattered individuals ~20± per acre within the interior live oak shrub and California black oak woodland communities. Vegetation removal within these communities has the potential to result in the loss of some of these plants.

Proposed Mitigation: Construction and vegetation clearing within the interior live oak chaparral or California black oak woodland should be preceded by a survey for/ and flagging of Konocti manzanita. Clearing and grading within these habitats should attempt to avoid these plants where possible. Due to the low density of the subspecies within these habitats and its extensive distribution within the region, removal of a moderate number of plants may not rise to the level of a significant adverse impact within the context of the CEQA Guidelines.

3. Woodlands and Forest:

Potential Impacts: Due to the presence of the extensive wetland habitat and intact surrounding valley oak woodland and adjacent black oak and blue oak forests, this property provides exceptional wildlife habitat. Impacts to woodlands (and wetlands and riparian habitat) here has a potential to significantly degrade this regional resource.

Proposed Mitigation: It is recommended that at a minimum, the central valley and wetland area and surrounding valley oak woodland be preserved as wildlife habitat. Ongoing cattle grazing (presumed to be

continuous since the late-1800's) would not be subject to regulatory permitting and would continue. Any regulatory restrictions would only apply to future construction or other non-agricultural development.

4. Habitat Fragmentation:

Potential Impacts: The wetlands, McIntire Creek riparian habitat, and surrounding valley and black oak woodlands form a significant part of a continuous, undeveloped wildlife corridor from Kelsey Creek to the headwaters of McIntire Creek east of the property. Construction or vegetation removal within this corridor has a potential to significantly degrade this regionally significant resource.

Proposed Mitigation: This mitigation is addressed in Item 3. above.

5. Waterways:

Potential Impacts: The 45.88 acres of wetlands and waterways on the property are mapped in **Appendix C**, **Figure W-2 (WOUS)**. Filling or grading within these wetlands would impact waters of the U.S. Impacts to wildlife habitat associated with these aquatic resources are addressed above.

Proposed Mitigation:

If project activities would result in the fill of any waters mapped in Figure W-2, permits may be required from the following agencies:

- U.S. Army Corps of Engineers Nationwide Permit (If they determine these are waters of the U.S.)
- Regional Water Quality Control Board 401 Water Quality Certification
- California Department of Fish and Wildlife 1601 Stream Alteration Agreement

6. Erosion Control:

Potential Impacts: Vegetation clearing, and grading activities have a potential to result in sediment runoff to McIntire Creek.

Proposed Mitigation: All work in or near waterways and wetlands should incorporate extensive erosion control measures consistent with Lake County Grading Regulations in order to avoid erosion and the potential for transport of sediments to McIntire Creek. Coverage under the National Pollutant Discharge Elimination System (NPDES), General Permit for Storm Water Discharges associated with a Construction Activity (General Permit) and a Storm Water Pollution Prevention Plan (SWPPP) may be required.

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APPENDIX A

CNDDB SENSITIVE PLANT AND WILDLIFE SPECIES WITHIN THE

SURROUNDING CALIF. 7¹/₂' QUADS.

Surrounding 9-Quad List: Kelseyville Quadrangle

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
ASTI	Dicamptodon ensatus	California giant salamander	None	None	SSC	-
ASTI	Rana boylii	foothill yellow-legged frog	None	Cand Threat	SSC	-
ASTI	Taricha rivularis	red-bellied newt	None	None	SSC	-
ASTI	Ardea herodias	great blue heron	None	None	-	-
ASTI	Entosphenus tridentatus	Pacific lamprey	None	None	SSC	-
ASTI	Hysterocarpus traskii pomo	Russian River tule perch	None	None	SSC	-
ASTI	Lavinia symmetricus ssp. 4	Clear Lake - Russian River roach	None	None	SSC	-
ASTI	Oncorhynchus mykiss irideus pop. 8	steelhead - central California coast DPS	Threat	None	-	-
ASTI	Oncorhynchus tshawytscha pop. 17	chinook salmon - California coastal ESU	Threat	None	-	-
ASTI	Bombus caliginosus	obscure bumble bee	None	None	-	-
ASTI	Antrozous pallidus	pallid bat	None	None	SSC	-
ASTI	Corynorhinus townsendii	Townsend's big-eared bat	None	None	SSC	-
ASTI	Erethizon dorsatum	North American porcupine	None	None	-	-
ASTI	Lasiurus blossevillii	western red bat	None	None	SSC	-
ASTI	Myotis yumanensis	Yuma myotis	None	None	-	-
ASTI	Emys marmorata	western pond turtle	None	None	SSC	-
ASTI	Arctostaphylos manzanita ssp. elegans	Konocti manzanita	None	None	-	1B.3
ASTI	Cypripedium montanum	mountain lady's-slipper	None	None	-	4.2
CLEARLAKE HIGHLANDS	Rana boylii	foothill yellow-legged frog	None	Cand Threat	SSC	-
CLEARLAKE HIGHLANDS	Rana draytonii	California red-legged frog	Threat	None	SSC	-
CLEARLAKE HIGHLANDS	Ardea alba	great egret	None	None	-	-
CLEARLAKE HIGHLANDS	Ardea herodias	great blue heron	None	None	-	-
CLEARLAKE HIGHLANDS	Coccyzus americanus occidentalis	western yellow-billed cuckoo	Threat	End	-	-
CLEARLAKE HIGHLANDS	Haliaeetus leucocephalus	bald eagle	Delisted	End	FP	-
CLEARLAKE HIGHLANDS	Strix occidentalis caurina	Northern Spotted Owl	Threat	Threat	-	-
CLEARLAKE HIGHLANDS	Archoplites interruptus	Sacramento perch	None	None	SSC	-
CLEARLAKE HIGHLANDS	Hysterocarpus traskii lagunae	Clear Lake tule perch	None	None	SSC	-

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
CLEARLAKE HIGHLANDS	Lavinia exilicauda chi	Clear Lake hitch	None	Threat	-	-
CLEARLAKE HIGHLANDS	Lavinia symmetricus ssp. 4	Clear Lake - Russian River roach	None	None	SSC	-
CLEARLAKE HIGHLANDS	Dubiraphia brunnescens	brownish dubiraphian riffle beetle	None	None	-	-
CLEARLAKE HIGHLANDS	Hedychridium milleri	Borax Lake cuckoo wasp	None	None	-	-
CLEARLAKE HIGHLANDS	Antrozous pallidus	pallid bat	None	None	SSC	-
CLEARLAKE HIGHLANDS	Corynorhinus townsendii	Townsend's big-eared bat	None	None	SSC	-
CLEARLAKE HIGHLANDS	Myotis lucifugus	little brown bat	None	None	-	-
CLEARLAKE HIGHLANDS	Myotis yumanensis	Yuma myotis	None	None	-	-
CLEARLAKE HIGHLANDS	Pyrgulopsis ventricosa	Clear Lake pyrg	None	None	-	-
CLEARLAKE HIGHLANDS	Emys marmorata	western pond turtle	None	None	SSC	-
CLEARLAKE HIGHLANDS	Clear Lake Drainage Resident Trout Stream	Clear Lake Drainage Resident Trout Stream	None	None	-	-
CLEARLAKE HIGHLANDS	Coastal and Valley Freshwater Marsh	Coastal and Valley Freshwater Marsh	None	None	-	-
CLEARLAKE HIGHLANDS	Northern Basalt Flow Vernal Pool	Northern Basalt Flow Vernal Pool	None	None	-	-
CLEARLAKE HIGHLANDS	Northern Volcanic Ash Vernal Pool	Northern Volcanic Ash Vernal Pool	None	None	-	-
CLEARLAKE HIGHLANDS	Antirrhinum virga	twig-like snapdragon	None	None	-	4.3
CLEARLAKE HIGHLANDS	Arctostaphylos manzanita ssp. elegans	Konocti manzanita	None	None	-	1B.3
CLEARLAKE HIGHLANDS	Arctostaphylos stanfordiana ssp. raichei	Raiche's manzanita	None	None	-	1B.1
CLEARLAKE HIGHLANDS	Brasenia schreberi	watershield	None	None	-	2B.3
CLEARLAKE HIGHLANDS	Calochortus uniflorus	pink star-tulip	None	None	-	4.2
CLEARLAKE HIGHLANDS	Calyptridium quadripetalum	four-petaled pussypaws	None	None	-	4.3
CLEARLAKE HIGHLANDS	Cordylanthus tenuis ssp. brunneus	serpentine bird's-beak	None	None	-	4.3
CLEARLAKE HIGHLANDS	Eriastrum brandegeeae	Brandegee's eriastrum	None	None	-	1B.1
CLEARLAKE HIGHLANDS	Eryngium constancei	Loch Lomond button-celery	End	End	-	1B.1
CLEARLAKE HIGHLANDS	Gratiola heterosepala	Boggs Lake hedge-hyssop	None	End	-	1B.2
CLEARLAKE HIGHLANDS	Harmonia hallii	Hall's harmonia	None	None	-	1B.2
CLEARLAKE HIGHLANDS	Hemizonia congesta ssp. calyculata	Mendocino tarplant	None	None	-	4.3
CLEARLAKE HIGHLANDS	Hesperolinon bicarpellatum	two-carpellate western flax	None	None	-	1B.2
CLEARLAKE HIGHLANDS	Horkelia bolanderi	Bolander's horkelia	None	None	-	1B.2
CLEARLAKE HIGHLANDS	Imperata brevifolia	California satintail	None	None	-	2B.1

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
CLEARLAKE HIGHLANDS	Lasthenia burkei	Burke's goldfields	End	End	-	1B.1
CLEARLAKE HIGHLANDS	Leptosiphon acicularis	bristly leptosiphon	None	None	-	4.2
CLEARLAKE HIGHLANDS	Limnanthes floccosa ssp. floccosa	woolly meadowfoam	None	None	-	4.2
CLEARLAKE HIGHLANDS	Myosurus minimus ssp. apus	little mousetail	None	None	-	3.1
CLEARLAKE HIGHLANDS	Navarretia leucocephala ssp. bakeri	Baker's navarretia	None	None	-	1B.1
CLEARLAKE HIGHLANDS	Navarretia leucocephala ssp. pauciflora	few-flowered navarretia	End	Threat	-	1B.1
CLEARLAKE HIGHLANDS	Navarretia leucocephala ssp. plieantha	many-flowered navarretia	End	End	-	1B.2
CLEARLAKE HIGHLANDS	Piperia michaelii	Michael's rein orchid	None	None	-	4.2
CLEARLAKE HIGHLANDS	Potamogeton zosteriformis	eel-grass pondweed	None	None	-	2B.2
CLEARLAKE HIGHLANDS	Sedella leiocarpa	Lake County stonecrop	End	End	-	1B.1
CLEARLAKE HIGHLANDS	Sidalcea oregana ssp. hydrophila	marsh checkerbloom	None	None	-	1B.2
CLEARLAKE HIGHLANDS	Toxicoscordion fontanum	marsh zigadenus	None	None	-	4.2
CLEARLAKE HIGHLANDS	Viburnum ellipticum	oval-leaved viburnum	None	None	-	2B.3
CLEARLAKE OAKS	Haliaeetus leucocephalus	bald eagle	Delisted	End	FP	-
CLEARLAKE OAKS	Pandion haliaetus	osprey	None	None	WL	-
CLEARLAKE OAKS	Strix occidentalis caurina	Northern Spotted Owl	Threat	Threat	-	-
CLEARLAKE OAKS	Archoplites interruptus	Sacramento perch	None	None	SSC	-
CLEARLAKE OAKS	Hysterocarpus traskii lagunae	Clear Lake tule perch	None	None	SSC	-
CLEARLAKE OAKS	Lavinia exilicauda chi	Clear Lake hitch	None	Threat	-	-
CLEARLAKE OAKS	Dubiraphia brunnescens	brownish dubiraphian riffle beetle	None	None	-	-
CLEARLAKE OAKS	Antrozous pallidus	pallid bat	None	None	SSC	-
CLEARLAKE OAKS	Corynorhinus townsendii	Townsend's big-eared bat	None	None	SSC	-
CLEARLAKE OAKS	Myotis yumanensis	Yuma myotis	None	None	-	-
CLEARLAKE OAKS	Pekania pennanti	fisher - West Coast DPS	None	Threat	SSC	-
CLEARLAKE OAKS	Gonidea angulata	western ridged mussel	None	None	-	-
CLEARLAKE OAKS	Emys marmorata	western pond turtle	None	None	SSC	-
CLEARLAKE OAKS	Great Valley Mixed Riparian Forest	Great Valley Mixed Riparian Forest	None	None	-	-
CLEARLAKE OAKS	Arctostaphylos manzanita ssp. elegans	Konocti manzanita	None	None	-	1B.3
CLEARLAKE OAKS	Brasenia schreberi	watershield	None	None	-	2B.3

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
CLEARLAKE OAKS	Calyptridium quadripetalum	four-petaled pussypaws	None	None	-	4.3
CLEARLAKE OAKS	Erythronium helenae	St. Helena fawn lily	None	None	-	4.2
CLEARLAKE OAKS	Hemizonia congesta ssp. calyculata	Mendocino tarplant	None	None	-	4.3
CLEARLAKE OAKS	Layia septentrionalis	Colusa layia	None	None	-	1B.2
CLEARLAKE OAKS	Leptosiphon acicularis	bristly leptosiphon	None	None	-	4.2
CLEARLAKE OAKS	Potamogeton zosteriformis	eel-grass pondweed	None	None	-	2B.2
HIGHLAND SPRINGS	Rana boylii	foothill yellow-legged frog	None	Cand Threat	SSC	-
HIGHLAND SPRINGS	Taricha rivularis	red-bellied newt	None	None	SSC	-
HIGHLAND SPRINGS	Agelaius tricolor	tricolored blackbird	None	Threat	SSC	-
HIGHLAND SPRINGS	Aquila chrysaetos	golden eagle	None	None	FP;WL	-
HIGHLAND SPRINGS	Artemisiospiza belli belli	Bell's sage sparrow	None	None	WL	-
HIGHLAND SPRINGS	Lavinia exilicauda chi	Clear Lake hitch	None	Threat	-	-
HIGHLAND SPRINGS	Oncorhynchus mykiss irideus pop. 8	steelhead - central California coast DPS	Threat	None	-	-
HIGHLAND SPRINGS	Emys marmorata	western pond turtle	None	None	SSC	-
HIGHLAND SPRINGS	Amsinckia lunaris	bent-flowered fiddleneck	None	None	-	1B.2
HIGHLAND SPRINGS	Antirrhinum subcordatum	dimorphic snapdragon	None	None	-	4.3
HIGHLAND SPRINGS	Arctostaphylos manzanita ssp. elegans	Konocti manzanita	None	None	-	1B.3
HIGHLAND SPRINGS	Arctostaphylos stanfordiana ssp. raichei	Raiche's manzanita	None	None	-	1B.1
HIGHLAND SPRINGS	Astragalus breweri	Brewer's milk-vetch	None	None	-	4.2
HIGHLAND SPRINGS	Calycadenia micrantha	small-flowered calycadenia	None	None	-	1B.2
HIGHLAND SPRINGS	Calyptridium quadripetalum	four-petaled pussypaws	None	None	-	4.3
HIGHLAND SPRINGS	Calystegia collina ssp. oxyphylla	Mt. Saint Helena morning-glory	None	None	-	4.2
HIGHLAND SPRINGS	Clarkia gracilis ssp. tracyi	Tracy's clarkia	None	None	-	4.2
HIGHLAND SPRINGS	Cryptantha dissita	serpentine cryptantha	None	None	-	1B.2
HIGHLAND SPRINGS	Fritillaria purdyi	Purdy's fritillary	None	None	-	4.3
HIGHLAND SPRINGS	Hesperolinon adenophyllum	glandular western flax	None	None	-	1B.2
HIGHLAND SPRINGS	Horkelia bolanderi	Bolander's horkelia	None	None	-	1B.2
HIGHLAND SPRINGS	Layia septentrionalis	Colusa layia	None	None	-	1B.2
HIGHLAND SPRINGS	Leptosiphon acicularis	bristly leptosiphon	None	None	-	4.2

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
HIGHLAND SPRINGS	Trichostema ruygtii	Napa bluecurls	None	None	-	1B.2
KELSEYVILLE	Rana boylii	foothill yellow-legged frog	None	Cand Threat	SSC	-
KELSEYVILLE	Taricha rivularis	red-bellied newt	None	None	SSC	-
KELSEYVILLE	Pandion haliaetus	osprey	None	None	WL	-
KELSEYVILLE	Progne subis	purple martin	None	None	SSC	-
KELSEYVILLE	Calasellus californicus	An isopod	None	None	-	-
KELSEYVILLE	Linderiella occidentalis	California linderiella	None	None	-	-
KELSEYVILLE	Lavinia exilicauda chi	Clear Lake hitch	None	Threat	-	-
KELSEYVILLE	Lavinia symmetricus ssp. 4	Clear Lake - Russian River roach	None	None	SSC	-
KELSEYVILLE	Bombus caliginosus	obscure bumble bee	None	None	-	-
KELSEYVILLE	Hydrochara rickseckeri	Ricksecker's water scavenger beetle	None	None	-	-
KELSEYVILLE	Erethizon dorsatum	North American porcupine	None	None	-	-
KELSEYVILLE	Emys marmorata	western pond turtle	None	None	SSC	-
KELSEYVILLE	Clear Lake Drainage Cyprinid/Catostomid	Clear Lake Drainage Cyprinid/Catostomid Stream	None	None	-	-
	Stream					
KELSEYVILLE	Clear Lake Drainage Resident Trout Stream	Clear Lake Drainage Resident Trout Stream	None	None	-	-
KELSEYVILLE	Clear Lake Drainage Seasonal Lakefish	Clear Lake Drainage Seasonal Lakefish Spawning	None	None	-	-
	Spawning Stream	Stream				
KELSEYVILLE	Northern Volcanic Ash Vernal Pool	Northern Volcanic Ash Vernal Pool	None	None	-	-
KELSEYVILLE	Amsinckia lunaris	bent-flowered fiddleneck	None	None	-	1B.2
KELSEYVILLE	Arctostaphylos manzanita ssp. elegans	Konocti manzanita	None	None	-	1B.3
KELSEYVILLE	Arctostaphylos stanfordiana ssp. raichei	Raiche's manzanita	None	None	-	1B.1
KELSEYVILLE	Astragalus breweri	Brewer's milk-vetch	None	None	-	4.2
KELSEYVILLE	Azolla microphylla	Mexican mosquito fern	None	None	-	4.2
KELSEYVILLE	Brasenia schreberi	watershield	None	None	-	2B.3
KELSEYVILLE	Calyptridium quadripetalum	four-petaled pussypaws	None	None	-	4.3
KELSEYVILLE	Clarkia gracilis ssp. tracyi	Tracy's clarkia	None	None	-	4.2
KELSEYVILLE	Cordylanthus tenuis ssp. brunneus	serpentine bird's-beak	None	None	-	4.3
KELSEYVILLE	Eriastrum brandegeeae	Brandegee's eriastrum	None	None	-	1B.1

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
KELSEYVILLE	Gratiola heterosepala	Boggs Lake hedge-hyssop	None	End	-	1B.2
KELSEYVILLE	Harmonia hallii	Hall's harmonia	None	None	-	1B.2
KELSEYVILLE	Hesperolinon adenophyllum	glandular western flax	None	None	-	1B.2
KELSEYVILLE	Horkelia bolanderi	Bolander's horkelia	None	None	-	1B.2
KELSEYVILLE	Lasthenia burkei	Burke's goldfields	End	End	-	1B.1
KELSEYVILLE	Layia septentrionalis	Colusa layia	None	None	-	1B.2
KELSEYVILLE	Legenere limosa	legenere	None	None	-	1B.1
KELSEYVILLE	Leptosiphon acicularis	bristly leptosiphon	None	None	-	4.2
KELSEYVILLE	Limnanthes floccosa ssp. floccosa	woolly meadowfoam	None	None	-	4.2
KELSEYVILLE	Micropus amphibolus	Mt. Diablo cottonweed	None	None	-	3.2
KELSEYVILLE	Monardella viridis	green monardella	None	None	-	4.3
KELSEYVILLE	Navarretia leucocephala ssp. pauciflora	few-flowered navarretia	End	Threat	-	1B.1
KELSEYVILLE	Navarretia leucocephala ssp. plieantha	many-flowered navarretia	End	End	-	1B.2
KELSEYVILLE	Orcuttia tenuis	slender Orcutt grass	Threat	End	-	1B.1
KELSEYVILLE	Potamogeton zosteriformis	eel-grass pondweed	None	None	-	2B.2
KELSEYVILLE	Sidalcea oregana ssp. hydrophila	marsh checkerbloom	None	None	-	1B.2
KELSEYVILLE	Streptanthus barbiger	bearded jewelflower	None	None	-	4.2
KELSEYVILLE	Trichostema ruygtii	Napa bluecurls	None	None	-	1B.2
LAKEPORT	Agelaius tricolor	tricolored blackbird	None	Threat	SSC	-
LAKEPORT	Ardea alba	great egret	None	None	-	-
LAKEPORT	Ardea herodias	great blue heron	None	None	-	-
LAKEPORT	Egretta thula	snowy egret	None	None	-	-
LAKEPORT	Elanus leucurus	white-tailed kite	None	None	FP	-
LAKEPORT	Haliaeetus leucocephalus	bald eagle	Delisted	End	FP	-
LAKEPORT	Nycticorax nycticorax	black-crowned night heron	None	None	-	-
LAKEPORT	Pandion haliaetus	osprey	None	None	WL	-
LAKEPORT	Phalacrocorax auritus	double-crested cormorant	None	None	WL	-
LAKEPORT	Archoplites interruptus	Sacramento perch	None	None	SSC	-
LAKEPORT	Hysterocarpus traskii lagunae	Clear Lake tule perch	None	None	SSC	-

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
LAKEPORT	Lavinia exilicauda chi	Clear Lake hitch	None	Threat	-	-
LAKEPORT	Lavinia symmetricus ssp. 4	Clear Lake - Russian River roach	None	None	SSC	-
LAKEPORT	Andrena blennospermatis	Blennosperma vernal pool andrenid bee	None	None	-	-
LAKEPORT	Bombus occidentalis	western bumble bee	None	Cand End	-	-
LAKEPORT	Dubiraphia brunnescens	brownish dubiraphian riffle beetle	None	None	-	-
LAKEPORT	Pekania pennanti	fisher - West Coast DPS	None	Threat	SSC	-
LAKEPORT	Taxidea taxus	American badger	None	None	SSC	-
LAKEPORT	Emys marmorata	western pond turtle	None	None	SSC	-
LAKEPORT	Coastal and Valley Freshwater Marsh	Coastal and Valley Freshwater Marsh	None	None	-	-
LAKEPORT	Amsinckia lunaris	bent-flowered fiddleneck	None	None	-	1B.2
LAKEPORT	Antirrhinum virga	twig-like snapdragon	None	None	-	4.3
LAKEPORT	Arctostaphylos manzanita ssp. elegans	Konocti manzanita	None	None	-	1B.3
LAKEPORT	Astragalus breweri	Brewer's milk-vetch	None	None	-	4.2
LAKEPORT	Brasenia schreberi	watershield	None	None	-	2B.3
LAKEPORT	Clarkia gracilis ssp. tracyi	Tracy's clarkia	None	None	-	4.2
LAKEPORT	Cryptantha dissita	serpentine cryptantha	None	None	-	1B.2
LAKEPORT	Erythranthe nudata	bare monkeyflower	None	None	-	4.3
LAKEPORT	Fritillaria purdyi	Purdy's fritillary	None	None	-	4.3
LAKEPORT	Hesperolinon adenophyllum	glandular western flax	None	None	-	1B.2
LAKEPORT	Layia septentrionalis	Colusa layia	None	None	-	1B.2
LAKEPORT	Leptosiphon acicularis	bristly leptosiphon	None	None	-	4.2
LAKEPORT	Leptosiphon latisectus	broad-lobed leptosiphon	None	None	-	4.3
LAKEPORT	Plagiobothrys lithocaryus	Mayacamas popcornflower	None	None	-	1A
LAKEPORT	Ranunculus lobbii	Lobb's aquatic buttercup	None	None	-	4.2
LAKEPORT	Tracyina rostrata	beaked tracyina	None	None	-	1B.2
LUCERNE	Rana draytonii	California red-legged frog	Threat	None	SSC	-
LUCERNE	Taricha rivularis	red-bellied newt	None	None	SSC	-
LUCERNE	Ardea herodias	great blue heron	None	None	-	-
LUCERNE	Branta hutchinsii leucopareia	cackling (=Aleutian Canada) goose	Delisted	None	WL	-

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
LUCERNE	Falco mexicanus	prairie falcon	None	None	WL	-
LUCERNE	Haliaeetus leucocephalus	bald eagle	Delisted	End	FP	-
LUCERNE	Pandion haliaetus	osprey	None	None	WL	-
LUCERNE	Phalacrocorax auritus	double-crested cormorant	None	None	WL	-
LUCERNE	Strix occidentalis caurina	Northern Spotted Owl	Threat	Threat	-	-
LUCERNE	Archoplites interruptus	Sacramento perch	None	None	SSC	-
LUCERNE	Hysterocarpus traskii lagunae	Clear Lake tule perch	None	None	SSC	-
LUCERNE	Lavinia exilicauda chi	Clear Lake hitch	None	Threat	-	-
LUCERNE	Dubiraphia brunnescens	brownish dubiraphian riffle beetle	None	None	-	-
LUCERNE	Corynorhinus townsendii	Townsend's big-eared bat	None	None	SSC	-
LUCERNE	Lasionycteris noctivagans	silver-haired bat	None	None	-	-
LUCERNE	Gonidea angulata	western ridged mussel	None	None	-	-
LUCERNE	Emys marmorata	western pond turtle	None	None	SSC	-
LUCERNE	Clear Lake Drainage Cyprinid/Catostomid	Clear Lake Drainage Cyprinid/Catostomid Stream	None	None	-	-
	Stream					
LUCERNE	Clear Lake Drainage Seasonal Lakefish	Clear Lake Drainage Seasonal Lakefish Spawning	None	None	-	-
	Spawning Stream	Stream				
LUCERNE	Coastal and Valley Freshwater Marsh	Coastal and Valley Freshwater Marsh	None	None	-	-
LUCERNE	Amsinckia lunaris	bent-flowered fiddleneck	None	None	-	1B.2
LUCERNE	Arctostaphylos manzanita ssp. elegans	Konocti manzanita	None	None	-	1B.3
LUCERNE	Hesperolinon adenophyllum	glandular western flax	None	None	-	1B.2
LUCERNE	Hesperolinon bicarpellatum	two-carpellate western flax	None	None	-	1B.2
LUCERNE	Layia septentrionalis	Colusa layia	None	None	-	1B.2
LUCERNE	Leptosiphon acicularis	bristly leptosiphon	None	None	-	4.2
LUCERNE	Leptosiphon latisectus	broad-lobed leptosiphon	None	None	-	4.3
LUCERNE	Lupinus antoninus	Anthony Peak lupine	None	None	-	1B.2
LUCERNE	Potamogeton zosteriformis	eel-grass pondweed	None	None	-	2B.2
THE GEYSERS	Dicamptodon ensatus	California giant salamander	None	None	SSC	-
THE GEYSERS	Rana boylii	foothill yellow-legged frog	None	Cand Threat	SSC	-

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
THE GEYSERS	Taricha rivularis	red-bellied newt	None	None	SSC	-
THE GEYSERS	Progne subis	purple martin	None	None	SSC	-
THE GEYSERS	Entosphenus tridentatus	Pacific lamprey	None	None	SSC	-
THE GEYSERS	Hysterocarpus traskii pomo	Russian River tule perch	None	None	SSC	-
THE GEYSERS	Lavinia symmetricus ssp. 4	Clear Lake - Russian River roach	None	None	SSC	-
THE GEYSERS	Oncorhynchus mykiss irideus pop. 8	steelhead - central California coast DPS	Threat	None	-	-
THE GEYSERS	Bombus occidentalis	western bumble bee	None	Cand End	-	-
THE GEYSERS	Emys marmorata	western pond turtle	None	None	SSC	-
THE GEYSERS	Clear Lake Drainage Resident Trout Stream	Clear Lake Drainage Resident Trout Stream	None	None	-	-
THE GEYSERS	Antirrhinum virga	twig-like snapdragon	None	None	-	4.3
THE GEYSERS	Arctostaphylos manzanita ssp. elegans	Konocti manzanita	None	None	-	1B.3
THE GEYSERS	Asclepias solanoana	serpentine milkweed	None	None	-	4.2
THE GEYSERS	Astragalus breweri	Brewer's milk-vetch	None	None	-	4.2
THE GEYSERS	Astragalus clevelandii	Cleveland's milk-vetch	None	None	-	4.3
THE GEYSERS	Calamagrostis ophitidis	serpentine reed grass	None	None	-	4.3
THE GEYSERS	Calyptridium quadripetalum	four-petaled pussypaws	None	None	-	4.3
THE GEYSERS	Calystegia collina ssp. oxyphylla	Mt. Saint Helena morning-glory	None	None	-	4.2
THE GEYSERS	Calystegia collina ssp. tridactylosa	three-fingered morning-glory	None	None	-	1B.2
THE GEYSERS	Ceanothus confusus	Rincon Ridge ceanothus	None	None	-	1B.1
THE GEYSERS	Ceanothus divergens	Calistoga ceanothus	None	None	-	1B.2
THE GEYSERS	Clarkia gracilis ssp. tracyi	Tracy's clarkia	None	None	-	4.2
THE GEYSERS	Collomia diversifolia	serpentine collomia	None	None	-	4.3
THE GEYSERS	Cordylanthus tenuis ssp. brunneus	serpentine bird's-beak	None	None	-	4.3
THE GEYSERS	Eriastrum brandegeeae	Brandegee's eriastrum	None	None	-	1B.1
THE GEYSERS	Erythronium helenae	St. Helena fawn lily	None	None	-	4.2
THE GEYSERS	Fritillaria purdyi	Purdy's fritillary	None	None	-	4.3
THE GEYSERS	Harmonia hallii	Hall's harmonia	None	None	-	1B.2
THE GEYSERS	Hesperolinon adenophyllum	glandular western flax	None	None	-	1B.2
THE GEYSERS	Layia septentrionalis	Colusa layia	None	None	-	1B.2

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
THE GEYSERS	Leptosiphon acicularis	bristly leptosiphon	None	None	-	4.2
THE GEYSERS	Lupinus sericatus	Cobb Mountain lupine	None	None	-	1B.2
THE GEYSERS	Navarretia leucocephala ssp. pauciflora	few-flowered navarretia	End	Threat	-	1B.1
THE GEYSERS	Panicum acuminatum var. thermale	Geysers panicum	None	End	-	1B.2
THE GEYSERS	Sidalcea oregana ssp. hydrophila	marsh checkerbloom	None	None	-	1B.2
THE GEYSERS	Streptanthus barbiger	bearded jewelflower	None	None	-	4.2
THE GEYSERS	Streptanthus brachiatus ssp. brachiatus	Socrates Mine jewelflower	None	None	-	1B.2
THE GEYSERS	Streptanthus glandulosus ssp. hoffmanii	Hoffman's bristly jewelflower	None	None	-	1B.3
WHISPERING PINES	Dicamptodon ensatus	California giant salamander	None	None	SSC	-
WHISPERING PINES	Rana boylii	foothill yellow-legged frog	None	Cand Threat	SSC	-
WHISPERING PINES	Rana draytonii	California red-legged frog	Threat	None	SSC	-
WHISPERING PINES	Taricha rivularis	red-bellied newt	None	None	SSC	-
WHISPERING PINES	Progne subis	purple martin	None	None	SSC	-
WHISPERING PINES	Strix occidentalis caurina	Northern Spotted Owl	Threat	Threat	-	-
WHISPERING PINES	Bombus occidentalis	western bumble bee	None	Cand End	-	-
WHISPERING PINES	Antrozous pallidus	pallid bat	None	None	SSC	-
WHISPERING PINES	Corynorhinus townsendii	Townsend's big-eared bat	None	None	SSC	-
WHISPERING PINES	Lasiurus blossevillii	western red bat	None	None	SSC	-
WHISPERING PINES	Lasiurus cinereus	hoary bat	None	None	-	-
WHISPERING PINES	Myotis evotis	long-eared myotis	None	None	-	-
WHISPERING PINES	Myotis thysanodes	fringed myotis	None	None	-	-
WHISPERING PINES	Emys marmorata	western pond turtle	None	None	SSC	-
WHISPERING PINES	Central Valley Drainage Rainbow Trout/	Central Valley Drainage Rainbow Trout/Cyprinid Stream	None	None	-	-
	Cyprinid Stream					
WHISPERING PINES	Clear Lake Drainage Resident Trout Stream	Clear Lake Drainage Resident Trout Stream	None	None	-	-
WHISPERING PINES	Grimmia torenii	Toren's grimmia	None	None	-	1B.3
WHISPERING PINES	Mielichhoferia elongata	elongate copper moss	None	None	-	4.3
WHISPERING PINES	Amsinckia lunaris	bent-flowered fiddleneck	None	None	-	1B.2
WHISPERING PINES	Antirrhinum subcordatum	dimorphic snapdragon	None	None	-	4.3

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
WHISPERING PINES	Antirrhinum virga	twig-like snapdragon	None	None	-	4.3
WHISPERING PINES	Arabis blepharophylla	coast rockcress	None	None	-	4.3
WHISPERING PINES	Arctostaphylos manzanita ssp. elegans	Konocti manzanita	None	None	-	1B.3
WHISPERING PINES	Arctostaphylos stanfordiana ssp. raichei	Raiche's manzanita	None	None	-	1B.1
WHISPERING PINES	Asclepias solanoana	serpentine milkweed	None	None	-	4.2
WHISPERING PINES	Astragalus breweri	Brewer's milk-vetch	None	None	-	4.2
WHISPERING PINES	Astragalus clevelandii	Cleveland's milk-vetch	None	None	-	4.3
WHISPERING PINES	Astragalus rattanii var. jepsonianus	Jepson's milk-vetch	None	None	-	1B.2
WHISPERING PINES	Calamagrostis ophitidis	serpentine reed grass	None	None	-	4.3
WHISPERING PINES	Calyptridium quadripetalum	four-petaled pussypaws	None	None	-	4.3
WHISPERING PINES	Calystegia collina ssp. oxyphylla	Mt. Saint Helena morning-glory	None	None	-	4.2
WHISPERING PINES	Carex praticola	northern meadow sedge	None	None	-	2B.2
WHISPERING PINES	Ceanothus confusus	Rincon Ridge ceanothus	None	None	-	1B.1
WHISPERING PINES	Ceanothus divergens	Calistoga ceanothus	None	None	-	1B.2
WHISPERING PINES	Chlorogalum pomeridianum var. minus	dwarf soaproot	None	None	-	1B.2
WHISPERING PINES	Collomia diversifolia	serpentine collomia	None	None	-	4.3
WHISPERING PINES	Cordylanthus tenuis ssp. brunneus	serpentine bird's-beak	None	None	-	4.3
WHISPERING PINES	Cordylanthus tenuis ssp. capillaris	Pennell's bird's-beak	End	Rare	-	1B.2
WHISPERING PINES	Delphinium uliginosum	swamp larkspur	None	None	-	4.2
WHISPERING PINES	Downingia willamettensis	Cascade downingia	None	None	-	2B.2
WHISPERING PINES	Erigeron greenei	Greene's narrow-leaved daisy	None	None	-	1B.2
WHISPERING PINES	Eriogonum nervulosum	Snow Mountain buckwheat	None	None	-	1B.2
WHISPERING PINES	Eryngium constancei	Loch Lomond button-celery	End	End	-	1B.1
WHISPERING PINES	Erythranthe nudata	bare monkeyflower	None	None	-	4.3
WHISPERING PINES	Erythronium helenae	St. Helena fawn lily	None	None	-	4.2
WHISPERING PINES	Fritillaria purdyi	Purdy's fritillary	None	None	-	4.3
WHISPERING PINES	Helianthus exilis	serpentine sunflower	None	None	-	4.2
WHISPERING PINES	Hesperolinon adenophyllum	glandular western flax	None	None	-	1B.2
WHISPERING PINES	Hesperolinon bicarpellatum	two-carpellate western flax	None	None	-	1B.2

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
WHISPERING PINES	Horkelia bolanderi	Bolander's horkelia	None	None	-	1B.2
WHISPERING PINES	Imperata brevifolia	California satintail	None	None	-	2B.1
WHISPERING PINES	Layia septentrionalis	Colusa layia	None	None	-	1B.2
WHISPERING PINES	Legenere limosa	legenere	None	None	-	1B.1
WHISPERING PINES	Leptosiphon acicularis	bristly leptosiphon	None	None	-	4.2
WHISPERING PINES	Leptosiphon grandiflorus	large-flowered leptosiphon	None	None	-	4.2
WHISPERING PINES	Leptosiphon jepsonii	Jepson's leptosiphon	None	None	-	1B.2
WHISPERING PINES	Lupinus sericatus	Cobb Mountain lupine	None	None	-	1B.2
WHISPERING PINES	Navarretia leucocephala ssp. bakeri	Baker's navarretia	None	None	-	1B.1
WHISPERING PINES	Navarretia leucocephala ssp. pauciflora	few-flowered navarretia	End	Threat	-	1B.1
WHISPERING PINES	Navarretia leucocephala ssp. plieantha	many-flowered navarretia	End	End	-	1B.2
WHISPERING PINES	Panicum acuminatum var. thermale	Geysers panicum	None	End	-	1B.2
WHISPERING PINES	Penstemon newberryi var. sonomensis	Sonoma beardtongue	None	None	-	1B.3
WHISPERING PINES	Sedella leiocarpa	Lake County stonecrop	End	End	-	1B.1
WHISPERING PINES	Sidalcea oregana ssp. hydrophila	marsh checkerbloom	None	None	-	1B.2
WHISPERING PINES	Streptanthus brachiatus ssp. brachiatus	Socrates Mine jewelflower	None	None	-	1B.2
WHISPERING PINES	Streptanthus brachiatus ssp. hoffmanii	Freed's jewelflower	None	None	-	1B.2
WHISPERING PINES	Streptanthus hesperidis	green jewelflower	None	None	-	1B.2

9 QUAD KEY:

CNPS Rare Plant-Threat Rank Definitions:

- 1B.1 = Rare, threatened, or endangered in California and elsewhere; seriously threatened in California
- 1B.2 = Rare, threatened, or endangered in California and elsewhere; fairly threatened in California
- 1B.3 = Rare, threatened, or endangered in California and elsewhere; not very threatened in California
- 2A = Presumed extinct in California, but extant elsewhere
- 2B.1 = Rare, threatened, or endangered in Calif., but more common elsewhere; seriously threatened in Calif.
- 2B.2 = Rare, threatened, or endangered in Calif., but more common elsewhere; fairly threatened in Calif.
- 2B.3 = Rare, threatened, or endangered in Calif., but more common elsewhere; not very threatened in Calif.
- 3 = Plants about which we need more information (Review List)
- 3.1 = Plants about which we need more information (Review List); seriously threatened in California
- 3.2 = Plants about which we need more information (Review List); fairly threatened in California
- 3.3 = Plants about which we need more information (Review List); not very threatened in California
- 4.1 = Plants of limited distribution (watch list); seriously threatened in California
- 4.2 = Plants of limited distribution (watch list); fairly threatened in California
- 4.3 = Plants of limited distribution (watch list); not very threatened in California

CDFW / State and Federal Status:

SE/ST/SD = State Endangered/Threatened/Delisted

SC/SCD = State Candidate for Listing/Delisting

SSC = CDFW Species of Special Concern

SFP = State Fully Protected

WL = CDFW Watch List

FE/FT/FD = Federal Endangered/Threatened/Delisted

FPE/FPT/FPD/FP = Federal Proposed Endangered/Threatened/Delisting

FC = Federal Candidate

State and Federal Status:

- Threat = Threatened
- End = Endangered
- Prop = Proposed
- Cand = Candidate

Cand End/Threat = State Candidate for Endangered/Threatened

APPENDIX B

WILDLIFE HABITAT RELATIONSHIPS SYSTEM RESULTS

5/20/2020



CALIFORNIA WILDLIFE HABITAT RELATIONSHIPS SYSTEM supported by the CALIFORNIA INTERAGENCY WILDLIFE TASK GROUP and maintained by the **CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE Database Version: 9.0**

SPECIES SUMMARY REPORT

- FE = Federal Endangered
- CF = California Fully Protected CP = California Protected
- PT = Federally-Proposed Threatened

CD = CDF Sensitive

- FT = Federal Threatened
- FC = Federal Candidate

HA = Harvest

CE = California Endangered

SC = California Species of Special Concern BL = BLM Sensitive

PE = Federally-Proposed Endangered CT = California Threatened FS = USFS Sensitive

Note: Any given status code for a species may apply to the full species or to only one or more subspecies or distinct population segments.

ID	SPECIES NAME		STATU	IS		NATIVE/INTRODUCED
A012	COMMON ENSATINA		SC	E	BL FS	NATIVE
A014	CALIFORNIA SLENDER SALAMANDER					NATIVE
A020	SPECKLED BLACK SALAMANDER					NATIVE
A039	PACIFIC TREEFROG					NATIVE
A071	CALIFORNIA RED-LEGGED FROG	FT	SC			NATIVE
B052	GREAT EGRET				CD	NATIVE
B053	SNOWY EGRET					NATIVE
B057	CATTLE EGRET					NATIVE
B058	GREEN HERON					NATIVE
B059	BLACK-CROWNED NIGHT HERON					NATIVE
B067	TUNDRA SWAN					NATIVE
B079	MALLARD				HA	NATIVE
B080	NORTHERN PINTAIL				HA	NATIVE
B084	NORTHERN SHOVELER				HA	NATIVE
B086	EURASIAN WIGEON				HA	NATIVE
B107	RUDDY DUCK				HA	NATIVE
B108	TURKEY VULTURE					NATIVE
B111	WHITE-TAILED KITE		CF	E	3L	NATIVE
B114	NORTHERN HARRIER		SC			NATIVE
B115	SHARP-SHINNED HAWK					NATIVE
B116	COOPER'S HAWK					NATIVE
B117	NORTHERN GOSHAWK		SC	E	BL FS CD	NATIVE
B119	RED-SHOULDERED HAWK					NATIVE

ID	SPECIES NAME	STA	TUS			NATIVE/INTRODUCED
B123	RED-TAILED HAWK					NATIVE
B124	FERRUGINOUS HAWK					NATIVE
B125	ROUGH-LEGGED HAWK					NATIVE
B126	GOLDEN EAGLE	CF		BL	CD	NATIVE
B127	AMERICAN KESTREL					NATIVE
B128	MERLIN					NATIVE
B131	PRAIRIE FALCON					NATIVE
B141	MOUNTAIN QUAIL				HA	NATIVE
B146	SORA					NATIVE
B148	COMMON GALLINULE				HA	NATIVE
B165	GREATER YELLOWLEGS					NATIVE
B166	LESSER YELLOWLEGS					NATIVE
B170	SPOTTED SANDPIPER					NATIVE
B183	WESTERN SANDPIPER					NATIVE
B185	LEAST SANDPIPER					NATIVE
B196	SHORT-BILLED DOWITCHER					NATIVE
B197	LONG-BILLED DOWITCHER					NATIVE
B200	WILSON'S PHALAROPE					NATIVE
B215	CALIFORNIA GULL					NATIVE
B251	BAND-TAILED PIGEON				HA	NATIVE
B260	GREATER ROADRUNNER					NATIVE
B263	FLAMMULATED OWL					NATIVE
B264	WESTERN SCREECH OWL					NATIVE
B265	GREAT HORNED OWL					NATIVE
B267	NORTHERN PYGMY OWL					NATIVE
B269	BURROWING OWL	S	SC	BL		NATIVE
B272	LONG-EARED OWL	S	SC			NATIVE
B273	SHORT-EARED OWL	S	SC			NATIVE
B274	NORTHERN SAW-WHET OWL					NATIVE
B277	COMMON POORWILL					NATIVE
B281	VAUX'S SWIFT	S	SC			NATIVE
B287	ANNA'S HUMMINGBIRD					NATIVE
B291	RUFOUS HUMMINGBIRD					NATIVE
B292	ALLEN'S HUMMINGBIRD					NATIVE
B294	LEWIS' S WOODPECKER					NATIVE

ID	SPECIES NAME	STATUS	NATIVE/INTRODUCED
B299	RED-BREASTED SAPSUCKER		NATIVE
B302	NUTTALL'S WOODPECKER		NATIVE
B303	DOWNY WOODPECKER		NATIVE
B304	HAIRY WOODPECKER		NATIVE
B307	NORTHERN FLICKER		NATIVE
B309	OLIVE-SIDED FLYCATCHER	SC	NATIVE
B311	WESTERN WOOD-PEWEE		NATIVE
B317	HAMMOND'S FLYCATCHER		NATIVE
B320	PACIFIC-SLOPE FLYCATCHER		NATIVE
B323	SAY'S PHOEBE		NATIVE
B326	ASH-THROATED FLYCATCHER		NATIVE
B333	WESTERN KINGBIRD		NATIVE
B337	HORNED LARK		NATIVE
B338	PURPLE MARTIN	SC	NATIVE
B339	TREE SWALLOW		NATIVE
B340	VIOLET-GREEN SWALLOW		NATIVE
B341	NORTHERN ROUGH-WINGED SWALLOW		NATIVE
B346	STELLER'S JAY		NATIVE
B348	WESTERN SCRUB-JAY		NATIVE
B352	YELLOW-BILLED MAGPIE		NATIVE
B353	AMERICAN CROW	НА	NATIVE
B357	CHESTNUT-BACKED CHICKADEE		NATIVE
B358	OAK TITMOUSE		NATIVE
B360	BUSHTIT		NATIVE
B361	RED-BREASTED NUTHATCH		NATIVE
B362	WHITE-BREASTED NUTHATCH		NATIVE
B363	PYGMY NUTHATCH		NATIVE
B364	BROWN CREEPER		NATIVE
B367	CANYON WREN		NATIVE
B368	BEWICK'S WREN	SC	NATIVE
B369	HOUSE WREN		NATIVE
B370	WINTER WREN		NATIVE
B376	RUBY-CROWNED KINGLET		NATIVE
B377	BLUE-GRAY GNATCATCHER		NATIVE
B381	MOUNTAIN BLUEBIRD		NATIVE

ID	SPECIES NAME		STATUS	NATIVE/INTRODUCED
B382	TOWNSEND'S SOLITAIRE			NATIVE
B385	SWAINSON'S THRUSH			NATIVE
B386	HERMIT THRUSH			NATIVE
B389	AMERICAN ROBIN			NATIVE
B390	VARIED THRUSH			NATIVE
B391	WRENTIT			NATIVE
B393	NORTHERN MOCKINGBIRD			NATIVE
B398	CALIFORNIA THRASHER			NATIVE
B404	AMERICAN PIPIT			NATIVE
B407	CEDAR WAXWING			NATIVE
B408	PHAINOPEPLA			NATIVE
B410	LOGGERHEAD SHRIKE	FE	SC	NATIVE
B415	CASSIN'S VIREO			NATIVE
B417	HUTTON'S VIREO		SC	NATIVE
B418	WARBLING VIREO			NATIVE
B425	ORANGE-CROWNED WARBLER			NATIVE
B426	NASHVILLE WARBLER			NATIVE
B430	YELLOW WARBLER		SC	NATIVE
B435	YELLOW-RUMPED WARBLER			NATIVE
B436	BLACK-THROATED GRAY WARBLER			NATIVE
B437	TOWNSEND'S WARBLER			NATIVE
B438	HERMIT WARBLER			NATIVE
B461	COMMON YELLOWTHROAT		SC	NATIVE
B463	WILSON'S WARBLER			NATIVE
B471	WESTERN TANAGER			NATIVE
B475	BLACK-HEADED GROSBEAK			NATIVE
B477	LAZULI BUNTING			NATIVE
B482	GREEN-TAILED TOWHEE			NATIVE
B483	SPOTTED TOWHEE		SC	NATIVE
B484	CALIFORNIA TOWHEE	FT CE		NATIVE
B487	RUFOUS-CROWNED SPARROW		SC	NATIVE
B489	CHIPPING SPARROW			NATIVE
B493	BLACK-CHINNED SPARROW			NATIVE
B495	LARK SPARROW			NATIVE
B497	BELL'S SPARROW	FT	SC	NATIVE

ID	SPECIES NAME			STATUS			NATIVE/INTRODUCED
B499	SAVANNAH SPARROW		CE	SC			NATIVE
B501	GRASSHOPPER SPARROW			SC			NATIVE
B504	FOX SPARROW						NATIVE
B505	SONG SPARROW			SC			NATIVE
B506	LINCOLN'S SPARROW						NATIVE
B509	GOLDEN-CROWNED SPARROW						NATIVE
B510	WHITE-CROWNED SPARROW						NATIVE
B512	DARK-EYED JUNCO						NATIVE
B521	WESTERN MEADOWLARK						NATIVE
B522	YELLOW-HEADED BLACKBIRD			SC			NATIVE
B528	BROWN-HEADED COWBIRD						NATIVE
B532	BULLOCK'S ORIOLE						NATIVE
B536	PURPLE FINCH						NATIVE
B539	RED CROSSBILL						NATIVE
B542	PINE SISKIN						NATIVE
B543	LESSER GOLDFINCH						NATIVE
B544	LAWRENCE'S GOLDFINCH						NATIVE
B545	AMERICAN GOLDFINCH						NATIVE
B546	EVENING GROSBEAK						NATIVE
B554	PLUMBEOUS VIREO						NATIVE
B699	BARRED OWL						NATIVE
M006	ORNATE SHREW	FE		SC			NATIVE
M018	BROAD-FOOTED MOLE			SC			NATIVE
M033	WESTERN RED BAT			SC	FS		NATIVE
M034	HOARY BAT						NATIVE
M037	TOWNSEND'S BIG-EARED BAT			SC	BL FS		NATIVE
M038	PALLID BAT			SC	BL FS		NATIVE
M039	BRAZILIAN FREE-TAILED BAT						NATIVE
M045	BRUSH RABBIT	FE	CE			HA	NATIVE
M047	AUDUBON'S COTTONTAIL					HA	NATIVE
M051	BLACK-TAILED JACKRABBIT			SC		HA	NATIVE
M055	YELLOW-PINE CHIPMUNK						NATIVE
M057	SHADOW CHIPMUNK						NATIVE
M059	SONOMA CHIPMUNK						NATIVE
M072	CALIFORNIA GROUND SQUIRREL						NATIVE

ID	SPECIES NAME		S	STATUS			NATIVE/INTRODUCED
M075	GOLDEN-MANTLED GROUND SQUIRREL						NATIVE
M077	WESTERN GRAY SQUIRREL					HA	NATIVE
M079	DOUGLAS' SQUIRREL					HA	NATIVE
M080	NORTHERN FLYING SQUIRREL			SC	FS		NATIVE
M081	BOTTA'S POCKET GOPHER						NATIVE
M084	MAZAMA POCKET GOPHER						NATIVE
M087	SAN JOAQUIN POCKET MOUSE			SC	BL		NATIVE
M105	CALIFORNIA KANGAROO RAT			SC			NATIVE
M113	WESTERN HARVEST MOUSE						NATIVE
M117	DEER MOUSE			SC			NATIVE
M119	BRUSH MOUSE						NATIVE
M120	PINYON MOUSE						NATIVE
M127	DUSKY-FOOTED WOODRAT	FE		SC			NATIVE
M134	CALIFORNIA VOLE	FE	CE	SC	BL		NATIVE
M146	COYOTE					HA	NATIVE
M149	GRAY FOX					HA	NATIVE
M151	BLACK BEAR					HA	NATIVE
M152	RINGTAIL		CF				NATIVE
M156	ERMINE					HA	NATIVE
M157	LONG-TAILED WEASEL					HA	NATIVE
M160	AMERICAN BADGER			SC		HA	NATIVE
M162	STRIPED SKUNK					HA	NATIVE
M165	MOUNTAIN LION			SC			NATIVE
M166	BOBCAT					HA	NATIVE
M177	ELK					HA	NATIVE
M181	MULE DEER					HA	NATIVE
R022	WESTERN FENCE LIZARD						NATIVE
R023	COMMON SAGEBRUSH LIZARD				BL		NATIVE
R036	WESTERN SKINK			SC	BL		NATIVE
R039	TIGER WHIPTAIL						NATIVE
R040	SOUTHERN ALLIGATOR LIZARD						NATIVE
R042	NORTHERN ALLIGATOR LIZARD						NATIVE
R046	NORTHERN RUBBER BOA		СТ		FS		NATIVE
R048	RING-NECKED SNAKE				FS		NATIVE
R049	COMMON SHARP-TAILED SNAKE						NATIVE

ID	SPECIES NAME	STATUS	NATIVE/INTRODUCED
R051	NORTH AMERICAN RACER		NATIVE
R053	STRIPED RACER	FT CT	NATIVE
R057	GOPHERSNAKE	SC	NATIVE
R058	EASTERN KINGSNAKE		NATIVE
R059	CALIFORNIA MOUNTAIN KINGSNAKE	SC BL FS	NATIVE
R060	LONG-NOSED SNAKE		NATIVE
R061	COMMON GARTERSNAKE	FE CE CF SC	NATIVE
R062	TERRESTRIAL GARTERSNAKE		NATIVE
R071	DESERT NIGHTSNAKE		NATIVE
R076	WESTERN RATTLESNAKE		NATIVE

Total Number of Species: 208

Query Parameters

Included Locations

Lake Co

Included Location Seasons

Migrant, Summer, Winter, Yearlong

Included Habitats & (Stages)

Annual Grassland, Blue Oak Woodland, Closed-cone Pine-cypress, Fresh Emergent Wetland, Mixed Chaparral, Montane Hardwood, Valley Oak Woodland, Wet Meadow

Habitat Suitability Threshold

Reproduction - Medium, Cover - Medium, Feeding - Medium

Included Habitat Seasons

Migrant, Summer, Winter, Yearlong

Excluded Elements

Bogs, Brush Pile, Buildings, Campground, Cave, Cliff, Dump, Fish, Grass/agriculture, Jetty, Kelp, Lakes, Mine, Mud Flats, Nest Box, Nest Island, Nest Platform, Pack Stations, Ponds, Riparian Inclusion, Rivers, Salt Ponds, Sand Dune, Shrub/agriculture, Soil - Gravelly, Soil - Organic, Soil - Saline, Soil - Sandy, Springs, Springs - Hot, Springs - Mineral, Streams - Permanent, Talus, Tidepools, Transmission Lines, Tree/agriculture, Trees - Fir, Vernal Pools, Water, Water - Created Body, Water - Fast, Water/agriculture, Wharf

Included Species: All Species Included

Included Special Statuses: Native

APPENDIX C

DELINEATION REPORT

DELINEATION OF WATERS OF THE U.S.: AQUATIC RESOURCES REPORT

1.0 <u>Purpose and Methodology</u>

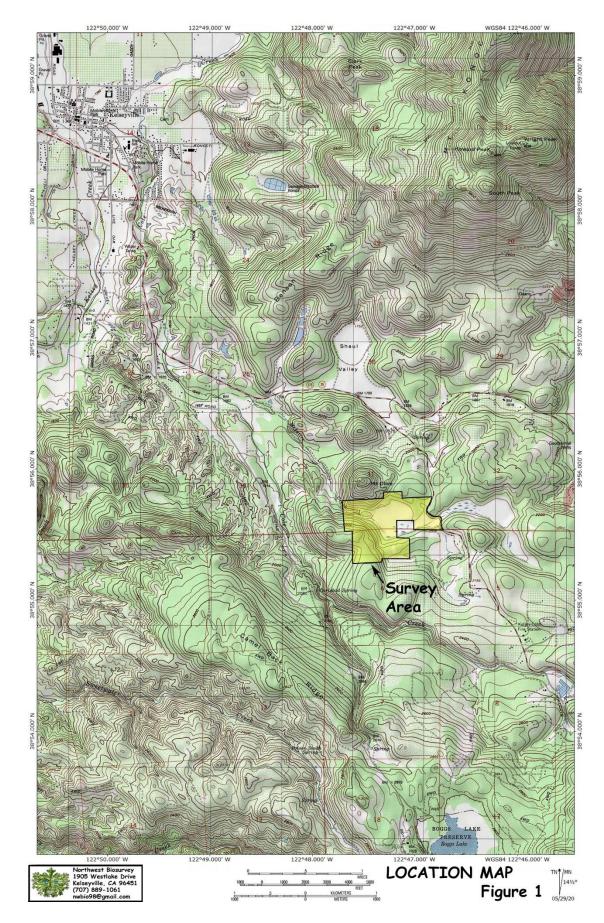
1.1 <u>**Purpose of Delineation:**</u> This delineation has been conducted at the request of the property owner in order to determine the extent of possible waters of the U.S. on the project.

1.2 <u>Delineation Procedure</u>: This delineation has been conducted as prescribed in the Corps of Engineers Wetlands Delineation Manual, January 1987, and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, 2008. Plant taxonomy and nomenclature is from the Jepson Manual, Higher Plants of California, 2012. Other texts, such as Munz's A California Flora and Supplement 1973, and Mason's Flora of the Marshes of California, 1957, were used as supplemental texts; however, all nomenclature and wetland indicator status have been checked with the U.S. Army Corps of Engineers. 2016. National Wetland Plant Lists: Arid West and California. The survey included use of Google satellite images, 7.5' USGS quadrangle maps, and LIDAR mapped overlays along with an extensive foot survey. The results of the delineation are mapped on a 1"=250' aerial photo.

1.3 <u>Delineation Dates</u>: Delineation fieldwork was completed on February 26, March 3, and April 30, 2020.

1.4 <u>Delineation Staff</u>: The delineation was conducted by Steve Zalusky, Northwest Biosurvey principal biologist. Mr. Zalusky has a Master of Science Degree in Biology from the California State University at Northridge and a Bachelor of Science Degree in Zoology from the University of California at Santa Barbara. Mr. Zalusky has more than 35 years of experience as a biologist in the government and private sectors. He completed his wetland delineation training under Terry Huffman of Huffman & Associates, Inc.

Fieldwork, wetland forms, with mapping were also conducted by Leigh Zalusky. Leigh Zalusky has a Bachelor of Science Degree in Engineering from the University of California, Davis. He has also developed extensive skills in plant taxonomy and ecology while managing and assisting in the development of the Seigler Valley Wetland Mitigation Bank and while assisting Northwest Biosurvey staff in field surveys and vegetation mapping over the past three years.



Hanson Preliminary Biological Resource Assessment, May 2020

2.0 Existing Conditions

2.1 <u>Location</u>: The project site is located on Highway 175 south of the intersection with Highway 29 on APNs 009-022-67, 011-055-20 & 21, Kelseyville, California (T12N R8W Sec. 4 & 5, T13N R8W Sec. 31, 32 & 33; Kelseyville, Calif. 7¹/₂ ' Topographic Map). A location map is provided in **Figure 1**.

2.2 <u>Site Topography and Drainage</u>: The Hanson property is located in the Mayacamas Mountains within the Clear Lake Basin. It occupies a small mountain valley and the adjacent slopes between Camel Back Ridge and Mount Olive. The valley is at an elevation of approximately 2,040 feet msl (mean sea level). The property rises to an elevation of 2,280 feet msl on the ridgetop to the west. It drains to McIntire Creek which has its confluence with Kelsey Creek approximately three miles to the northwest. Kelsey Creek drains to Clear Lake through the Big Valley. The basin drains east to the Sacramento River via Cache Creek. The topography is shown in **Figure 1**.

3.2 <u>Soils:</u> The property contains the following soil types:

• Aiken-Sobrante Association, 5-15% slopes (soil unit 101):

Aiken-Sobrante Association, 15-30% slopes (soil unit 102);

These map units are on hills and mountains. They contain Aiken loam (on north- and east-facing slopes) and Sobrante loam (on south- and west-facing slopes). The Aiken soil is very deep and well drained; it formed in material weathered from basalt. Permeability is relatively slow; surface runoff is medium, and the hazard of erosion is moderate. The Sobrante loam is moderated deep and well drained. It formed in material weathered from basalt. Permeability is moderate. Surface runoff is medium, and the hazard of erosion is moderate. These soil units occur within the wooded areas between the two wetlands and the woodland west of the main wetland.

- Benridge-Konocti association, 15-30% slopes (soil unit 112):
- Benridge-Konocti association, 30-50% slopes (soil unit 113):

These map units are on hills and mountains. They are comprised of 40% Benridge loam, 20-30% Konocti cobbly loam, and 15-20% Konocti stony loam. The Konocti soils are on the upper part of side slopes, on ridgetops, and in ravines. Some Rock outcrop and boulders are including in this association. Typical vegetation is brush on south-and east-facing slopes, and brush with scattered conifers and hardwoods on north- and west-facing slopes, including manzanita, chamise, and California scrub oak with some areas of knobcone pine. Both soils are moderately deep to very deep and well-drained. They formed in materials derived from volcanic ash, andesite, basalt, or dacite. Permeability is moderately slow, runoff is rapid, and the hazard of erosion is severe. These soils occur on the western parts of the property.

Bottlerock-Glenview-Arrowhead complex, 5-30% slopes (soil unit 117):

This map unit is on volcanic hills. Vegetation is mainly brush, including manzanita and ceanothus, with scattered conifers. The complex consists of about 50% Bottlerock extremely gravelly loam, 20% Glenview very gravelly loam, and 15% Arrowhead extremely gravelly sandy loam. All soils are deep and well drained and formed in material weathered from obsidian. Permeability ranges from slow to moderately slow, runoff is rapid, and the hazard of erosion is moderate to severe. This soil complex is located in the woodland west of the highway.

Clear Lake Variant clay, drained (soil unit 122):

This soil occurs within the two wetlands on the property. This very deep soil is in basins. It formed under poorly drained conditions; however, drainage has been improved as a result of entrenchment of stream channels. The soil formed in lacustrine deposits derived from mixed rock sources. The soil consists of clay or clay loam to more than 72 inches in depth. Permeability of this soil is slow. Surface runoff is slow, and the hazard of erosion is slight. The soil is subject to rare periods of flooding and ponding during prolonged storms. The shrink-swell potential is high. Natural vegetation includes annual grasses, forbs, and scattered oaks.

3.0 Aquatic Resources Results

3.1 Wetland Vegetation:

Most of the property is undeveloped but heavily grazed (perhaps since the late-1800s). The wetland itself is herbaceous. Plants identified within the wetland are listed below in **Table W-1** with their stratum and indicator status. Since 2008, a number of changes in wetland indicator status of several plant species have been made pursuant to the Army Corps of Engineer's *The National Wetland Plant List* and the *Arid West 2016 Regional Wetland Plant List*. Additionally, a number of species and common names were revised in the 2012 Jepson Manual.

Stratum	Species	Common name	Wetland Indicator Status*
herb	Anthoxanthum odoratum	sweet vernal grass	FAC
herb	Carex praegracilis	clustered field sedge	FACW
herb	Cerastium glomeratum	mouse-ear chickweed, sticky mouse-ear	UPL
herb	Eleocharis obtusa	blunt spikerush	OBL
herb	Hordeum brachyantherum ssp. brachyantherum	meadow barley, northern barley	FACW
herb	Juncus balticus	Baltic rush	FACW
herb	Juncus effusus var. pacificus	Pacific bog rush	FACW
herb	Lotus corniculatus	bird's-foot trefoil	FAC
herb	Rumex crispus	curly dock	FAC
herb	Urtica dioica ssp. gracilis	stinging nettle	FAC

TABLE W-1. PLANTS OCCURRING WITHIN THE HANSON PROPERTY

*Wetland Indicator Status:

OBL = Occurs in aquatic resources >99% of time

FACW = Occurs in aquatic resources 67-99% of time

FAC = Occurs in aquatic resources 34-66% of time

FACU = Occurs in aquatic resources 1-33% of time

UPL = Occurs in uplands >99% of time

NI = Indicator status not known in this region

3.2 Wetland Soils:

The soils within the property are classified as Clear Lake Variant clay, drained. This is a hydric soil based on the Natural Resources Conservation District's National Wetland Indicator criteria: (2B3) soils that are frequently ponded for long duration or very long duration during the growing season; (3) soils that are frequently flooded for long duration or very long duration during the growing season.

Soil colors are consistent throughout the wetlands. Wetland sample points (WSP) 1, 3, 5, 7, 9, 12 & 13 are described as 10YR/2.5/1 (Matrix), 2.5YR/4/4 (Redox Features, 5%). The hydric soil indicator(s) for all of these sample points is F6 (Redox Dark Surface).

3.3 Wetland Hydrology:

Saturation was present to a depth of 18 inches during the site visits. Surface water was present at WSP 5 to 12 inches deep. Other hydrologic indicators occurring include water-stained leaves (B9). Saturation is also visible on aerial photos.

3.4 Waters of the U.S:

The results of the delineation are shown on the aerial photo base map provided in **Figure W-2** of this report. Waters of the U.S. within the property consist of wetlands and stream channels. The Wetland Sample Points (WSPs) that qualify as wetland are mapped in Figure W-2. Wetland sample points are shown in light green and upland sample points are shown in red; stream channels are shown in purple and light and dark blue. Delineation forms corresponding to each numbered WSP are provided in **Attachment A**.

The total area of all delineated wetlands and other waters is <u>45.88 acres</u>. The delineation results are shown below in **Table 2**.

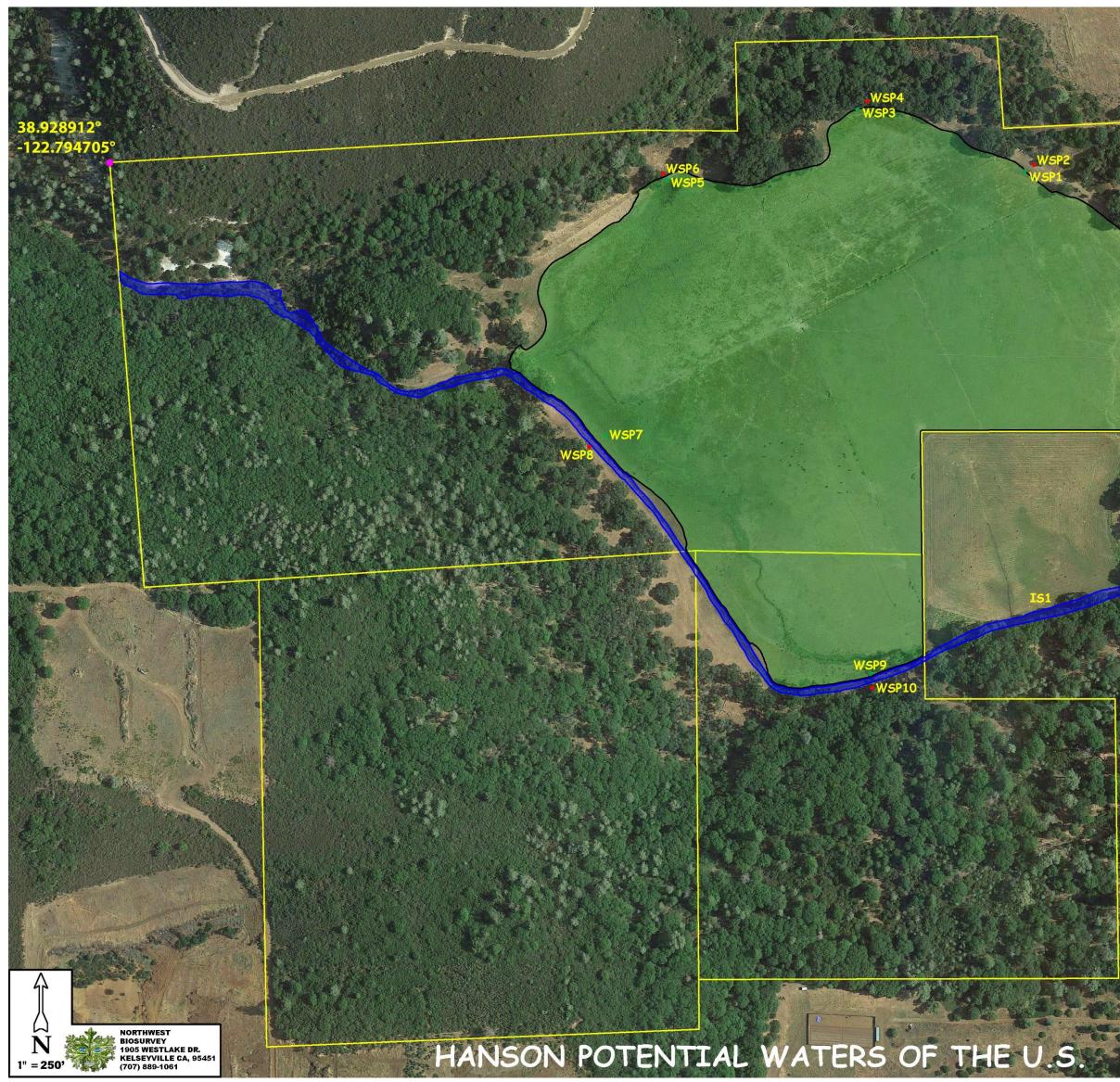
Name	Cowardin Code	HGM Code	Waters Type	Latitude	Longitude	Length (ft)	Width (ft)	Area (acres)
Stream S	egments							
IS1	R4	-	RPW	38.926027°	-122.789029°	4973	19.9	2.2737
152	R4	-	RPW	38.926082°	-122.780623°	800	8.8	0.1622
					Total St	ream Segn	nents:	2.4359
Wetland	s							
WL1	PEM	DEPRESS	RPWWD	38.927156°	-122.787495°	-	-	41.0029
WL2	PEM	DEPRESS	RPWWD	38.367600°	-122.782433°	-	-	2.4388
				•	•	Total Wetl	ands:	43.4417
Total Po	ssible Waters	of U.S. Witl	hin Survey A	Area				45.8776

TABLE 2. POSSIBLE AQUATIC RESOURCES WITHIN THE SURVEY AREA

4.0 <u>Recommendations</u>

Any work proposed within the possible waters of the U.S. will require permits from the following:

- U.S. Army Corps of Engineers (Nationwide Permit)
- Regional Water Quality Control Board (Water Quality Certification 401 permit)
- California Department of Fish and Wildlife (1602 Stream Alteration Agreement)



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51			t: Mr. briar	Brian Hans	on <u>hotmail.</u>	com	022-671, 011-	055-201	1, 011-05		77922	3*
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		Contact Delinea Date of Name	t: Mr. briar ator: Leig Nor 190 Kels (70 f Map: POSSII Cowardin Code	Brian Hans <u>n.hanson@</u> h Zalusky, thwest Bio 5 Westlake reyville, CA 7) 889-106 May 19, 20 BLE AQUA HGM	on hotmail. Steve Za osurvey 2 Drive 3 95451 1 020 TIC RESC Waters Type	COM lusky DURCES WI Latitude Stream Segment:	THIN THE S Longitude -122.789029° -122.780623°	URVEY / Length (ft) 4973 800	AREA Width (ft) 19.9 8.8	5-211 Area (acres)	50//77922	3*
		Contact Delinea Date of Name	t: Mr. briar ator: Leig Nor 190 Kels (70 f Map: POSSII Cowardin Code	Brian Hans <u>hanson@</u> h Zalusky, thwest Bio 5 Westlake reyville, CA 7) 889-106 May 19, 20 BLE AQUA HGM Code	on hotmail. Steve Za osurvey 2 Drive 3 95451 1 020 TIC RESC Waters Type RPW	COM lusky DURCES WI Latitude Stream Segment: 38.926027°	THIN THE S Longitude -122.789029° -122.780623°	URVEY / Length (ft) 4973	AREA Width (ft) 19.9 8.8	5-211 5-211 Area (acres) 2.2737 0.1622	50//7	3*
S1		Contact Delinea Date of Name	t: Mr. briar ator: Leig Nor 190 Kels (70 f Map: POSSII Cowardin Code R4 R4 R4	Brian Hans h.hanson@ h Zalusky, thwest Bio 5 Westlake reyville, CA 7) 889-106 May 19, 20 BLE AQUA HGM Code 	on hotmail. Steve Za survey Drive 95451 1 020 TIC RESC Waters Type RPW RPW	COM lusky DURCES WI Latitude Stream Segment: 38.926027° 38.926082° Wetlands 38.927156°	THIN THE S Longitude -122.789029° -122.780623° Total s -122.787495°	URVEY / Length (ft) 4973 800	AREA Width (ft) 19.9 8.8	5-211 5-211 Area (acres) 2.2737 0.1622 2.4359 41.0029	50//77922	3*
SI		Contact Delinea Date of Name	t: Mr. briar ator: Leig Nor 190 Kels (70 f Map: POSSI Cowardin Code R4 R4	Brian Hans <u>h.hanson@</u> h Zalusky, thwest Bio 5 Westlake reyville, CA 7) 889-106 May 19, 20 BLE AQUA HGM Code	on hotmail. Steve Za survey Drive 95451 1 020 TIC RESC Waters Type RPW RPW	COM lusky DURCES WI Latitude Stream Segment: 38.926027° 38.926082° Wetlands	THIN THE S Longitude -122.789029° -122.780623° Total s	URVEY / Length (ft) 4973 800 Stream Segr	AREA Width (ft) 19.9 8.8 ments: - -	5-211 5-211 Area (acres) 2.2737 0.1622 2.4359 41.0029 2.4388	50//77922	3.
51		Contact Delinea Date of Name	t: Mr. briar ator: Leig Nor 190 Kels (70 f Map: POSSI Cowardin Code R4 R4 R4	Brian Hans h.hanson@ h Zalusky, thwest Bio 5 Westlake reyville, CA 7) 889-106 May 19, 20 BLE AQUA HGM Code 	on hotmail. Steve Za osurvey 2 Drive 3 95451 1 020 TIC RESC Waters Type RPW RPW RPW RPW	COM lusky DURCES WI Latitude Stream Segment: 38.926027° 38.926082° Wetlands 38.927156°	THIN THE S Longitude -122.789029° -122.780623° Total s -122.787495°	URVEY / Length (ft) 4973 800	AREA Width (ft) 19.9 8.8 ments: - -	5-211 5-211 Area (acres) 2.2737 0.1622 2.4359 41.0029	50//77922	3*
		Contact Delinea Date of Name	t: Mr. briar ator: Leig Nor 190 Kels (70 f Map: POSSI Cowardin Code R4 R4 R4	Brian Hans <u>hanson@</u> h Zalusky, thwest Bio 5 Westlake reyville, CA 7) 889-106 May 19, 20 BLE AQUA HGM Code - - DEPRESS DEPRESS	on hotmail. Steve Za osurvey 2 Drive 3 95451 1 020 TIC RESC Waters Type RPW RPW RPW RPW	COM lusky DURCES WI Latitude Stream Segment: 38.926027° 38.926082° Wetlands 38.927156°	THIN THE S Longitude -122.789029° -122.780623° Total s -122.787495°	URVEY / Length (ft) 4973 800 Stream Segr	AREA Width (ft) 19.9 8.8 ments: - -	5-211 5-211 Area (acres) 2.2737 0.1622 2.4359 41.0029 2.4388 43.4417	50//77922	3*
		Contact Delinea Date of Name	t: Mr. briar ator: Leig Nor 190 Kels (70 f Map: POSSI Cowardin Code R4 R4 R4	Brian Hans <u>hanson@</u> h Zalusky, thwest Bio 5 Westlake reyville, CA 7) 889-106 May 19, 20 BLE AQUA HGM Code - - DEPRESS DEPRESS	on hotmail. Steve Za osurvey 2 Drive 3 95451 1 020 TIC RESC Waters Type RPW RPW RPW RPW	COM lusky DURCES WI Latitude Stream Segment: 38.926027° 38.926082° Wetlands 38.927156°	THIN THE SI Longitude -122.789029° -122.780623° Total S -122.787495° -122.782433°	URVEY A Length (ft) 4973 800 Stream Segr - - Total Wet	AREA Width (ft) 19.9 8.8 ments: - 	5-211 5-211 Area (acres) 2.2737 0.1622 2.4359 41.0029 2.4388 43.4417 45.8776		
		Contact Delinea Date of Name	t: Mr. briar ator: Leig Nor 190 Kels (70 f Map: POSSI Cowardin Code R4 R4 R4	Brian Hans <u>hanson@</u> h Zalusky, thwest Bio 5 Westlake reyville, CA 7) 889-106 May 19, 20 BLE AQUA HGM Code - - DEPRESS DEPRESS	on hotmail. Steve Za osurvey 2 Drive 3 95451 1 020 TIC RESC Waters Type RPW RPW RPW RPW	COM lusky DURCES WI Latitude Stream Segment: 38.926027° 38.926082° Wetlands 38.927156°	THIN THE SI Longitude -122.789029° -122.780623° Total S -122.787495° -122.782433°	URVEY A Length (ft) 4973 800 Stream Segr - - Total Wet	AREA Width (ft) 19.9 8.8 ments: - 	5-211 5-211 Area (acres) 2.2737 0.1622 2.4359 41.0029 2.4388 43.4417 45.8776		
		Contact Delinea Date of Name	t: Mr. briar ator: Leig Nor 190 Kels (70 f Map: POSSI Cowardin Code R4 R4 R4	Brian Hans <u>hanson@</u> h Zalusky, thwest Bio 5 Westlake reyville, CA 7) 889-106 May 19, 20 BLE AQUA HGM Code - - DEPRESS DEPRESS	on hotmail. Steve Za osurvey 2 Drive 3 95451 1 020 TIC RESC Waters Type RPW RPW RPW RPW	COM lusky DURCES WI Latitude Stream Segment: 38.926027° 38.926082° Wetlands 38.927156°	THIN THE SI Longitude -122.789029° -122.780623° Total S -122.787495° -122.782433°	URVEY A Length (ft) 4973 800 Stream Segr - - Total Wet	AREA Width (ft) 19.9 8.8 ments: - 	5-211 5-211 Area (acres) 2.2737 0.1622 2.4359 41.0029 2.4388 43.4417 45.8776		
		Contact Delinea Date of Name	t: Mr. briar ator: Leig Nor 190 Kels (70 f Map: POSSI Cowardin Code R4 R4 R4	Brian Hans <u>hanson@</u> h Zalusky, thwest Bio 5 Westlake reyville, CA 7) 889-106 May 19, 20 BLE AQUA HGM Code - - DEPRESS DEPRESS	on hotmail. Steve Za osurvey 2 Drive 3 95451 1 020 TIC RESC Waters Type RPW RPW RPW RPW	COM lusky DURCES WI Latitude Stream Segment: 38.926027° 38.926082° Wetlands 38.927156°	THIN THE SI Longitude -122.789029° -122.780623° Total S -122.787495° -122.782433°	URVEY A Length (ft) 4973 800 Stream Segr - - Total Wet	AREA Width (ft) 19.9 8.8 ments: - 	5-211 5-211 Area (acres) 2.2737 0.1622 2.4359 41.0029 2.4388 43.4417		

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Attachment A

WETLAND DELINEATION DATA FORMS FOR SAMPLE POINTS 1 – 15

Project/Site: Hanson Preliminary		City/Count	Stake Co.		Samp	oling Date:4,	30/202	0
Applicant/Owner:Brian Hanson		State:CA			Sampling Point:WSP1			
nvestigator(s): Steve Zalusky, Leigh Zalusky		Section, To	ownship, Ra	inge:S.31 T16N-R8W				
andform (hillslope, terrace, etc.): Depression		Local relie	f (concave,	convex, none): none		Slop	e (%):1	
Subregion (LRR):C - Mediterranean California	Lat:38 5	55.729'N		Long:-122 47.109W		Datur	n:WGS	84
Soil Map Unit Name: Clear Lake Variant clay, drained				NWI classifi	cation:2	2B3,3	- 60	
Are climatic / hydrologic conditions on the site typical for this	time of ye	ar?Yes 🤇	No () (If no, explain in F	- Remark	s.)		
Are Vegetation Soil or Hydrology si	ignificantly	disturbed?	Are	"Normal Circumstances"	presen	t? Yes 💽	No	0
Are Vegetation Soil or Hydrology n	aturally pro	oblematic?	(lf n	eeded, explain any answe	ers in R	emarks.)		
SUMMARY OF FINDINGS - Attach site map s	howing	samplin	ig point l	ocations, transects	, imp	ortant fea	itures,	etc.
Hydrophytic Vegetation Present? Yes 🝙 No				100 100				
	• 🔘	Is t	he Sampleo	d Area				
Wetland Hydrology Present? Yes (No. 1000)	0	wit	hin a Wetla	nd? Yes 🖲	N	lo ()		
Remarks:								
Tree Stratum (Use scientific names.) 1. .	Absolute % Cover	Dominant Species?		Dominance Test wor Number of Dominant S That Are OBL, FACW,	species			(A)
2.								. ,
3.	-			 Total Number of Domi Species Across All Str 		1		(B)
4.				- Percent of Dominant S	nanina	-		
Total Cover	: %			That Are OBL, FACW,		: 100	.0%	(A/B)
Sapling/Shrub Stratum 1.				Prevalence Index wo	rkshee	f•		a (2)
2.				Total % Cover of:	INSINCE	Multiply	bv:	
3.			1995) 	OBL species		x 1 =	0	
4.				FACW species	90	x 2 =	180	
5.	1			FAC species	5	x 3 =	15	
Total Cover	%		-	FACU species		x 4 =	0	
Herb Stratum				UPL species	5	x 5 =	25	
1 Juncus balticus	80	Yes	FACW	Column Totals:	100	(A)	220	(B)
² Hordeum brachyantherum ssp. brachyantherum	-	No	FACW	Prevalence Index	r = R/A	_	2.20	
3.Poa annua	5	No	FAC	Hydrophytic Vegetati			2.20	
4. <i>Cerastium glomeratum</i> 5.	5	No	UPL	 X Dominance Test is 				
6.				Prevalence Index	3			
7			-	Morphological Ada			supportir	na
8.				- data in Remark	s or on	a separate	sheet)	3
Total Cover	100.00			Problematic Hydro	phytic	Vegetation ¹	(Explain))
Woody Vine Stratum	100%							
1				¹ Indicators of hydric s be present.	oil and	wetland hyd	Irology n	nust
2								
Total Cover	: %			Hydrophytic Vegetation				
% Bare Ground in Herb Stratum %%% Cover	of Biotic C	Crust	%		es 💿	No 🔿		

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-		D	WSP1
Samp	lina.	Point:	W SF I

Depth (inches)	Matrix Color (moist)	<u> </u>	Redo olor (moist)	x Feature %	rs Type ¹	Loc ²	Texture	3	Remarks
18	10YR/2.5/1		/R/4/4	5	RM	M	Silt Loam		Nemarka
10			K/ 1 /+		<u></u>				
Soil Textu Hydric Soil Histos Histos Black Hydrog Stratifi 1 cm M Deplet Thick Sandy	Concentration, D=Depl res: Clay, Silty Clay, S Indicators: (Applicabl ol (A1) Epipedon (A2) Histic (A3) gen Sulfide (A4) ed Layers (A5) (LRR D) ted Below Dark Surface Dark Surface (A12) Mucky Mineral (S1) Gleyed Matrix (S4)	e to all LRRs, u	ım, Sandy Clay	Loam, Si noted.) x (S5) atrix (S6) ky Miner yed Matrii atrix (F3) c Surface ark Surfa ressions	andy Loam al (F1) x (F2) (F6) ce (F7)		Indicato	ors for Probler m Muck (A9) (m Muck (A10) duced Vertic (d Parent Mate her (Explain in ors of hydropt	oam, Silt, Loamy Sand, Sand natic Hydric Soils (LRR C) (LRR B) F18) rial (TF2)
	e Layer (if present):							and nyarology	
Type:									
Depth (inches):		-3				Hydric S	Soil Present?	Yes 💿 No 🔿
IYDROL	OGY								
Wetland H	lydrology Indicators:						Se	condary Indic	ators (2 or more required)
Surfac	dicators (any one indica be Water (A1) Vater Table (A2) titon (A3) Marks (B1) (Nonriveri ent Deposits (B2) (Nor reposits (B3) (Nonriver se Soil Cracks (B6) ation Visible on Aerial In -Stained Leaves (B9)	ne) nriverine) ine)	Salt Crust Biotic Cru Aquatic In Hydrogen Oxidized I	st (B12) vertebrat Sulfide C Rhizosphi of Reduc	Odor (C1) eres along ed Iron (C4 tion in Ploy	4)		Sediment D Drift Deposi Drainage Pa Dry-Season Thin Muck S Crayfish Bu	rrows (C8) /isible on Aerial Imagery (C9) uitard (D3)
Water Tab Saturation (includes c	ater Present? Ye le Present? Ye	es No (es No (es No (gauge, monitor	Depth (in Depth (in	ches): ches):	10 revious ins			logy Present	? Yes 💿 No 🔿
Remarks:									

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at the law and the second second		City/Cour	ty:Lake Co.		San	npling Date:	4/30/202	0
Applicant/Owner:Brian Hanson			State:CA Sampling Point:WSP2					
nvestigator(s):Steve Zalusky, Leigh Zalusky		Section, Township, Range:S.31 T16N-R8W						
andform (hillslope, terrace, etc.): Depression		Local rel	ief (concave,	convex, none): none		Slo	ope (%):()	
Subregion (LRR):C - Mediterranean California	Lat:38 5	55.733'N		Long:-122 47.114W	V	Date	um:WGS	84
Soil Map Unit Name: Clear Lake Variant clay, drained				NWI class	ification	2B3.3		
Are climatic / hydrologic conditions on the site typical for this	time of ve	ar? Yes	No (
		disturbed	~ `	"Normal Circumstances			No	\cap
	5) (A.S.)	oblematic		eeded, explain any ans	-	~		
SUMMARY OF FINDINGS - Attach site map s	a a.					10	eatures,	etc.
	~		1871 D					2
			the Comula	d Aven				
			the Sampleo thin a Wetla	0.475 (2010)000 (27	-	No 💿		
Remarks:	U		unn a vveua	indr tes (
	Absolute % Cover	Dominar Species	t Indicator ? Status	Dominance Test wo				
1			0.56	That Are OBL, FACV			0	(A)
2				Total Number of Don Species Across All S			1	D)
4.		<u></u>		-			1	(B)
Total Cover Sapling/Shrub Stratum	%			 Percent of Dominant That Are OBL, FACV 		-	.0 % (A/B)
1.				Prevalence Index w	orkshe	et:		
				Total % Cover o	f:	Multip	bly by:	
2						x 1 =		
3.				OBL species			0	
				FACW species	10	x 2 =	20	
3. 4. 5		·		FACW species	10	x 3 =	20 30	
3. 4. 5	%			FACW species FAC species FACU species	10 40	x 3 = x 4 =	20 30 160	
3. 4. 5. Herb Stratum		Yes	FACU	FACW species FAC species FACU species UPL species	10 40 40	x 3 = x 4 = x 5 =	20 30 160 200	(B)
3. 4. 5	% 40 30	Yes	FACU Not Listed	FACW species FAC species FACU species	10 40	x 3 = x 4 =	20 30 160	(B)
3. 4. 5. Herb Stratum 1.Bromus hordeaceus	40		-	FACW species FAC species FACU species UPL species	10 40 40 100	x 3 = x 4 = x 5 = (A)	20 30 160 200	(B)
3. 4. 5. Total Cover: Herb Stratum 1.Bromus hordeaceus 2.Festuca perennis	40	No	Not Listed	FACW species FAC species FACU species UPL species Column Totals: Prevalence Ind Hydrophytic Vegeta	10 40 40 100 ex = B.	x 3 = x 4 = x 5 = (A) /A = dicators:	20 30 160 200 410	(B)
3. 4. 5. Total Cover: Herb Stratum 1.Bromus hordeaceus 2.Festuca perennis 3.Juncus balticus	40 30 10	No No	Not Listed FACW	FACW species FAC species FACU species UPL species Column Totals: Prevalence Ind Hydrophytic Vegeta Dominance Test	10 40 40 100 ex = B. tion In : is >50	x 3 = x 4 = x 5 = (A) /A = dicators:	20 30 160 200 410	(B)
3. 4. 5. Total Cover: Herb Stratum 1.Bromus hordeaceus 2.Festuca perennis 3.Juncus balticus 4. Hordeum marinum ssp. gussoneanum	40 30 10 10	No No No	Not Listed FACW Not Listed	FACW species FAC species FACU species UPL species Column Totals: Prevalence Ind Hydrophytic Vegeta Dominance Test Prevalence Inde	10 40 40 100 ex = B. ition In is >50 ^o x is <3.	x 3 = x 4 = x 5 = (A) /A = dicators: % 0 ¹	20 30 160 200 410 4.10	
3. 4. 5. Total Cover: Herb Stratum 1.Bromus hordeaceus 2.Festuca perennis 3.Juncus balticus 4.Hordeum marinum ssp. gussoneanum 5.Poa annua 6. 7.	40 30 10 10	No No No	Not Listed FACW Not Listed	FACW species FAC species FACU species UPL species Column Totals: Prevalence Ind Hydrophytic Vegeta Dominance Test Prevalence Inde	10 40 40 100 ex = B. ition In is >50 ^o x is <3. daptatic	x 3 = x 4 = x 5 = (A) /A = dicators: % 0 ¹ ons ¹ (Provide	20 30 160 200 410 4.10	
3 4 5 Total Cover: Herb Stratum 1.Bromus hordeaceus 2.Festuca perennis 3.Juncus balticus 4.Hordeum marinum ssp. gussoneanum 5.Poa annua 6 7 8	40 30 10 10 10	No No No	Not Listed FACW Not Listed	FACW species FAC species FACU species UPL species Column Totals: Prevalence Ind Hydrophytic Vegeta Dominance Test Prevalence Inde Morphological A data in Rema	10 40 40 100 ex = B. ition In : is >50° x is <3. daptatic irks or c	x 3 = x 4 = x 5 = (A) /A = dicators: % 0 ¹ ons ¹ (Provide on a separate	20 30 160 200 410 4.10	ng
3. 4. 5. Total Cover: Herb Stratum 1. Bromus hordeaceus 2. Festuca perennis 3. Juncus balticus 4. Hordeum marinum ssp. gussoneanum 5. Poa annua 6. 7. 8. Total Cover: Woody Vine Stratum 1.	40 30 10 10 10	No No No	Not Listed FACW Not Listed	FACW species FAC species FACU species UPL species Column Totals: Prevalence Ind Hydrophytic Vegeta Dominance Test Prevalence Inde Morphological A data in Rema Problematic Hydr 1Indicators of hydric	10 40 40 100 ex = B. ition In is >50° x is ≤ 3 . daptatic irks or control of the second se	x 3 = $x 4 =$ $x 5 =$ (A) (A) (A = dicators: % 0 ¹ ons ¹ (Provide on a separate c Vegetation	20 30 160 200 410 4.10 4.10 (xplain)	ng
3	40 30 10 10 10 10 100%	No No No	Not Listed FACW Not Listed	FACW species FAC species FACU species UPL species Column Totals: Prevalence Ind Hydrophytic Vegeta Dominance Test Prevalence Inde Morphological A data in Rema	10 40 40 100 ex = B. ition In is >50° x is ≤ 3 . daptatic irks or control of the second se	x 3 = $x 4 =$ $x 5 =$ (A) (A) (A = dicators: % 0 ¹ ons ¹ (Provide on a separate c Vegetation	20 30 160 200 410 4.10 4.10 (xplain)	ng

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Sampling	Delinte	WCD2
Samplind	Point.	W SFZ

inches) Color (moist)	% Color	Redox Featu (moist) %		Loc ² Texture	3	Remarks
ype: C=Concentration, D=Deple Soil Textures: Clay, Silty Clay, Sa				ning, RC=Root Cha lay Loam, Silty Cla		, Silt, Loamy Sand, Sa
ydric Soil Indicators: (Applicable Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) (LRR C) 1 cm Muck (A9) (LRR D) Depleted Below Dark Surface Thick Dark Surface (A12) Sandy Mucky Mineral (S1)	(A11)	s otherwise noted. Sandy Redox (S5) Stripped Matrix (S6 Loamy Mucky Mine Loamy Gleyed Mat Depleted Matrix (F Redox Dark Surfac Depleted Dark Sur Redox Depression Vernal Pools (F9)	5) eral (F1) rrix (F2) 3) xe (F6) face (F7)	☐ 1 c 2 c Ret Oth	ors for Problematic m Muck (A9) (LRR m Muck (A10) (LR duced Vertic (F18) d Parent Material (ler (Explain in Rem ors of hydrophytic	(C) RB) TF2) harks) vegetation and
Sandy Gleyed Matrix (S4) estrictive Layer (if present):				wetla	and hydrology mus	t be present.
Туре:						
Depth (inches): emarks:		<u>`</u>		Hydric S	Soil Present? Yo	es 🔿 🛛 No 💿
/DROLOGY						
/etland Hydrology Indicators:				Se	and and and a second	(2 or more required)
rimary Indicators (any one indica Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverir Sediment Deposits (B2) (Non Drift Deposits (B3) (Nonriveri Surface Soil Cracks (B6) Inundation Visible on Aerial In	ne)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebri Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Other (Explain in	ates (B13) Odor (C1) heres along Liv uced Iron (C4) uction in Plowed		Drift Deposits (B Drainage Patterr Dry-Season Wat Thin Muck Surfa Crayfish Burrows Saturation Visibl Shallow Aquitarc	itts (B2) (Riverine) 3) (Riverine) ns (B10) er Table (C2) ce (C7) s (C8) e on Aerial Imagery (C d (D3)
Water-Stained Leaves (B9) ield Observations:					FAC-Neutral Tes	at (D5)
urface Water Present? Ye	s No 💿	Depth (inches): Depth (inches):		-		
Vater Table Present? Ye aturation Present? Ye	s O No O	Depth (inches):		Wetland Hydrol	logy Present? Y	es 🔿 No 🙆
Vater Table Present? Ye	s O No O		previous inspe		logy Present? Y	'es 🔿 No 🖲
Vater Table Present? Ye aturation Present? Ye ncludes capillary fringe)	s O No O		previous inspec			′es 🔿 No 🖲

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Project/Site: Hanson Preliminary		City/Coun	ty:Lake Co.		San	npling Date:	4/30/202	0
Applicant/Owner:Brian Hanson			State:CA		Sam	Sampling Point:WSP3		
nvestigator(s): Steve Zalusky, Leigh Zalusky		Section, T	ownship, Ra	ange:S.31 T16N-R8V	V			
andform (hillslope, terrace, etc.): Depression		Local reli	ef (concave,	convex, none): none		Slo	ope (%):1	
Subregion (LRR):C - Mediterranean California	Lat:38	55.759'N		Long:-122 47.223	N	Datu	um:WGS	84
Soil Map Unit Name: Clear Lake Variant clay, drained				NWI class	sification	:2B3,3	- 60	
Are climatic / hydrologic conditions on the site typical for this	s time of ye	ear? Yes (No () (If no, explain i	n Remar	ks.)		
Are Vegetation Soil or Hydrology s	ignificantly	/ disturbed'	? Are	"Normal Circumstance	s" prese	nt?Yes 💽	No	0
	aturally pr	oblematic?	(If n	eeded, explain any ans	wers in	Remarks.)		
SUMMARY OF FINDINGS - Attach site map			10	28.2 2.8 2. 2 2. 2 2. 2 2. 2 2. 2 2. 2			atures,	etc.
Hydrophytic Vegetation Present? Yes 💿 N	0 🔘		100	976-1	1240 12			2
	0 0	Ist	the Sampled	1 Area				
	0 0		thin a Wetla		•	No O		
Remarks:	~					~		
Tree Stratum (Use scientific names.)	Absolute % Cover	Dominan Species?	t Indicator Status	Dominance Test w Number of Dominar That Are OBL, FAC	t Specie	s	1 ((A)
23.	-		0.00 4.00	 Total Number of Do Species Across All \$ 	minant			(B)
4.	-	<u>.</u>		-			1	(0)
Total Cove Sapling/Shrub Stratum	r: %			 Percent of Dominan That Are OBL, FAC 		•	0.0%	(A/B)
1.				Prevalence Index v	vorkshe	et:		
2.			-	Total % Cover d	of:	Multip	ly by:	
<u>∠</u> .								
3.	79 <u>0</u>	·		OBL species	60	x 1 =	60	
				OBL species	60 10	x 2 =	20	
3. 4. 5				OBL species FACW species FAC species	60	x 2 = x 3 =	20 60	
3. 4. 5				OBL species FACW species FAC species FACU species	60 10	x 2 = x 3 = x 4 =	20 60 0	
3. 4. 5. Herb Stratum			OBL	OBL species FACW species FAC species FACU species UPL species	60 10 20	x 2 = x 3 = x 4 = x 5 =	20 60 0 0	(B)
3. 4. 5. Herb Stratum 1-Eleocharis obtusa		Yes	OBL FAC	OBL species FACW species FAC species FACU species	60 10	x 2 = x 3 = x 4 =	20 60 0	(B)
3. 4. 5. Herb Stratum	60	Yes	-	OBL species FACW species FAC species FACU species UPL species Column Totals: Prevalence Int	60 10 20 90 dex = B/	x 2 = x 3 = x 4 = x 5 = (A)	20 60 0 0	(B)
3. 4. 5. Herb Stratum 1. Eleocharis obtusa 2. Urtica dioica ssp. gracilis	<u>60</u> 20	Yes No	FAC	OBL species FACW species FAC species FACU species UPL species Column Totals: Prevalence Int Hydrophytic Veget	60 10 20 90 dex = B/	x 2 = x 3 = x 4 = x 5 = (A) A =	20 60 0 0 140	(B)
3. 4. 5. Total Cover Herb Stratum 1. Eleocharis obtusa 2. Urtica dioica ssp. gracilis 3. Juncus balticus	<u>60</u> 20	Yes No	FAC	OBL species FACW species FAC species FACU species UPL species Column Totals: Prevalence Int Hydrophytic Veget X Dominance Tes	60 10 20 90 dex = B/ ation In-	x 2 = x 3 = x 4 = x 5 = (A) A = dicators:	20 60 0 0 140	(B)
3. 4. 5. Total Cover Herb Stratum 1. Eleocharis obtusa 2. Urtica dioica ssp. gracilis 3. Juncus balticus 4.	<u>60</u> 20	Yes No	FAC	OBL species OBL species FACW species FAC species UPL species Column Totals: Prevalence Int Hydrophytic Veget X Dominance Tes X Prevalence Ind	60 10 20 90 dex = B/ ation In- t is >50° ex is ≤3.0	x 2 = x 3 = x 4 = x 5 = (A) A = dicators: % 0 ¹	20 60 0 140 1.56	
3. 4. 5. Total Cover Herb Stratum 1. Eleocharis obtusa 2. Urtica dioica ssp. gracilis 3. Juncus balticus 4. 5. 5.	<u>60</u> 20	Yes No	FAC	OBL species FACW species FAC species FACU species UPL species Column Totals: Prevalence Int X Dominance Tes X Prevalence Ind Morphological A	60 10 20 90 $dex = B/$ $ation Individual of the second s$	x 2 = x 3 = x 4 = x 5 = (A) A = dicators: % 0 ¹ (Provide	20 60 0 140 1.56	
3 4 5 Herb Stratum 1.Eleocharis obtusa 2.Urtica dioica ssp. gracilis 3.Juncus balticus 4 5 6 7 8	60 20 10	Yes No	FAC	OBL species FACW species FAC species FACU species UPL species Column Totals: Prevalence Ind X Dominance Tes X Prevalence Ind Morphological A data in Rem	60 10 20 90 dex = B/ ation Indication in the second sec	x 2 = $x 3 =$ $x 4 =$ $x 5 =$ (A)	20 60 0 140 1.56	ng
3	60 20 10	Yes No No	FAC	OBL species FACW species FAC species FACU species UPL species Column Totals: Prevalence Int X Dominance Tes X Prevalence Ind Morphological A	60 10 20 90 dex = B/ ation Indication in the second sec	x 2 = $x 3 =$ $x 4 =$ $x 5 =$ (A)	20 60 0 140 1.56	ng
3	60 20 10	Yes No No	FAC	OBL species FACW species FAC species FACU species UPL species Column Totals: Prevalence Ind X Dominance Tes X Prevalence Ind Morphological A data in Rem	60 10 20 90 dex = B/ ation In- at is >50 ex is <3.0 daptatic arks or o drophytic	x 2 = $x 3 =$ $x 4 =$ $x 5 =$ (A)	20 60 0 140 1.56 e supportine e sheet) $(x,y) = x^{-1}$	ng)
3	60 20 10	Yes No No	FAC	OBL species FACW species FACW species FACU species UPL species Column Totals: Prevalence Ind Hydrophytic Veget X Dominance Tes Prevalence Ind Morphological A data in Rem Problematic Hy	60 10 20 90 dex = B/ ation In- at is >50 ex is <3.0 daptatic arks or o drophytic	x 2 = $x 3 =$ $x 4 =$ $x 5 =$ (A)	20 60 0 140 1.56 e supportine e sheet) $(x,y) = x^{-1}$	ng)
3.	60 20 10 90 %	Yes No No	FAC	OBL species FACW species FACW species FACU species UPL species Column Totals: Prevalence Ind Hydrophytic Veget X Dominance Tes X Prevalence Ind data in Rem Problematic Hy Indicators of hydric	60 10 20 90 dex = B/ ation In- at is >50 ex is <3.0 daptatic arks or o drophytic	x 2 = $x 3 =$ $x 4 =$ $x 5 =$ (A)	20 60 0 140 1.56 e supportine e sheet) $(x,y) = x^{-1}$	ng)

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Sampling	Daint	WCD3
Sampling	POINT.	VY OL J

Profile Des	cription: (Describe t	o the depth	needed to docu	nent the	e indicator	or confir	n the abse	nce of indica	tors.)
Depth	Matrix			x Feature				3	
(inches)	Color (moist)	<u>%</u>	Color (moist)	· <u> </u>	Type1		Texture	<u> </u>	Remarks
	10YR/2.5/1	<u>100</u> 2.5	5YR/4/4		<u>RM</u>	<u>M</u>	Silt Loam		
³ Soil Textur Hydric Soil Histosc Black H Hydrog Stratifie 1 cm M Deplete Thick D Sandy Sandy Restrictive	Indicators: (Applicabl	andy Clay, Lo e to all LRRs,)	oam, Sandy Clay	Loam, S e noted.) x (S5) atrix (S6) ky Miner yed Matr atrix (F3 c Surface ark Surface ressions	andy Loan ral (F1) ix (F2)) ∋ (F6) ace (F7)	-	Indicate Indicate 1 c 2 c Re Re Ott	ors for Proble m Muck (A9) m Muck (A10 duced Vertic d Parent Mat her (Explain ir	Loam, Silt, Loamy Sand, Sand. matic Hydric Soils ⁴ : (LRR C) I) (LRR B) (F18) erial (TF2)
Туре:	,,,,,								
Depth (ir	iches):						Hvdric S	Soil Present?	Yes No
HYDROLO	DGY								
Wetland Hy	drology Indicators:						Se	econdary India	cators (2 or more required)
Primary Ind	icators (any one indica	tor is sufficie	nt)				Ē	Water Mark	ks (B1) (Riverine)
High W Saturat Water I Sedime Drift De Surface Inundat	Water (A1) ater Table (A2) ion (A3) Marks (B1) (Nonriveri Int Deposits (B2) (Nor posits (B3) (Nonriver Soil Cracks (B6) ion Visible on Aerial In Stained Leaves (B9)	riverine) ine)	Presence	st (B12) vertebrat Sulfide (Rhizosph of Reduc	Odor (C1) heres along ced Iron (C ction in Ploy	4)		Drift Depos Drainage P Dry-Season Thin Muck Crayfish Bu Saturation	Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10) In Water Table (C2) Surface (C7) Jurrows (C8) Visible on Aerial Imagery (C9) juitard (D3) al Test (D5)
Field Obse	substanting of the second second								
		es 🔿 No	Depth (in	ches).					
Water Table		\sim	 Depth (in Depth (in 						
Saturation F (includes ca		es 💿 No	O Depth (in	ches):	10 previous ins			logy Present	1? Yes 💿 No 🔿
Remarks:									

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Project/Site: Hanson Preliminary		City/Count	y:Lake Co		Samp	ling Date:4/3	0/2020	0
Applicant/Owner:Brian Hanson			-	State:CA	Samp	ling Point:WS	SP4	
Investigator(s): Steve Zalusky, Leigh Zalusky		Section, Township, Range:S.31 T16N-R8W						
Landform (hillslope, terrace, etc.): Depression		Local relie	ef (concave,	convex, none):none		Slope	(%):()	
Subregion (LRR):C - Mediterranean California	Lat:38 5	55.762'N		Long:-122 47.217W		Datum	WGS	84
Soil Map Unit Name: Clear Lake Variant clay, drained				NWI classifi	cation:2	B3.3		
Are climatic / hydrologic conditions on the site typical for this	time of ye	ar? Yes (No () (If no, explain in F	 Remarks	5.)		
		disturbed?	-	"Normal Circumstances"			No	\cap
		oblematic?		eeded, explain any answe	0 10 00000	~		
SUMMARY OF FINDINGS - Attach site map s						11	ures,	etc.
Hydrophytic Vegetation Present? Yes 🍙 No								
		ls t	he Sample	d Area				
			hin a Wetla		N	o (•		
VEGETATION	Abaaluta	Deminant	Indiantes					
	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test work				
1.				Number of Dominant S That Are OBL, FACW,		: 1	((A)
2.				_ _ Total Number of Domir	hant			
3.				Species Across All Stra		2	((B)
4				Percent of Dominant S	necies			
Sapling/Shrub Stratum	: %			That Are OBL, FACW,		50.0	% ((A/B)
1.				Prevalence Index wo	rksheet	:		
2.				Total % Cover of:		Multiply b	y:	
3.	2		<u>Vali:</u>	OBL species		x 1 =	0	
4.	-	·		FACW species		x 2 =	0	
5	2 <u>0</u>			FAC species	40	х 3 =	120	
Total Cover:	%			FACU species		x 4 =	0	
Herb Stratum		37		UPL species	60	x 5 =	300	
¹ Hordeum marinum ssp. gussoneanum	40	Yes	FAC	Column Totals:	100	(A)	420	(B)
² ·Festuca perennis ³ ·Cardamine californica var. californica	20	Yes	Not Listed	Prevalence Index	(= B/A	- 1	4.20	
⁴ . Galium porrigens var. porrigens	$\frac{15}{15}$	No	Not Listed	Hydrophytic Vegetati	on Indi	cators:		
5. Torilis arvensis	$\frac{13}{10}$	No	Not Listed	Dominance Test is				
6.				Prevalence Index	is ≤3.0 ¹			
7.			-	Morphological Ada				ng
8.	-		1000	data in Remark		1 (Sec.)	·	
Total Cover:	100%			- Problematic Hydro	phytic \	egetation (E	xpiain))
Woody Vine Stratum 1. 2.				¹ Indicators of hydric so be present.	oil and v	wetland hydro	ology n	nust
2Total Cover:	%			- Hydrophytic				
i Star Gover.				Vegetation	s O			
% Bare Ground in Herb Stratum % % Cover	of Biotic C	Crust	%	Present? Ye	is (No 💽		

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Sampling	Doint.	WSP4
Samplind	POINT.	TUNY

Profile Dec	cription: (Describe	to the depth pe	eded to docu	ment the	indicator o	r confirm	the abcence of in	dicators)
Depth	Matrix	to the depth he		x Features		Commin	the absence of m	dicators.)
(inches)	Color (moist)	% <u>C</u>	olor (moist)	%	Type ¹	Loc ²	Texture ³	Remarks
	/		/					
		· · · · · · · · · · · · · · · · · · ·						
	~ <u>+</u>							
	· · · · · · · · · · · · · · · · · · ·	· ·						
	· · · · · · · · · · · · · · · · · · ·	. <u> </u>						
¹ Type: C=C	oncentration, D=Dep	letion. RM=Red	uced Matrix.	² Location	: PL=Pore	Linina, RC	=Root Channel, M:	=Matrix.
	And a state of the	Construction of the state of the state of the						Silt Loam, Silt, Loamy Sand, Sand.
	Indicators: (Applicab	200 C C C C C C C C C C C C C C C C C C				-	- 11 12 12 12 12 12 12 12 12 12 12 12 12	oblematic Hydric Soils
Histoso			Sandy Red					(A9) (LRR C)
Histic E	pipedon (A2)	Ì	Stripped M	latrix (S6)			2 cm Muck ((A10) (LRR B)
	listic (A3)	ĺ	Loamy Mu	the second second			Reduced Ve	ertic (F18)
	en Sulfide (A4)	[Loamy Gle		: (F2)			Material (TF2)
	d Layers (A5) (LRR (C)	Depleted N		(50)		Other (Expla	ain in Remarks)
	uck (A9) (LRR D)	a (A 1 1)	Redox Dar					
	ed Below Dark Surfac lark Surface (A12)		Depleted D Redox Dep					
	Mucky Mineral (S1)	ļ	Vernal Poo		10)		⁴ Indicators of hyd	drophytic vegetation and
	Gleyed Matrix (S4)	L		,ie (i e)			1. and 1.	ology must be present.
	Layer (if present):							
Type:								
Depth (ir	iches).						Hydric Soil Pres	ent? Yes 🔿 No 💿
Remarks:			<u></u>					
HYDROLO	DGY							
Wetland Hy	drology Indicators:						Secondary	Indicators (2 or more required)
	icators (any one indic)					Marks (B1) (Riverine)
	Water (A1)		Salt Crus	t (B11)				ent Deposits (B2) (Riverine)
	ater Table (A2)		Biotic Cru					eposits (B3) (Riverine)
	ion (A3)			nvertebrate	s (B13)			ge Patterns (B10)
	Marks (B1) (Nonriver	ine)		n Sulfide O				ason Water Table (C2)
	ent Deposits (B2) (No				res along L	ivina Root	·	uck Surface (C7)
	posits (B3) (Nonrive	10 - 10 - 11 - 11 - 11 - 11 - 11 - 11 -			ed Iron (C4)			h Burrows (C8)
	Soil Cracks (B6)				on in Plowe			tion Visible on Aerial Imagery (C9)
Inundat	ion Visible on Aerial	magery (B7)		plain in Re				v Aquitard (D3)
	Stained Leaves (B9)	• • • •		•				eutral Test (D5)
Field Obse	rvations:							1997 1997 1997 1997 1997 1997 1997 1997
Surface Wa	ter Present? Y	es 🔿 No 🤅	Depth (ir	nches):				
Water Table		es O No (NO			-		
Saturation F		~ ~	-	·		-		
	pillary fringe)	es 🔿 No (beptir (ii	iones).		Wetla	nd Hydrology Pre	sent? Yes 🔿 No 💽
Describe Re	ecorded Data (stream	gauge, monitor	ing well, aerial	photos, pr	evious insp	ections), if	available:	
Remarks:								

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oject/Site: Hanson Preliminary	City/County:Lake Co. Sampling Date:4/30/202	20
oplicant/Owner:Brian Hanson	State:CA Sampling Point:WSP5	
vestigator(s):Steve Zalusky, Leigh Zalusky	Section, Township, Range:S.31 T16N-R8W	
indform (hillslope, terrace, etc.): Depression	Local relief (concave, convex, none): none Slope (%):	
ubregion (LRR):C - Mediterranean California Lat:38 :	5.726'N Long:-122 47.340'W Datum:WGS	584
bil Map Unit Name: Clear Lake Variant clay, drained	NWI classification:2B3,3	
e climatic / hydrologic conditions on the site typical for this time of ye	ar? Yes 💿 No 🔿 (If no, explain in Remarks.)	
e Vegetation Soil or Hydrology significantly	disturbed? Are "Normal Circumstances" present? Yes 💿 No	C
e Vegetation Soil or Hydrology naturally pr	blematic? (If needed, explain any answers in Remarks.)	
UMMARY OF FINDINGS - Attach site map showing	sampling point locations, transects, important features	, etc
Hydrophytic Vegetation Present? Yes 💿 No 🍙		
Hydric Soil Present? Yes	Is the Sampled Area	
Netland Hydrology Present? Yes 💿 No 🔘	within a Wetland? Yes	
Remarks:		
EGETATION Absolute Free Stratum (Use scientific names.)	Dominant Indicator Dominance Test worksheet: Species? Status Number of Dominant Species	
2	That Are OBL, FACW, or FAC: 1	(A)
<u></u>	Total Number of Dominant Species Across All Strata:	(B)
4.		(0)
Total Cover: %	Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 %	(A/B)
Sapling/Shrub Stratum I.	Prevalence Index worksheet:	
2	Total % Cover of: Multiply by:	
3.	OBL species 55 x 1 = 55	
4	FACW species x 2 = 0	
5	FAC species x 3 = 0	
Herb Stratum	FACU species x 4 = 0	
Eleocharis obtusa 55	$\begin{array}{c c} UPL \text{ species} & x \ 5 = & 0 \\ Yes & OBL & Column Totals; & 55 & (A) & 55 \\ \end{array}$	(P)
2.	Column Totals: 55 (A) 55	(B)
3.	Prevalence Index = B/A = 1.00	
4.	Hydrophytic Vegetation Indicators:	
5	Dominance Test is >50%	
ð		ina
7	data in Remarks or on a separate sheet)	ing
Total Cover: 55 or	Problematic Hydrophytic Vegetation ¹ (Explain	ו)
Noody Vine Stratum		
l. <u></u>	¹ Indicators of hydric soil and wetland hydrology be present.	must
2		
	Hydrophytic Vegetation	
Total Cover: %	rust % Present? Yes • No ()	
	Vegetation	

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Sampling	D	WCD5
Samplind	Point.	WORD

Depth Matrix (inches) Color (moist) %	Redox Features <u>Color (moist) % Type1 Loc</u>	c ² Texture ³	Remarks
Type: C=Concentration, D=Depletion, RM=F Soil Textures: Clay, Silty Clay, Sandy Clay, I ydric Soil Indicators: (Applicable to all LRR: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) (LRR C) 1 cm Muck (A9) (LRR D) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) testrictive Layer (if present): Type: Depth (inches):	Reduced Matrix. ² Location: PL=Pore Linin Loam, Sandy Clay Loam, Sandy Loam, Clay	ng, RC=Root Channel, M=Ma / Loam, Silty Clay Loam, Silt Indicators for Proble 1 cm Muck (A9) 2 cm Muck (A10 Reduced Vertic Red Parent Mat Other (Explain in ⁴ Indicators of hydrop	trix. Loam, Silt, Loamy Sand, Sand matic Hydric Soils ⁴ : (LRR C))) (LRR B) (F18) erial (TF2) n Remarks) hytic vegetation and y must be present.
Remarks: Area was flooded. YDROLOGY		, Secondary Indi	cators (2 or more required)
Wetland Hydrology Indicators: Primary Indicators (any one indicator is suffici X Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed So	Water Mari Water Mari Sediment I Drift Depos Drainage F Dry-Seaso Pry-Seaso Thin Muck Crayfish Br oils (C6) Saturation Shallow Ac	cators (2 or more required) ks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10) n Water Table (C2) Surface (C7) Jurrows (C8) Visible on Aerial Imagery (C9) jultard (D3) al Test (D5)
Nater Table Present? Yes N	0 Depth (inches): 12 0 Depth (inches): 0 0 Depth (inches): 0 itoring well, aerial photos, previous inspection 10	Wetland Hydrology Presen	t? Yes 💿 No 🔿

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Project/Site: Hanson Preliminary	City/C	ounty:Lake Co		Sampling Date:	4/30/202	20
Applicant/Owner:Brian Hanson			State:CA	Sampling Point:	WSP6	
nvestigator(s): Steve Zalusky, Leigh Zalusky	Section	on, Township, Ra	ange:S.31 T16N-R8W			
_andform (hillslope, terrace, etc.): hillslope	Loca	l relief (concave,	convex, none): none	Slo	ope (%):5	
Subregion (LRR):C - Mediterranean California	a Lat:38 55.72:	5'N	Long:-122 47.341W	Dati	um:WGS	584
Soil Map Unit Name: Clear Lake Variant clay,	drained		NWI classifie	cation:2B3,3	62	
Are climatic / hydrologic conditions on the site typi	ical for this time of year? Y	íes 💿 🛛 No () (If no, explain in F	(emarks.)		
Are Vegetation Soil or Hydrology	significantly distur	bed? Are	"Normal Circumstances"	present? Yes 🕞	No	0
Are Vegetation Soil or Hydrology	naturally problema	atic? (If n	eeded, explain any answe	ers in Remarks.)		
SUMMARY OF FINDINGS - Attach sit	e map showing sam	pling point l	ocations, transects	, important fe	atures	. etc.
Hydrophytic Vegetation Present? Yes (Hydric Soil Present? Yes (le the Comple	d Area			
Wetland Hydrology Present? Yes	0° 10°	Is the Sample within a Wetla		No 🔎		
Remarks:		within a wetta	ild? Tes ()			
VEGETATION						
Tree Stratum (Use scientific names.)	Absolute Dom % Cover Spec	inant Indicator cies? Status	Dominance Test worl			
1.			Number of Dominant S That Are OBL, FACW,		0	(A)
2.		0			0	0.9
3.			 Total Number of Domin Species Across All Stra 		0	(B)
4.			-		U	(-)
	otal Cover: %		 Percent of Dominant S That Are OBL, FACW, 		0 %	(A/B)
Sapling/Shrub Stratum					0 70	()
1			Prevalence Index wor Total % Cover of:	Multip	hy hy:	
2. 3.			OBL species	x 1 =	<u>ny by.</u> 0	
4.			FACW species	x 2 =	0	
5.			FAC species	x 3 =	0	
	otal Cover: %	926	FACU species	x 4 =	0	
Herb Stratum			UPL species	x 5 =	0	
1			Column Totals:	(A)	0	(B)
2			- Drovalance Index	r = P/A =		
3.			Prevalence Index Hydrophytic Vegetati			
4			Dominance Test is			
5.			Prevalence Index	1		
6			Morphological Ada		e support	ina
8.		1000	data in Remark	s or on a separate	e sheet)	5
2	otal Cover: 04		Problematic Hydro	phytic Vegetation	¹ (Explair	ו)
Woody Vine Stratum	otal Cover. %		And there are another and the	that the second means		725
1			¹ Indicators of hydric so be present.	oil and wetland h	ydrology	must
2			-			
Т	otal Cover: %		Hydrophytic Vegetation			
% Bare Ground in Herb Stratum 100%	% Cover of Biotic Crust	%		s 🔿 No 🤅		
Remarks: Fill			l			

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Sampling	Daint	WSD6
Samplind	Point	W SFO

inches) Color (mo	latrix ist) % C	Redox F olor (moist)	eatures % Type1	Loc ² Tex	cture ³	Remarks
						Kendho
Type: C=Concentration, Soil Textures: Clay, Silty			ocation: PL=Pore			atrix. Loam, Silt, Loamy Sand, Sar
ydric Soil Indicators: (A) Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4 Stratified Layers (A5) 1 cm Muck (A9) (LRR Depleted Below Dark Thick Dark Surface (A Sandy Mucky Mineral Sandy Mucky Mineral) (LRR C) D) Surface (A11) (12) (S1)	Sandy Redox (Stripped Matr Loamy Mucky Loamy Gleye Depleted Mat Redox Dark S	S5) ix (S6) Mineral (F1) d Matrix (F2) rix (F3) Surface (F6) k Surface (F7) ssions (F8)	41nc	1 cm Muck (A9) 2 cm Muck (A10 Reduced Vertic Red Parent Mat Other (Explain i	D) (L RR B) (F18) erial (TF2) n Remarks) Dhytic vegetation and
Sandy Gleyed Matrix estrictive Layer (if pres					wetland hydrolog	y must be present.
Туре:	90 90	-				
Depth (inches):						
emarks:				Hyd	ric Soil Present	? Yes 🔿 No 💽
				Hyd	ric Soil Present	?Yes No 💽
emarks:	ators:			Hyd	Secondary Indi	cators (2 or more required)
emarks: /DROLOGY /etland Hydrology Indic rimary Indicators (any or Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) (No	e indicator is sufficient) onriverine)	Salt Crust (E Biotic Crust Aquatic Inve	(B12) rtebrates (B13) ulfide Odor (C1)		Secondary Indi Water Mar Sediment I Drift Depos Drainage F Dry-Seaso	cators (2 or more required) ks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) ² atterns (B10) n Water Table (C2)
emarks: /DROLOGY /etland Hydrology Indic rimary Indicators (any or Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) (No Sediment Deposits (B Drift Deposits (B3) (N Surface Soil Cracks (I Inundation Visible on Water-Stained Leaves	e indicator is sufficient) 2) (Nonriverine) onriverine) 36) Aerial Imagery (B7)	Salt Crust (E Biotic Crust Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron	(B12) rtebrates (B13)	iving Roots (C3)	Secondary Indi Water Mar Sediment I Drift Depos Drainage F Dry-Seaso Thin Muck Crayfish B Saturation Shallow Ac	cators (2 or more required) ks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10)
emarks: /DROLOGY /etland Hydrology Indic rimary Indicators (any or Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) (No Sediment Deposits (B Drift Deposits (B3) (N Surface Soil Cracks (I Inundation Visible on	e indicator is sufficient) 2) (Nonriverine) onriverine) 36) Aerial Imagery (B7)	Salt Crust (E Biotic Crust Aquatic Inve Hydrogen Si Oxidized Rh Presence of Recent Iron Other (Expla	(B12) rtebrates (B13) ulfide Odor (C1) izospheres along l Reduced Iron (C4 Reduction in Plow in in Remarks)	iving Roots (C3)	Secondary Indi Water Mar Sediment I Drift Depos Drainage F Dry-Seaso Thin Muck Crayfish B Saturation Shallow Ac	cators (2 or more required) ks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10) n Water Table (C2) Surface (C7) urrows (C8) Visible on Aerial Imagery (C quitard (D3)
emarks: /DROLOGY /etland Hydrology Indic rimary Indicators (any or Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) (No Sediment Deposits (B Drift Deposits (B3) (N Surface Soil Cracks (I Inundation Visible on Water-Stained Leavest ield Observations:	e indicator is sufficient) 2) (Nonriverine) 2) (Nonriverine) 36) Aerial Imagery (B7) s (B9)	Salt Crust (E Biotic Crust Aquatic Inve Hydrogen Si Oxidized Rh Presence of Recent Iron Other (Expla	(B12) rtebrates (B13) ulfide Odor (C1) izospheres along I Reduced Iron (C4 Reduction in Plow in in Remarks) es):	iving Roots (C3)	Secondary Indi Water Mar Sediment I Drift Depos Drainage F Dry-Seaso Thin Muck Crayfish B Saturation Shallow Ac	cators (2 or more required) ks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10) n Water Table (C2) Surface (C7) urrows (C8) Visible on Aerial Imagery (C9 quitard (D3)
emarks: /DROLOGY /etland Hydrology Indic rimary Indicators (any or Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) (No Sediment Deposits (B3) (N Surface Soil Cracks (I Inundation Visible on Water-Stained Leaves ield Observations: urface Water Present? /ater Table Present? aturation Present? ncludes capillary fringe)	e indicator is sufficient) 2) (Nonriverine) onriverine) 36) Aerial Imagery (B7) s (B9) Yes No (Yes No (Salt Crust (E Biotic Crust Aquatic Inve Hydrogen Si Oxidized Rh Presence of Recent Iron Other (Expla	(B12) rtebrates (B13) ulfide Odor (C1) izospheres along I Reduced Iron (C4 Reduction in Plow in in Remarks) es): es): es):	Living Roots (C3)	Secondary Indi Water Mar Sediment I Drift Depos Drainage F Dry-Seaso Thin Muck Crayfish Bi Saturation Shallow Ac FAC-Neutr	cators (2 or more required) ks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10) n Water Table (C2) Surface (C7) urrows (C8) Visible on Aerial Imagery (C quitard (D3) ral Test (D5)
emarks: /DROLOGY /etland Hydrology Indic rimary Indicators (any or Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) (No Sediment Deposits (B Drift Deposits (B3) (N Surface Soil Cracks (I Inundation Visible on Water-Stained Leavest ield Observations: urface Water Present? /ater Table Present? aturation Present?	e indicator is sufficient) 2) (Nonriverine) onriverine) 36) Aerial Imagery (B7) s (B9) Yes No (Yes No (Salt Crust (E Biotic Crust Aquatic Inve Hydrogen Si Oxidized Rh Presence of Recent Iron Other (Expla	(B12) rtebrates (B13) ulfide Odor (C1) izospheres along I Reduced Iron (C4 Reduction in Plow in in Remarks) es): es): es):	Living Roots (C3)	Secondary Indi Water Mar Sediment I Drift Depos Drainage F Dry-Seaso Thin Muck Crayfish Bi Saturation Shallow Ac FAC-Neutr	cators (2 or more required) ks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10) n Water Table (C2) Surface (C7) urrows (C8) Visible on Aerial Imagery (C quitard (D3) ral Test (D5)
emarks: /DROLOGY /etland Hydrology Indic rimary Indicators (any or Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) (No Sediment Deposits (B3) (N Surface Soil Cracks (I Inundation Visible on Water-Stained Leaves ield Observations: urface Water Present? /ater Table Present? aturation Present? ncludes capillary fringe)	e indicator is sufficient) 2) (Nonriverine) onriverine) 36) Aerial Imagery (B7) s (B9) Yes No (Yes No (Salt Crust (E Biotic Crust Aquatic Inve Hydrogen Si Oxidized Rh Presence of Recent Iron Other (Expla	(B12) rtebrates (B13) ulfide Odor (C1) izospheres along I Reduced Iron (C4 Reduction in Plow in in Remarks) es): es): es):	Living Roots (C3)	Secondary Indi Water Mar Sediment I Drift Depos Drainage F Dry-Seaso Thin Muck Crayfish Bi Saturation Shallow Ac FAC-Neutr	cators (2 or more required) ks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10) n Water Table (C2) Surface (C7) urrows (C8) Visible on Aerial Imagery (C quitard (D3) ral Test (D5)

US Army Corps of Engineers

Project/Site: Hanson Preliminary			City/County:Lake C	о.		Sampling Date:4/30/2020
Applicant/Owner: Brian Hanson				State:C	Ą	Sampling Point:WSP7
Investigator(s): Steve Zalusky, Leigh	Zalusky		Section, Township,	Range:S.31 T161	N-R8W	
Landform (hillslope, terrace, etc.): Dcpr	ession		Local relief (concav	e, convex, none): _I	ione	Slope (%):2
Subregion (LRR):C - Mediterranean (California	Lat:38	55.609'N	Long:-122 4	7.377W	Datum:WGS84
Soil Map Unit Name: Clear Lake Vari	ant clay, drain	ned		NV	/I classific	ation:2B3,3
Are climatic / hydrologic conditions on th	ne site typical fo	or this time of ye	ear? Yes 💿 🛛 No	(If no, ex	plain in R	emarks.)
Are Vegetation Soil or H	ydrology	significantly	disturbed? A	re "Normal Circum	stances" p	oresent? Yes 💿 No 🔿
Are Vegetation Soil or H	ydrology	naturally pr	oblematic? (If	needed, explain a	ny answe	rs in Remarks.)
SUMMARY OF FINDINGS - At	tach site m	ap showing	sampling point	locations, tra	nsects,	important features, etc
Hydrophytic Vegetation Present?	Yes 🜘	No 🔘				
Hydric Soil Present?	Yes 💿	No 🔘	Is the Samp	led Area		
Wetland Hydrology Present?	Yes 🜘	No 🌀	within a Wet	land?	Yes 💿	No 🔿

VEGETATION

	Absolute	Dominant		Dominance Test v	vorkshee	et:		
Tree Stratum (Use scientific names.)	% Cover	Species?	Status	Number of Domina	int Specie	es		
1			-	That Are OBL, FAC	CW, or FA	AC:	1	(A)
2.				Total Number of De	ominant			
3.				Species Across All			1	(B)
4.				- Dereent of Demine	nt Cassia			00 W
Total Cove	r: %			 Percent of Domina That Are OBL, FAC 			00.0%	(A/B)
Sapling/Shrub Stratum				5-00-052.001 (0.000-02000-02000)			JU.U 70	(//////
1.				Prevalence Index	workshe	eet:		
2.				Total % Cover	of:	Multi	ply by:	
3.				OBL species		x 1 =	0	
4.				FACW species	60	x 2 =	120	
5.	······			FAC species	30	x 3 =	90	
Total Cover	: %			FACU species		x 4 =	0	
Herb Stratum				UPL species		x 5 =	0	
1. Juncus balticus	60	Yes	FACW	Column Totals:	90	(A)	210	(B)
2. Anthoxanthum odoratum	30	No	FAC	-	70	()		
3.				Prevalence Ir	ndex = B	/A =	2.33	
4.			-	Hydrophytic Vege	etation In	dicators:		
5.			-	X Dominance Te	est is >50	%		
6.	8		-	× Prevalence Ind	dex is ≤3.	0 ¹		
7.				Morphological				ng
8.				data in Ren		11.5 G 1285 F 26	10	
Total Cover	90 %	·	3 	- Problematic H	ydrophyti	c Vegetatio	n ¹ (Explain	ı)
Woody Vine Stratum	. 90 %							
1.				¹ Indicators of hydr	ic soil an	d wetland h	ydrology i	must
2.				be present.				
Total Cover	: %			Hydrophytic				
				Vegetation			~	
	of Biotic C	Jrust	%	Present?	Yes 🖲	No	\odot	
Remarks:								

US Army Corps of Engineers

ampling	Delinte	WCD7	

201 - 1942 - 1942	scription: (Describe	to the dep	th needed to docu	ment the	indicator	or confirm	m the absence of i	ndicators.)
Depth	Matrix			x Feature				
inches)	Color (moist)	%	Color (moist)	%	Type ¹	_Loc ²	Texture ³	Remarks
18	10YR/2.5/1	100	2.5YR/4/4	5	RM	<u>M</u>	Silt Loam	
			Deduced Metric	21				
	Concentration, D=Dep res: Clav. Silty Clav. \$						RC=Root Channel, N am. Siltv Clav Loam	/i=iviatrix. , Silt Loam, Silt, Loamy Sand, Sar
Histose Histic I Black I Hydrog Stratifie 1 cm M Deplet Thick I Sandy sandy estrictive Type: Depth (i	Epipedon (A2) Histic (A3) gen Sulfide (A4) ed Layers (A5) (LRR 0) Muck (A9) (LRR D) ed Below Dark Surfac Dark Surface (A12) Mucky Mineral (S1) Gleyed Matrix (S4) e Layer (if present):	C)	Rs, unless otherwise Sandy Redo Stripped M Loamy Mu Depleted M Redox Dar Depleted D Redox Dep Vernal Poo	ox (S5) atrix (S6) oky Mine yed Matr yed Matr latrix (F3 k Surface park Surface pressions	ral (F1) ix (F2)) e (F6) ace (F7)			roblematic Hydric Soils [‡] : (A9) (LRR C) (A10) (LRR B) /ertic (F18) t Material (TF2) lain in Remarks) ydrophytic vegetation and rology must be present.
emarks:							Hydric Soil Pre	sent? Yes 🌒 No 🔿
DROL	93. T. T.							
YDROL(OGY ydrology Indicators: dicators (any one indic		icient)				Secondary	sent? Yes • No y Indicators (2 or more required) r Marks (B1) (Riverine)
rimary Ind Surfac High W Satura Water Sedime Drift Do Surfac Inunda Water	ydrology Indicators: dicators (any one indic e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No eposits (B3) (Nonrive e Soil Cracks (B6) tion Visible on Aerial I Stained Leaves (B9)	ine) nriverine) rine)	Salt Crust Biotic Cru Aquatic Ir Hydrogen Oxidized Presence Recent Ird	st (B12) overtebra Sulfide (Rhizosph of Reduc	Odor (C1) heres along ced Iron (C ction in Ploy	4)	Secondary Water Sedin Drift D Drain: Dry-S ots (C3) Thin M Crayfi (C6) Satura Shallo	y Indicators (2 or more required)
(DROL(/etland H rimary Inc Surfac High W Satura Water Sedim Drift D. Surfac Inunda Water- ield Obse	ydrology Indicators: dicators (any one indic e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No eposits (B3) (Nonrive e Soil Cracks (B6) ation Visible on Aerial -Stained Leaves (B9) ervations:	ator is suff ine) nriverine) rine) Imagery (B	Salt Crust Biotic Cru Aquatic Ir Hydrogen Oxidized Presence Recent Irr Other (Ex	st (B12) svertebra Sulfide (Rhizosph of Reduc on Reduc plain in F	Odor (C1) heres along ced Iron (C ction in Ploy	4)	Secondary Water Sedin Drift D Drain: Dry-S ots (C3) Thin M Crayfi (C6) Satura Shallo	y Indicators (2 or more required) r Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) age Patterns (B10) eason Water Table (C2) Muck Surface (C7) ish Burrows (C8) ation Visible on Aerial Imagery (C9 ow Aquitard (D3)
YDROLO /etland H rimary Inc Surfac High W Satura Water Sedim Drift D Surfac Inunda Water- ield Obse water- ield Obse	ydrology Indicators: dicators (any one indic e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No eposits (B3) (Nonrive e Soil Cracks (B6) ation Visible on Aerial Stained Leaves (B9) ervations: ater Present? Y	ine) nriverine) rine) Imagery (B	Salt Crust Biotic Cru Aquatic Ir Hydrogen Oxidized Presence Recent Ird 7) Other (Ex	st (B12) vvertebra Sulfide (Rhizosph of Reduc on Reduc plain in F	Odor (C1) heres along ced Iron (C ction in Ploy	4)	Secondary Water Sedin Drift D Drain: Dry-S ots (C3) Thin M Crayfi (C6) Satura Shallo	y Indicators (2 or more required) r Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) age Patterns (B10) eason Water Table (C2) Muck Surface (C7) ish Burrows (C8) ation Visible on Aerial Imagery (C3 ow Aquitard (D3)
YDROLO /etland H rimary Inc Surfac High W Satura Water Sedim Drift D Surfac Inunda Water- ield Obse urface Wa /ater Tabl aturation ncludes c:	ydrology Indicators: dicators (any one indic e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No eposits (B3) (Nonrive e Soil Cracks (B6) tition Visible on Aerial I -Stained Leaves (B9) ervations: ater Present? Y he Present? Y Present? Y apillary fringe)	ine) nriverine) rine) Imagery (B 'es () 'es ()	Salt Crust Biotic Cru Biotic Cru Aquatic Ir Hydrogen Oxidized Presence Recent Irr 7) Other (Ex No Depth (ir No Depth (ir	st (B12) avertebra Sulfide (Rhizosph of Reduc on Reduc plain in F aches): aches): aches):	Odor (C1) heres along ced Iron (C- stion in Plov Remarks)	4) ved Soils	Secondar Water Sedim Drift E Drain: Droin: Dry.s ots (C3) Thin Crayfi (C6) Satur Shalld FAC-1	y Indicators (2 or more required) r Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) age Patterns (B10) eason Water Table (C2) Muck Surface (C7) ish Burrows (C8) ation Visible on Aerial Imagery (C9 ow Aquitard (D3) Neutral Test (D5)
/DROLO /etland H rimary Inc Surfac High W Satura Water Drift D Surfac Inunda Water- ield Obse urface Wa /ater Tabl aturation ncludes c:	ydrology Indicators: dicators (any one indic e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No eposits (B3) (Nonrive e Soil Cracks (B6) ation Visible on Aerial Stained Leaves (B9) ervations: ater Present? Y le Present? Y Present? Y	ine) nriverine) rine) Imagery (B 'es () 'es ()	Salt Crust Biotic Cru Biotic Cru Aquatic Ir Hydrogen Oxidized Presence Recent Irr 7) Other (Ex No Depth (ir No Depth (ir	st (B12) avertebra Sulfide (Rhizosph of Reduc on Reduc plain in F aches): aches): aches):	Odor (C1) heres along ced Iron (C- stion in Plov Remarks)	4) ved Soils	Secondar Water Sedim Drift E Drain: Droin: Dry.s ots (C3) Thin Crayfi (C6) Satur Shalld FAC-1	y Indicators (2 or more required) r Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) age Patterns (B10) eason Water Table (C2) Muck Surface (C7) sish Burrows (C8) ation Visible on Aerial Imagery (C9 ow Aquitard (D3) Neutral Test (D5)

US Army Corps of Engineers

Project/Site: Hanson Preliminary		City/Coun	ty:Lake Co.		Sam	pling Date:4	/30/202	20
Applicant/Owner:Brian Hanson				State:CA	Sam	pling Point:	VSP8	
nvestigator(s): Steve Zalusky, Leigh Zalusky		Section, T	ownship, Ra	ange:S.31 T16N-R8W	7	_		
andform (hillslope, terrace, etc.): Depression		Local reli	ef (concave,	convex, none): none		Slo	pe (%):()	
Subregion (LRR):C - Mediterranean California	Lat:38 :	55.602'N		Long:-122 47.382W	1	Datu	m:WGS	584
Soil Map Unit Name: Clear Lake Variant clay, drained				NWI classi	fication	2B3,3		
Are climatic / hydrologic conditions on the site typical for this	time of ye	ear? Yes (No () (If no, explain in	Remar	ks.)		
Are Vegetation Soil or Hydrology si	ignificantly	disturbed	? Are	"Normal Circumstances	" presei	nt?Yes 💽	No	C
Are Vegetation Soil or Hydrology n	aturally pro	oblematic?	(lf n	eeded, explain any answ	vers in I	Remarks.)		
SUMMARY OF FINDINGS - Attach site map s	howing	samplii	ng point l	ocations, transect	s, imp	ortant fe	atures,	, etc.
Hydrophytic Vegetation Present? Yes 🦳 No								
		Ist	the Sampleo	d Area				
Wetland Hydrology Present? Yes O No	• •	wit	thin a Wetla	nd? Yes 🤇)	No 💿		
Remarks:								
Tree Stratum (Use scientific names.)	Absolute % Cover	Dominan Species?	t Indicator	Dominance Test wo Number of Dominant That Are OBL, FACW	Specie	S		(A)
2	-			- Total Number of Dom		0. ()		
3		<u>.</u>		Species Across All St	trata:	1		(B)
4	: %			 Percent of Dominant That Are OBL, FACW 		-	0 %	(A/B)
1.				Prevalence Index w	orkshe	et:		
2.	. .	·		Total % Cover of	:	Multipl	y by:	_
3.				OBL species		x 1 =	0	
4.	-			FACW species	20	x 2 =	40	
5				FAC species	15	x 3 =	45	
Herb Stratum	%			FACU species	40	x 4 =	160	
1.Bromus hordeaceus	40	Yes	FACU	UPL species	25	x 5 =	125	(B)
2.Juncus balticus	20	No	FACW	Column Totals:	100	(A)	370	(B)
3. Anthoxanthum odoratum	15	No	FAC	Prevalence Inde	ex = B/.	A =	3.70	
4. Trifolium subterraneum	25	No	Not Listed	Hydrophytic Vegeta				
5.				Dominance Test				
6	-			Prevalence Inde				
7	-			Morphological Addition				ng
8.				Problematic Hyd	rophytic	· Vegetation ¹	(Explain	1)
Woody Vine Stratum	100%							
1.				¹ Indicators of hydric	soil and	l wetland hy	drology i	must
2.				be present.				
Total Cover	%			Hydrophytic				
				Vegetation	0.025	1223		
	of Biotic C	Crust	%		res ()	No 🖲)	

US Army Corps of Engineers

Sampling	Doint.	WSP8
Samplind	POINT.	W DI O

Profile Dec	cription: (Describe	to the depth ne	eded to docu	ment the	indicator o	r confirm	the abcence of in	dicatore)
Depth	Matrix	to the depth he		x Features		Commin	the absence of m	dicators.)
(inches)	Color (moist)	<u>%</u> Co	olor (moist)	%	Type ¹	Loc ²	Texture ³	Remarks
	/							
-								
	~ <u></u>							
	· · · · · · · · · · · · · · · · · · ·	·						
	· · · · · · · · · · · · · · · · · · ·							
				-1.5				4
¹ Type: C=C	oncentration, D=Dep	letion. RM=Red	uced Matrix.	² Location	: PL=Pore	Linina. RC	=Root Channel, M:	=Matrix.
	And a state of the	conservation conservation and conservation				-		Silt Loam, Silt, Loamy Sand, Sand.
	Indicators: (Applicab	200 00000		20			- 11 12 12 12 12 12 12 12 12 12 12 12 12	oblematic Hydric Soils:
Histoso		Г	Sandy Red					(A9) (LRR C)
Histic E	pipedon (A2)	Ē	Stripped M	latrix (S6)			2 cm Muck ((A10) (LRR B)
	listic (A3)	Ē	Loamy Mu	the second second			Reduced Ve	ertic (F18)
	en Sulfide (A4)		Loamy Gle		(F2)			Material (TF2)
	d Layers (A5) (LRR (C)	Depleted N		(50)		Other (Expla	ain in Remarks)
	uck (A9) (LRR D)		Redox Dar					
	ed Below Dark Surfac lark Surface (A12)		Depleted D Redox Dep					
	Mucky Mineral (S1)	F	Vernal Poo		10)		⁴ Indicators of hyd	drophytic vegetation and
	Gleyed Matrix (S4)	L		,ie (i e)			1. and 1.	plogy must be present.
	Layer (if present):							
Type:								
Depth (ir	iches).		-				Hydric Soil Pres	ent? Yes 🔿 No 💿
Remarks:								
HYDROLO	DGY							
Wetland Hy	drology Indicators:						Secondary	Indicators (2 or more required)
	icators (any one indic							Marks (B1) (Riverine)
	Water (A1)		Salt Crus	t (B11)				ent Deposits (B2) (Riverine)
	ater Table (A2)		Biotic Cru					eposits (B3) (Riverine)
	ion (A3)			nvertebrate	s (B13)			ge Patterns (B10)
	Marks (B1) (Nonriver	ine)		Sulfide O				ason Water Table (C2)
	ent Deposits (B2) (No				res along L	ivina Root	·	uck Surface (C7)
	posits (B3) (Nonrive				ed Iron (C4)			h Burrows (C8)
	Soil Cracks (B6)	,			on in Plowe		6) 🗍 Satural	tion Visible on Aerial Imagery (C9)
	ion Visible on Aerial	magery (B7)		plain in Re				v Aquitard (D3)
	Stained Leaves (B9)	••••		•				eutral Test (D5)
Field Obse								ntartemperez, 195. (FSIRE) (*120) 47
Surface Wa	ter Present? Y	es 🔿 No 🕢	Depth (ir	nches):				
Water Table		es O No (1000 1000 1000					
Saturation F		~ ~		·		-		
(includes ca	pillary fringe)					1000 Contraction 1000 Contraction	nd Hydrology Pre	sent? Yes 🔿 No 💽
Describe Re	ecorded Data (stream	gauge, monitori	ng well, aerial	photos, pr	evious insp	ections), if	available:	
Remarks:								

US Army Corps of Engineers

Project/Site: Hanson Preliminary		City/Cou	unty:Lake Co.		San	npling Date:	4/30/2020	0
Applicant/Owner:Brian Hanson				State:CA	San	pling Point:	WSP9	
Investigator(s): Steve Zalusky, Leigh Zalusky		Section	, Township, Ra	inge:S.31 T16N-R8V	V			
Landform (hillslope, terrace, etc.): Depression		Local re	elief (concave,	convex, none):none		SI	ope (%):()	
Subregion (LRR):C - Mediterranean California	Lat:38 5	5.6027	N	Long:-122 47.383V	V	Dat	um:WGS	84
Soil Map Unit Name: Clear Lake Variant clay, drained				NWI class	ification	2B3,3		
Are climatic / hydrologic conditions on the site typical for this t	ime of ye	ar? Yes	6 No () (If no, explain ir	Rema	rks.)		
Are Vegetation Soil or Hydrology sig	nificantly	disturbe	d? Are	"Normal Circumstances	s" prese	nt? Yes 💽	No	0
Are Vegetation Soil or Hydrology nat	urally pro	oblemati	c? (If n	eeded, explain any ans	wers in	Remarks.)		
SUMMARY OF FINDINGS - Attach site map sh	nowing	samp	ling point l	ocations, transec	ts, im	portant fe	eatures,	etc.
Hydrophytic Vegetation Present? Yes 💿 No	0							
Hydric Soil Present? Yes No		1	s the Sampled	d Area				
Wetland Hydrology Present? Yes (No	0		vithin a Wetla	nd? Yes (No 🔿		
	bsolute	Domina	ant Indicator	Dominance Test wo	orkshee	et:		
Tree Stratum (Use scientific names.) 9 1. 9	6 Cover	Specie	s? Status	Number of Dominant That Are OBL, FAC		-	2 ((A)
2.				- _ Total Number of Dor	ninant			
3				Species Across All S			2 ((B)
4				Percent of Dominant	Specie	S		
Sapling/Shrub Stratum Total Cover:	%			That Are OBL, FAC	V, or FA	C: 10	0.0% (A/B)
1.				Prevalence Index w	orkshe	et:		
2.				Total % Cover o	f:	Multip	bly by:	
3.				OBL species		x 1 =	0	
4			North	FACW species	65	x 2 =	130	
5				FAC species	35	x 3 =	105	
Total Cover: Herb Stratum	%			FACU species		x 4 =	0	
1. Juncus balticus	35	Yes	FACW	UPL species	100	x 5 =	0	(B)
² Juncus effusus var. pacificus	30	Yes	FACW	Column Totals:	100	(A)	235	(B)
3. Urtica dioica ssp. gracilis	20	No	FAC	Prevalence Ind	ex = B	/A =	2.35	
4. Rumex crispus	15	No	FAC	Hydrophytic Vegeta	ation In	dicators:		
5.				X Dominance Tes				
6				Prevalence Inde				
7				Morphological A				ng
8.				Problematic Hyd		200)
Total Cover: Woody Vine Stratum	100%						· · · · · ·	
1.				¹ Indicators of hydric	soil an	d wetland h	ydrology n	nust
2.				be present.				
Total Cover:	%			Hydrophytic				
% Bare Ground in Herb Stratum % % Cover o	f Biotic C	rust	%	Vegetation Present?	Yes 🔎	No (
Remarks:			200 <u>-</u>		-			

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Sampling Point: V	WSP9
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Depth	Matrix			ox Featur			- ·	3	_	
(inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	Texture	<u> </u>	Remark	S
18			2.5YR/4/4		<u>RM</u>	M	Silt Loam			
Histor Histor Histor Histor Black H Hydrog Stratifi 1 cm M Deplet Thick I	Epipedon (A2) Histic (A3) gen Sulfide (A4) ed Layers (A5) (LRR (<i>J</i> uck (A9) (LRR D) ed Below Dark Surface Dark Surface (A12)	Gandy Cla le to all Ll	y, Loam, Sandy Cla RRs, unless otherwis Sandy Rec Stripped N Loamy Mi Loamy Gi Depleted Redox Da Depleted Redox De	y Loam, S e noted.) ox (S5) Matrix (S6 ucky Mine eyed Matri Matrix (F3 rk Surface Dark Surface pressions	Sandy Loam) ral (F1) ;ix (F2) ;) ∋ (F6) ace (F7)	-	am, Silty Cla Indicato 1 c 2 c Ret 0 Ctr	ms for Problem m Muck (A9) (m Muck (A10) duced Vertic (f d Parent Mater her (Explain in	oam, Silt, Loamy natic Hydric Soil: LRR C) (LRR B) 518) rial (TF2) Remarks)	4
1000 Sec. 1	Mucky Mineral (S1) Gleyed Matrix (S4)		Vernal Po	ols (F9)				the second se	ytic vegetation a must be presen	
and the second second	e Layer (if present):						Wette	and hydrology	indat be present	
Type:										
Depth (i									-	-
Remarks:	nches):		¥				Hydric S	Soil Present?	Yes 🖲	No 🔿
Remarks:							Hydric S	Soil Present?	Yes 🖲	No 🔿
Remarks: YDROLO	DGY									
Remarks: YDROL(Wetland H		ator is suf	fficient)					condary Indica	Yes • ators (2 or more s (B1) (Riverine)	required)
Remarks: YDROLO Wetland H Primary Inc Surfac High V X Satura Vater Sedim Drift Do Surfac X Inunda X Water-	OGY ydrology Indicators: dicators (any one indic e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (Non eposits (B3) (Nonriver e Soil Cracks (B6) ttion Visible on Aerial I Stained Leaves (B9)	ine) nriverine) rine)	Salt Crus Biotic Cr Aquatic I Hydroge Oxidized Presenc Recent I	ust (B12) nvertebra n Sulfide Rhizosph of Redu	tes (B13) Odor (C1) heres along ced Iron (C- ction in Plov Remarks)	4)	Se	condary Indica Water Marks Sediment De Drift Deposit Drainage Pa Dry-Season Thin Muck S Crayfish Bur	ators (2 or more s (B1) (Riverine eposits (B2) (Riverine tterns (B10) Water Table (C2 urface (C7) rows (C8) isible on Aerial I istard (D3)	required) erine)) ?)
YDROLO Wetland H Primary Inc Surfac High W X Satura Water Drift D Surfac Inunda X Water Field Obset	OGY ydrology Indicators: dicators (any one indic e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriveri ent Deposits (B2) (Non eposits (B3) (Nonriveri e Soil Cracks (B6) ation Visible on Aerial I Stained Leaves (B9) ervations:	ine) nriverine) rine)	Salt Crus Biotic Cr Aquatic I Hydroge Oxidized Presenc Recent I B7) Other (E	ust (B12) nvertebra n Sulfide Rhizosph e of Redu ron Redu xplain in F	Odor (C1) neres along ced Iron (Co ction in Plov	4)	Se	Condary Indica Water Marks Sediment De Drift Deposit Drainage Pa Dry-Season Thin Muck S Crayfish Bur Saturation V Shallow Aqu	ators (2 or more s (B1) (Riverine eposits (B2) (Riverine tterns (B10) Water Table (C2 urface (C7) rows (C8) isible on Aerial I istard (D3)	required) erine)) ?)
Remarks: YDROLO Wetland H Primary Inc Surfac High W X Satura Water Sedime Drift D Surfac X Inunda X Water- Field Obse Surface Wa	OGY ydrology Indicators: dicators (any one indic e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriveri ent Deposits (B2) (Noi eposits (B3) (Nonriveri e Soil Cracks (B6) tion Visible on Aerial I -Stained Leaves (B9) ervations: ater Present? Y	ine) nriverine) rine) magery (I	Salt Crus Biotic Cr Aquatic I Hydroge Oxidized Presenc Recent I B7) Other (E	ust (B12) nvertebra n Sulfide Rhizosph of Redu ron Reduc xplain in F	Odor (C1) neres along ced Iron (Co ction in Plov	4)	Se	Condary Indica Water Marks Sediment De Drift Deposit Drainage Pa Dry-Season Thin Muck S Crayfish Bur Saturation V Shallow Aqu	ators (2 or more s (B1) (Riverine eposits (B2) (Riverine tterns (B10) Water Table (C2 urface (C7) rows (C8) isible on Aerial I istard (D3)	required) erine)) ?)
YDROLO Wetland H Primary Inc Surfac High V X Satura Water Sedime Drift De Surfac Water Sedime Surfac Water Sedime Surfac Water- Field Obse Surface Water Vater Tabl Saturation Saturation	OGY ydrology Indicators: dicators (any one indic e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (Non eposits (B3) (Nonriver e Soil Cracks (B6) tition Visible on Aerial I Stained Leaves (B9) ervations: ater Present? Y le Present? Y Present? Y apillary fringe)	ine) nriverine; rine) magery (f es) es) es) es)	Salt Crus Biotic Cr Aquatic I Hydroge Oxidized Presenc Recent I B7) Other (E	ust (B12) nvertebra n Sulfide Rhizosph e of Redu ron Reduc kplain in F nches): 	Odor (C1) neres along ced Iron (C- ction in Plov Remarks) 5 18	4) ved Soils (Se [ots (C3) [(C6) [[]	Condary Indica Water Marks Sediment De Drift Deposit Drainage Pa Dry-Season Thin Muck S Crayfish Bur Saturation V Saturation V Shallow Aqu FAC-Neutral	ators (2 or more c (B1) (Riverine) eposits (B2) (Riverine) tterns (B10) Water Table (C2) urface (C7) rows (C8) isible on Aerial I itard (D3) I Test (D5)	required) erine)) ?)
YDROLO Wetland H Primary Inc Surfac High V X Satura Water Sedime Drift De Surfac Xatura Water Sedime Surfac Xatura Water Surface Xatura Surface Water Saturation Saturation	OGY ydrology Indicators: dicators (any one indic e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriveri ent Deposits (B2) (Non eposits (B3) (Nonriveri e Soil Cracks (B6) attion Visible on Aerial I Stained Leaves (B9) ervations: ater Present? Y le Present? Y Present? Y	ine) nriverine; rine) magery (f es) es) es) es)	Salt Crus Biotic Cr Aquatic I Hydroge Oxidized Presenc Recent I B7) Other (E	ust (B12) nvertebra n Sulfide Rhizosph e of Redu ron Reduc kplain in F nches): 	Odor (C1) neres along ced Iron (C- ction in Plov Remarks) 5 18	4) ved Soils (Se [ots (C3) [(C6) [[[]	Condary Indica Water Marks Sediment De Drift Deposit Drainage Pa Dry-Season Thin Muck S Crayfish Bur Saturation V Saturation V Shallow Aqu FAC-Neutral	ators (2 or more c (B1) (Riverine) eposits (B2) (Riverine) tterns (B10) Water Table (C2) urface (C7) rows (C8) isible on Aerial I itard (D3) I Test (D5)	required) erine)) ?) magery (CS
Remarks: YDROLO Wetland H Primary Inc Surfac High W X Satura Water Sedime Surfac Water Surfac X Inunda X Water- Field Obse Surface Wa Nater Tabl Saturation includes c Describe R	OGY ydrology Indicators: dicators (any one indic e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (Non eposits (B3) (Nonriver e Soil Cracks (B6) tition Visible on Aerial I Stained Leaves (B9) ervations: ater Present? Y le Present? Y Present? Y apillary fringe)	ine) nriverine; rine) magery (f es) es) es) es)	Salt Crus Biotic Cr Aquatic I Hydroge Oxidized Presenc Recent I B7) Other (E	ust (B12) nvertebra n Sulfide Rhizosph e of Redu ron Reduc kplain in F nches): 	Odor (C1) neres along ced Iron (C- ction in Plov Remarks) 5 18	4) ved Soils (Se [ots (C3) [(C6) [[[]	Condary Indica Water Marks Sediment De Drift Deposit Drainage Pa Dry-Season Thin Muck S Crayfish Bur Saturation V Saturation V Shallow Aqu FAC-Neutral	ators (2 or more c (B1) (Riverine) eposits (B2) (Riverine) tterns (B10) Water Table (C2) urface (C7) rows (C8) isible on Aerial I itard (D3) I Test (D5)	required) erine)) ?) magery (CS
YDROLO Wetland H Primary Inc Surfac High V X Satura Water Sedime Drift De Surfac Water Sedime Surfac Water Sedime Surfac Water- Field Obse Surface Water Vater Tabl Saturation Saturation	OGY ydrology Indicators: dicators (any one indic e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (Non eposits (B3) (Nonriver e Soil Cracks (B6) tition Visible on Aerial I Stained Leaves (B9) ervations: ater Present? Y le Present? Y Present? Y apillary fringe)	ine) nriverine; rine) magery (f es) es) es) es)	Salt Crus Biotic Cr Aquatic I Hydroge Oxidized Presenc Recent I B7) Other (E	ust (B12) nvertebra n Sulfide Rhizosph e of Redu ron Reduc kplain in F nches): 	Odor (C1) neres along ced Iron (C- ction in Plov Remarks) 5 18	4) ved Soils (Se [ots (C3) [(C6) [[[]	Condary Indica Water Marks Sediment De Drift Deposit Drainage Pa Dry-Season Thin Muck S Crayfish Bur Saturation V Saturation V Shallow Aqu FAC-Neutral	ators (2 or more c (B1) (Riverine) eposits (B2) (Riverine) tterns (B10) Water Table (C2) urface (C7) rows (C8) isible on Aerial I itard (D3) I Test (D5)	required) erine)) ?) magery (CS

Project/Site: Hanson Preliminary		City/Coun	ty:Lake Co.		Sar	npling Date:	4/30/202	0
Applicant/Owner:Brian Hanson				State:CA	San	npling Point:	WSP10	
Investigator(s):Steve Zalusky, Leigh Zalusky		Section, T	ownship, Ra	nge:S.31 T16N-R8V	v			
Landform (hillslope, terrace, etc.): Depression		Local reli	ef (concave,	convex, none): none		SI	ope (%):()	
Subregion (LRR):C - Mediterranean California	Lat:38 :	55.491'N		Long:-122 47.215	N	Dat	um:WGS	84
Soil Map Unit Name: Clear Lake Variant clay, drained				NWI class	sificatior	:2B3,3		
Are climatic / hydrologic conditions on the site typical for this	time of ye	ear? Yes (No () (If no, explain ii	n Rema	rks.)		
		disturbed	<u> </u>	"Normal Circumstance			No	\cap
		oblematic?		eeded, explain any ans	-			
SUMMARY OF FINDINGS - Attach site map s	a a.						eatures,	etc.
	~		1771 0	395-1	220 3	0		2
			the Sampled thin a Wetla		\sim	No 🔎		
Remarks:	U		unn a vvena	ilur les (0			
VEGETATION	Alessiuls	Deminen	. In dia atau	Deminance Testur				
	Absolute % Cover	Species?	t Indicator Status	Dominance Test we Number of Dominan				
1.				That Are OBL, FAC			0	(A)
2.	80 20			- _ Total Number of Doi	ninant			
3				Species Across All S			1	(B)
4		. <u> </u>		Percent of Dominan	t Specie	s		
Sapling/Shrub Stratum	%			That Are OBL, FAC			0.0 %	(A/B)
<u></u>				Prevalence Index w	/orkshe	et:		
2.	e			Total % Cover c	of:	Multip	oly by:	
3.				OBL species		x 1 =	0	
4.				FACW species	10	x 2 =	20	
5	21 21			FAC species	25	х 3 =	75	
Horb Stratum	%			FACU species		x 4 =	0	
Herb Stratum						x 5 =	200	
1 7	(0)	Vac		UPL species	60	× 5 -	300	2004-00-00
¹ . <i>Trifolium subterraneum</i>	60	Yes	Not Listed	UPL species Column Totals:	60 95	(A)	300	(B)
2.Poa annua	15	No	FAC		95	(A)		(B)
2. Poa annua 3. Juncus Balticus	15 10	No No	FAC FACW	Column Totals:	95 lex = B	(A) /A =	395	(B)
2. <u>Poa annua</u> 3. <u>Juncus Balticus</u> 4. <u>Lotus corniculatus</u>	15	No	FAC	Column Totals:	95 lex = B ation In	(A) /A = dicators:	395	(B)
2. Poa annua 3. Juncus Balticus	15 10	No No	FAC FACW	Column Totals: Prevalence Inc	95 dex = B ation In t is >50	(A) /A = dicators: %	395	(B)
2 Poa annua 3 Juncus Balticus 4 Lotus corniculatus 5 Carex barbarae	15 10	No No	FAC FACW	Column Totals: Prevalence Ind Hydrophytic Veget Dominance Tes Prevalence Inde Morphological A	95 dex = B ation In t is >50 ex is ≤3. adaptatio	(A) /A = dicators: % 0 ¹ ons ¹ (Provide	395 4.16 e supportin	
2-Poa annua 3-Juncus Balticus 4-Lotus corniculatus 5-Carex barbarae 6.	15 10	No No	FAC FACW	Column Totals: Prevalence Ind Hydrophytic Veget Dominance Tes Prevalence Inde Morphological A data in Rema	95 dex = B ation In t is >50 ex is ≤ 3 . daptational arks or o	(A) /A = dicators: % 0 ¹ ons ¹ (Provide on a separat	395 4.16 e supportin e sheet)	ng
2-Poa annua 3-Juncus Balticus 4-Lotus corniculatus 5-Carex barbarae 6. 7. 8. Total Cover:	15 10 10	No No	FAC FACW	Column Totals: Prevalence Ind Hydrophytic Veget Dominance Tes Prevalence Inde Morphological A	95 dex = B ation In t is >50 ex is ≤ 3 . daptational arks or o	(A) /A = dicators: % 0 ¹ ons ¹ (Provide on a separat	395 4.16 e supportin e sheet)	ng
2. Poa annua 3. Juncus Balticus 4. Lotus corniculatus 5. Carex barbarae 6. 7. 8. Woody Vine Stratum	15 10 10	No No	FAC FACW	Column Totals: Prevalence Ind Hydrophytic Veget Dominance Tes Prevalence Inde Morphological A data in Rema Problematic Hyd	95 dex = B ation In t is >50 ex is ≤3. daptatio arks or o drophyti	(A) /A = dicators: % 0 ¹ ons ¹ (Provide on a separat c Vegetation	395 4.16 e supportin e sheet) h ¹ (Explain	ng)
2 Poa annua 3 Juncus Balticus 4 Lotus corniculatus 5 Carex barbarae 6. 7. 8. Total Cover: Woody Vine Stratum 1.	15 10 10	No No	FAC FACW	Column Totals: Prevalence Ind Hydrophytic Veget Dominance Tes Prevalence Inde Morphological A data in Rema	95 dex = B ation In t is >50 ex is ≤3. daptatio arks or o drophyti	(A) /A = dicators: % 0 ¹ ons ¹ (Provide on a separat c Vegetation	395 4.16 e supportin e sheet) h ¹ (Explain	ng)
2. Poa annua 3. Juncus Balticus 4. Lotus corniculatus 5. Carex barbarae 6. 7. 8. Total Cover: Woody Vine Stratum 1. 2.	15 10 10 95 %	No No	FAC FACW	Column Totals: Prevalence Ind Hydrophytic Veget Dominance Tes Prevalence Inde Morphological A data in Rema Problematic Hydric be present.	95 dex = B ation In t is >50 ex is ≤3. daptatio arks or o drophyti	(A) /A = dicators: % 0 ¹ ons ¹ (Provide on a separat c Vegetation	395 4.16 e supportin e sheet) h ¹ (Explain	ng)
2. <u>Poa annua</u> 3. <u>Juncus Balticus</u> 4. <u>Lotus corniculatus</u> 5. <u>Carex barbarae</u> 6. 7. 8. <u>Total Cover:</u> <u>Woody Vine Stratum</u> 1. 2. <u>Total Cover:</u>	15 10 10 95 %	No No No	FAC FACW	Column Totals: Prevalence Ind Hydrophytic Veget Dominance Tes Prevalence Inde Morphological A data in Rema Problematic Hyd 'Indicators of hydric be present. Hydrophytic Vegetation	95 dex = B ation In t is >50 ex is ≤3. daptatio arks or o drophyti	(A) /A = dicators: % 0 ¹ ons ¹ (Provid- on a separat c Vegetation d wetland h	395 4.16 e supportii e sheet) ¹ (Explain ydrology r	ng)

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		WCDIA
Samplin	a Point	W SPIU

Profile Description: (Describe to the d	epth needed to document the indicator of		
Dopth Matrix		or confirm the absence	of indicators.)
Depth Matrix	Redox Features		
(inches) Color (moist) %	Color (moist) % Type ¹	Loc ² Texture ³	Remarks
		·	
		v	
Type: C=Concentration, D=Depletion, R	M=Reduced Matrix ² Location: PL=Pore	Lining, RC=Root Chann	el M=Matrix
	lay, Loam, Sandy Clay Loam, Sandy Loam,	-	
Hydric Soil Indicators: (Applicable to all I			or Problematic Hydric Soils:
Histosol (A1)	Sandy Redox (S5)		Auck (A9) (LRR C)
Histic Epipedon (A2)	Stripped Matrix (S6)		Auck (A10) (LRR B)
Black Histic (A3)	Loamy Mucky Mineral (F1)		ed Vertic (F18)
Hydrogen Sulfide (A4)	Loamy Gleved Matrix (F2)	2 State 1993	arent Material (TF2)
Stratified Layers (A5) (LRR C)	Depleted Matrix (F3)		(Explain in Remarks)
1 cm Muck (A9) (LRR D)	Redox Dark Surface (F6)		
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)		
Thick Dark Surface (A12)	Redox Depressions (F8)		
Sandy Mucky Mineral (S1)	Vernal Pools (F9)	⁴ Indicators	of hydrophytic vegetation and
Sandy Gleyed Matrix (S4)		wetland	hydrology must be present.
Restrictive Layer (if present):			
Туре:			
Depth (inches):		Hydric Soil	Present? Yes 🔿 No 💿
Remarks:			
Nomano.			
		0	
Vetland Hydrology Indicators:		5	idary Indicators (2 or more required)
Vetland Hydrology Indicators:	ufficient)	5	idary Indicators (2 or more required) /ater Marks (B1) (Riverine)
Vetland Hydrology Indicators:	ufficient)	V	
Vetland Hydrology Indicators: Primary Indicators (any one indicator is s			/ater Marks (B1) (Riverine)
Vetland Hydrology Indicators: Primary Indicators (any one indicator is s Surface Water (A1)	Salt Crust (B11)		/ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine)
Vetland Hydrology Indicators: Primary Indicators (any one indicator is s Surface Water (A1) High Water Table (A2)	Salt Crust (B11) Biotic Crust (B12)		/ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine)
Vetland Hydrology Indicators: Primary Indicators (any one indicator is signature) Surface Water (A1) High Water Table (A2) Saturation (A3)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)		/ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10)
Wetland Hydrology Indicators: Primary Indicators (any one indicator is signature) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	V	/ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2)
Wetland Hydrology Indicators: Primary Indicators (any one indicator is signature) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) e) Oxidized Rhizospheres along L Presence of Reduced Iron (C4)	V S D 	/ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) hin Muck Surface (C7) rayfish Burrows (C8)
Wetland Hydrology Indicators: Primary Indicators (any one indicator is s Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6)	Salt Crust (B11) Siotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent Iron Reduction in Plowe	V S D 	Ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) hin Muck Surface (C7) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (any one indicator is signature) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) e) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent Iron Reduction in Plowe	V S D S 	Ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) hin Muck Surface (C7) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) hallow Aquitard (D3)
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US Army Corps of Engineers

Project/Site: Hanson Preliminary		City/Cou	nty:Lake Co		Sampl	ling Date:4/30/	2020
Applicant/Owner∶Brian Hanson				State:CA	Sampl	ing Point:WSP	11
Investigator(s): Steve Zalusky, Leigh Zalusky		Section,	Township, Ra	ange:S.31 T16N-R8W	7		
Landform (hillslope, terrace, etc.): Depression		Local re	lief (concave,	convex, none):none		Slope (%):()
Subregion (LRR):C - Mediterranean California	Lat:38	55.604'N	ſ	Long:-122 46.897'W	V	Datum: W	/GS84
Soil Map Unit Name: Clear Lake Variant clay, drained				NWI class	ification:2]	B3,3	
Are climatic / hydrologic conditions on the site typical for this	time of ye	ear? Yes	No () (If no, explain in	Remarks	5.)	
Are Vegetation Soil or Hydrology si	gnificantly	disturbed	d? Are	"Normal Circumstances	" present	? Yes 💿	No 🔿
	aturally pr			eeded, explain any ans	10. 10 10.000	~	U
SUMMARY OF FINDINGS - Attach site map s	a a.						res, etc.
Hydrophytic Vegetation Present? Yes 🕥 No	•		60.015 V.				0000
		Is	the Sample	d Area			
Wetland Hydrology Present? Yes O No	•	w	ithin a Wetla	nd? Yes 🤇) N	o 💿	
Remarks:							
A REAL ALL REAL ART DATA AND A REAL ART	Absolute % Cover		nt Indicator	Dominance Test wo			
1.				Number of Dominant That Are OBL, FACV		0	(A)
2.				_ _ Total Number of Don	ninant		
3	-			Species Across All S		1	(B)
4		. <u></u>		- Percent of Dominant	Species		
Sapling/Shrub Stratum Total Cover	: %			That Are OBL, FACV	V, or FAC:	0.0 %	6 (A/B)
1.				Prevalence Index w	orksheet	:	
2.				Total % Cover of	f:	Multiply by	
3.				OBL species		x 1 =	0
4.				FACW species	5	x 2 =	10
5				FAC species	55		05
Total Cover: Herb Stratum	%			FACU species	55	_	40
1.Bromus hordeaceus	35	Yes	FACU	UPL species	20		25
2. Trifolium campestre	25	No	Not Listed	Column Totals:	100	(A) 3	80 (B)
3. Anthoxanthum odoratum	20	No	FAC	Prevalence Inde	ex = B/A	= 3	.80
4. Lotus corniculatus	10	No	FAC	Hydrophytic Vegeta	tion India	cators:	
5. Juncus Balticus	5	No	FACW	Dominance Test	is >50%		
6.Plantago lanceolata	5	No	FAC	Prevalence Inde		a.	
7				Morphological A		s' (Provide sup a separate she	
8			- 1100 	Problematic Hyd			<i>.</i>
Total Cover: Woody Vine Stratum	100%					J (14	
1.				¹ Indicators of hydric	soil and v	wetland hydrold	ogy must
2.				be present.			
Total Cover:	%			Hydrophytic			
	of Biotic (%	Vegetation Present?	Yes 🔿	No 🗩	
Remarks:			70	1 TOSCIILI			

US Army Corps of Engineers

2201			WSP1	1
Camp	ling	Doint.	WNPI	

	Redox Features		
nches) Color (moist) %	Color (moist)%Type1	Loc ² Texture ³	Remarks
	, Loam, Sandy Clay Loam, Sandy Loam,		am, Silt Loam, Silt, Loamy Sand, Sa
dric Soil Indicators: (Applicable to all LR Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) (LRR C) 1 cm Muck (A9) (LRR D) Depleted Below Dark Surface (A11)	Rs, unless otherwise noted.) Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7)	1 cm Mu 2 cm Mu Reduced Red Par	r Problematic Hydric Soils: ıck (A9) (LRR C) ıck (A10) (LRR B) d Vertic (F18) rent Material (TF2) ixplain in Remarks)
Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)	Redox Depressions (F8) Vernal Pools (F9)		f hydrophytic vegetation and lydrology must be present.
Depth (inches):	5	Hydric Soil P	Present? Yes 🔿 No 💿
indiko.			
DROLOGY		Second	ary Indicators (2 or more required)
DROLOGY etland Hydrology Indicators:	icient)		lary Indicators (2 or more required <u>)</u> ter Marks (B1) (Riverine)
DROLOGY etland Hydrology Indicators: mary Indicators (any one indicator is suff Surface Water (A1)	Salt Crust (B11)	Wa Va Sec	tter Marks (B1) (Riverine) diment Deposits (B2) (Riverine)
DROLOGY etland Hydrology Indicators: mary Indicators (any one indicator is suff Surface Water (A1) High Water Table (A2)	Salt Crust (B11) Biotic Crust (B12)	Wa Ser Dri	ter Marks (B1) (Riverine) diment Deposits (B2) (Riverine) ft Deposits (B3) (Riverine)
DROLOGY etland Hydrology Indicators: mary Indicators (any one indicator is suff Surface Water (A1) High Water Table (A2) Saturation (A3)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13)	Wa Se Dri Dra	iter Marks (B1) (Riverine) diment Deposits (B2) (Riverine) ft Deposits (B3) (Riverine) ainage Patterns (B10)
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DROLOGY etland Hydrology Indicators: mary Indicators (any one indicator is suff Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Plowe	Wa Sec Dri Dra Dry Dry Dry Thi Cra	ter Marks (B1) (Riverine) diment Deposits (B2) (Riverine) ft Deposits (B3) (Riverine) ainage Patterns (B10) <i>r</i> -Season Water Table (C2) n Muck Surface (C7) ayfish Burrows (C8)
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DROLOGY etland Hydrology Indicators: imary Indicators (any one indicator is suff] Surface Water (A1)] High Water Table (A2)] Saturation (A3)] Water Marks (B1) (Nonriverine)] Sediment Deposits (B2) (Nonriverine)] Drift Deposits (B3) (Nonriverine)] Surface Soil Cracks (B6)] Inundation Visible on Aerial Imagery (B] Water-Stained Leaves (B9) etd Observations: inface Water Present? Yes	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Plowe Other (Explain in Remarks)	Wa Set Dri Ori Dri Ori Dri Ori Or	Iter Marks (B1) (Riverine) diment Deposits (B2) (Riverine) ft Deposits (B3) (Riverine) ainage Patterns (B10) <i>r</i> -Season Water Table (C2) n Muck Surface (C7) ayfish Burrows (C8) turation Visible on Aerial Imagery (allow Aquitard (D3)
'DROLOGY etland Hydrology Indicators: 'imary Indicators (any one indicator is suff) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B Water-Stained Leaves (B9) eld Observations: urface Water Present? Yes (Arer Table Present?)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Plowe Other (Explain in Remarks) No Depth (inches): No Depth (inches):	Wa Set Dri Ori Dri Ori Dri Ori Or	ter Marks (B1) (Riverine) diment Deposits (B2) (Riverine) ft Deposits (B3) (Riverine) ainage Patterns (B10) <i>r</i> -Season Water Table (C2) n Muck Surface (C7) ayfish Burrows (C8) turation Visible on Aerial Imagery (C allow Aquitard (D3)
ZDROLOGY etland Hydrology Indicators: rimary Indicators (any one indicator is suff Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B Water-Stained Leaves (B9) eld Observations: urface Water Present? Yes (C) fater Table Present? Yes (C) aturation Present? Yes (C)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Plowe 7) Other (Explain in Remarks) No Depth (inches): No Depth (inches): No Depth (inches):	Wa Wa Ser Dri Dri Dri Dry Ory d Soils (C6) Sat Sha FA Wetland Hydrology	Iter Marks (B1) (Riverine) diment Deposits (B2) (Riverine) ft Deposits (B3) (Riverine) ainage Patterns (B10) /-Season Water Table (C2) n Muck Surface (C7) ayfish Burrows (C8) turation Visible on Aerial Imagery (C allow Aquitard (D3) C-Neutral Test (D5)
ZDROLOGY etland Hydrology Indicators: rimary Indicators (any one indicator is suff Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B Water-Stained Leaves (B9) eld Observations: urface Water Present? Yes (C) fater Table Present? Yes (C) aturation Present? Yes (C)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Plowe Other (Explain in Remarks) No Depth (inches): No Depth (inches):	Wa Wa Ser Dri Dri Dri Dry Ory d Soils (C6) Sat Sha FA Wetland Hydrology	Iter Marks (B1) (Riverine) diment Deposits (B2) (Riverine) ft Deposits (B3) (Riverine) ainage Patterns (B10) /-Season Water Table (C2) n Muck Surface (C7) ayfish Burrows (C8) turation Visible on Aerial Imagery (C allow Aquitard (D3) C-Neutral Test (D5)
ZDROLOGY etland Hydrology Indicators: rimary Indicators (any one indicator is suff Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B Water-Stained Leaves (B9) eld Observations: urface Water Present? Yes (C) fater Table Present? Yes (C) aturation Present? Yes (C)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Plowe 7) Other (Explain in Remarks) No Depth (inches): No Depth (inches): No Depth (inches):	Wa Wa Ser Dri Dri Dri Dry Ory d Soils (C6) Sat Sha FA Wetland Hydrology	Iter Marks (B1) (Riverine) diment Deposits (B2) (Riverine) ft Deposits (B3) (Riverine) ainage Patterns (B10) /-Season Water Table (C2) n Muck Surface (C7) ayfish Burrows (C8) turation Visible on Aerial Imagery (C allow Aquitard (D3) C-Neutral Test (D5)

US Army Corps of Engineers

Project/Site: Hanson Preliminary		City/Co	ounty:Lake Co.		Samp	pling Date:2	4/30/2020	0
Applicant/Owner:Brian Hanson				State:CA Sampling Point:WSP12				
Investigator(s): Steve Zalusky, Leigh Zalusky		Sectio	n, Township, Ra	nge:S.31 T16N-R8W		_		
Landform (hillslope, terrace, etc.): Depression		Local	relief (concave,	convex, none):none		Slo	ope (%):0	
Subregion (LRR):C - Mediterranean California	Lat: 38	55.578	3'N	Long:122 46.836'W		Datu	um:WGS8	84
Soil Map Unit Name: Clear Lake Variant clay, drained	-			NWI classifi	ication:2	2B3,3		
Are climatic / hydrologic conditions on the site typical for this ti	me of ye	ar? Ye	es (i) No () (If no, explain in I	- Remark	(s.)		
Are Vegetation Soil or Hydrology sigr	nificantly	disturb	ed? Are	"Normal Circumstances"	presen	t?Yes 💽	No (0
	urally pro			eeded, explain any answ	10. 10.	~		
SUMMARY OF FINDINGS - Attach site map sh	a a			ocations, transects	s, imp	ortant fe	atures,	etc.
Hydrophytic Vegetation Present? Yes 📦 No	0		n Maria Su	100A				
Hydric Soil Present? Yes (No			Is the Sampled	l Area				
Wetland Hydrology Present? Yes (No	0		within a Wetla	nd? Yes 🖲	M	No O		
VEGETATION								
	osolute Cover	Domir Speci	nant Indicator es? <u>Status</u>	Dominance Test wor Number of Dominant S That Are OBL, FACW	Species			(A)
2		6	0.70			. 2	2 ((A)
3.				 Total Number of Domi Species Across All Str 			2 (B)
4						-	- (,
Sapling/Shrub Stratum	%			 Percent of Dominant S That Are OBL, FACW, 			0.0% (A/B)
<u></u> 1.				Prevalence Index wo	rkshee	t:		
2.				Total % Cover of:		Multip	ly by:	
3.				OBL species		x 1 =	0	
4.				FACW species	80	x 2 =	160	
5				FAC species	20	х 3 =	60	
Total Cover: Herb Stratum	%			FACU species		x 4 =	0	
1.Juncus balticus	30	Yes	FACW	UPL species		x 5 =	0	
2. Carex praegracilis	25	Yes	FACW	Column Totals:	100	(A)	220	(B)
3. Polypogon monspeliensis	20255	No	FACW	Prevalence Inde	x = B/A	A =	2.20	
4. Rumex crispus	NC 94792	No	FAC	Hydrophytic Vegetat	ion Ind	icators:		
5. Lotus corniculatus	5	No	FAC	🖌 🗙 Dominance Test i	s >50%			
6.				Prevalence Index				
7				Morphological Ad data in Remarl				ng
8			100	- Problematic Hydro		· · · · · · · · · · · · · · · · · · ·	· ·	
Woody Vine Stratum	100%				<i></i> ,	- 3- 121.011	(
1.				¹ Indicators of hydric s	oil and	wetland hy	drology m	nust
2.				be present.				
Total Cover:	%			Hydrophytic				
% Bare Ground in Herb Stratum 0 % % Cover of	f Biotic C	rust	%	Vegetation Present? Ye	es 💿	No (
Remarks:			2010 - <u>-</u>		~			

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Sampling	Daint	VA	ICD	12
Samplind	Point:		SF	14

Profile De	scription: (Describe	o the depth ne	eded to docu	ment the	indicator	or confirr	n the absend	ce of indicators.)
Depth	Matrix		Redo	x Featur	es			
(inches)	Color (moist)	<u> </u>	olor (moist)	%	Type ¹	Loc ²	Texture ³	Remarks
18	10YR/2.5/1	<u>100</u> 2.5Y	R/4/4	5	RM	M	Silt Loam	
		·			·			
1=								
	Concentration, D=Depl res: Clay, Silty Clay, S					-		nnel, M=Matrix. / Loam, Silt Loam, Silt, Loamy Sand, Sa
	Indicators: (Applicabl			N		, ,		s for Problematic Hydric Soils:
Histos Histic Black Hydrog Stratifi 1 cm M		;)	Sandy Redd Stripped M Loamy Mud Loamy Gle Depleted M Redox Dari Depleted D	ox (S5) atrix (S6) cky Miner yed Matr latrix (F3 k Surface) ral (F1) ix (F2)) e (F6)		1 cm 2 cm Redu	n Muck (A9) (LRR C) n Muck (A10) (LRR B) uced Vertic (F18) Parent Material (TF2) er (Explain in Remarks)
Sandy	Dark Surface (A12) Mucky Mineral (S1)	Ī	Redox Dep		(F8)			rs of hydrophytic vegetation and
	Gleyed Matrix (S4) Layer (if present):						wetlar	nd hydrology must be present.
Type:								
Depth (i	nches):		3				Hydric So	oil Present? Yes 💿 No 🤿
HYDROL	DGY							
Wetland H	ydrology Indicators:						Sec	condary Indicators (2 or more required)
Primary Inc	licators (any one indica	ator is sufficient)					_	Water Marks (B1) (Riverine)
	e Water (A1)		Salt Crust					Sediment Deposits (B2) (Riverine)
	Vater Table (A2)		Biotic Cru		too (P12)			Drift Deposits (B3) (Riverine)
	tion (A3) Marks (B1) (Nonriveri	ne)	Aquatic In		Odor (C1)		님	Drainage Patterns (B10) Dry-Season Water Table (C2)
	ent Deposits (B2) (Nor				eres along	Living Ro	ots (C3)	Thin Muck Surface (C7)
	eposits (B3) (Nonriver		Presence	of Redu	ced Iron (C	4)		Crayfish Burrows (C8)
Surfac	e Soil Cracks (B6)		Recent Iro	on Reduc	tion in Plov	ved Soils (C6) 🔀	Saturation Visible on Aerial Imagery (C
	tion Visible on Aerial I	magery (B7)	Other (Ex	plain in F	Remarks)			Shallow Aquitard (D3)
	Stained Leaves (B9)					-		FAC-Neutral Test (D5)
Field Obse		es 🔿 No 🕢	Depth (in	iches).				
Water Tabl		es O No (-		
Saturation		es () No (-	·	10			
(includes c	apillary fringe) ecorded Data (stream	<u> </u>		· —	15.9118169			ogy Present? Yes 💿 No 🔿
	Sources Data (Stredill	gaage, moniton	ng wen, aeriar	prioros, j	a avious int	,peouoria),		
Remarks:								

US Army Corps of Engineers

Project/Site: Hanson Preliminary		City/Count	Lake Co.		Sampling Date:	4/30/2020
Applicant/Owner:Brian Hanson				State:CA	Sampling Point:	WSP13
Investigator(s): Steve Zalusky, Leigh Zalusky		Section, T	ownship, Rar	ge:S.31 T16N-R8W		
Landform (hillslope, terrace, etc.): Depression		Local relie	f (concave, c	onvex, none): none	SI	ope (%):()
Subregion (LRR):C - Mediterranean California	at:38 5	5.603'N		Long:-122 46.930'W	Dat	um:WGS84
Soil Map Unit Name: Clear Lake Variant clay, drained				NWI classific	ation:2B3,3	
Are climatic / hydrologic conditions on the site typical for this tim	e of ye	ar? Yes 🤇	No C	(If no, explain in R	emarks.)	
Are Vegetation Soil or Hydrology signif	ficantly	disturbed?	Are "	Normal Circumstances"	present? Yes 🕞	No O
Are Vegetation Soil or Hydrology natur	ally pro	oblematic?	(If ne	eded, explain any answe	rs in Remarks.)	
SUMMARY OF FINDINGS - Attach site map sho	wing	samplin	g point lo	cations, transects,	, important fe	eatures, etc
Hydrophytic Vegetation Present? Yes No						
Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present?			he Sampled			
Wetland Hydrology Present? Yes C No C	9	wit	hin a Wetlan	d? Yes ()	No 🖲	
	solute Cover	Dominant Species?		Dominance Test work Number of Dominant S That Are OBL, FACW,	pecies	0 (A)
2				Total Number of Domin	ant	
3				Species Across All Stra	ita:	1 (B)
4	%		·	Percent of Dominant Sp That Are OBL, FACW,		.0 % (A/B)
1.				Prevalence Index wor	ksheet:	
2.				Total % Cover of:	Multip	bly by:
3.				OBL species	x 1 =	0
4				FACW species	x 2 =	0
5				1000 C 100	30 x 3 =	90
Herb Stratum	%				45 × 4 =	180
	45	Yes	FACU		<u> </u>	125 395 (E
		No	Not Listed		(A) (00	393 (1
	20	No	FAC	Prevalence Index		3.95
⁴ .Plantago lanceolata	10	No	FAC	Hydrophytic Vegetatio		
5				Dominance Test is	second	
6				Prevalence Index is Morphological Ada		ourserting
7				data in Remarks	s or on a separat	e sheet)
8. Total Cover:	100			Problematic Hydro	phytic Vegetation	¹ (Explain)
Woody Vine Stratum 1.	100%			¹ Indicators of hydric so	il and wetland h	ydrology musł
2				be present.		
Total Cover: % Bare Ground in Herb Stratum %% Cover of B	% Biotic C	crust	%	Hydrophytic Vegetation Present? Ye	s () No (
Remarks:		2.	_			

US Army Corps of Engineers

	Point:		

SOIL					Sampling Point: WSP13
Profile Description: (Describe to 1	ne depth needed to documen	t the indicator o	r confirm the a	absence of indi	cators.)
Depth Matrix	Redox Fe	atures			
(inches) Color (moist)	% Color (moist)	% Type ¹	Loc ² Te	exture ³	Remarks
	11 28 000 18 Col	1000 NO-1000 EO 10			
			<u></u>		
Type: C=Concentration, D=Depletion	n, RM=Reduced Matrix. ² Lo	cation: PL=Pore	Lining, RC=Ro	ot Channel, M=N	Aatrix.
Soil Textures: Clay, Silty Clay, San			-		
Hydric Soil Indicators: (Applicable to	all LRRs, unless otherwise not	ed.)	In	dicators for Prob	plematic Hydric Soils:
Histosol (A1)	Sandy Redox (St	-1 / M / D / EX] 1 cm Muck (A	
Histic Epipedon (A2)	Stripped Matrix	Second and a second sec		2 cm Muck (A	
Black Histic (A3)	Loamy Mucky N			Reduced Vert	
Hydrogen Sulfide (A4)	Loamy Gleyed I			Red Parent M	
Stratified Layers (A5) (LRR C)	Depleted Matrix			Other (Explain	
1 cm Muck (A9) (LRR D)	Redox Dark Su				i in riemanic)
Depleted Below Dark Surface (A					
Thick Dark Surface (A12)	Redox Depress				
Sandy Mucky Mineral (S1)	Vernal Pools (F	. ,	⁴ lr	dicators of hydr	ophytic vegetation and
Sandy Gleyed Matrix (S4)		.,		1	ogy must be present.
Restrictive Layer (if present):					-9) ····=- == p····=
Туре:					
Depth (inches):			Hy	dric Soil Preser	nt?Yes 🔿 No 🖲
Remarks:					
YDROLOGY					
Netland Hydrology Indicators:				Secondary In	dicators (2 or more required)
				and the second second second	- C - PROVING BE-TRACK OF THE STATE
Primary Indicators (any one indicato					arks (B1) (Riverine)
Surface Water (A1)	Salt Crust (B1	1)		Sedimen	t Deposits (B2) (Riverine)
High Water Table (A2)	Biotic Crust (B	12)		Drift Dep	osits (B3) (Riverine)
Saturation (A3)	Aquatic Inverte	ebrates (B13)		Drainage	Patterns (B10)
Water Marks (B1) (Nonriverine	Hydrogen Sulf	ide Odor (C1)		Dry-Seas	son Water Table (C2)
Sediment Deposits (B2) (Nonriv		spheres along L	iving Roots (C3	·	k Surface (C7)
Drift Deposits (B3) (Nonriverine		educed Iron (C4)	Contraction and Contraction of Contraction	· 🛄	Burrows (C8)
		, ,		·	
Surface Soil Cracks (B6)	2005 A 10 00 00 00 00 00 00 00 00 00 00 00 00	eduction in Plowe	ed Solis (C6)		n Visible on Aerial Imagery (C9)
Inundation Visible on Aerial Ima	gery (B7) 🛛 Other (Explain	in Remarks)			Aquitard (D3)
Water-Stained Leaves (B9)				FAC-Neu	utral Test (D5)
Field Observations:					
Surface Water Present? Yes	🔿 No 💿 Depth (inches	s):			
Nater Table Present? Yes	No 🕢 Depth (inches	s):			
	<u> </u>		-		
Saturation Present? Yes includes capillary fringe)	No No Depth (inches		Wetland H	lydrology Prese	ent? Yes 🔿 No 💽
Describe Recorded Data (stream ga	ige, monitoring well, aerial phot	os, previous insp			
	U the second provide the second prove	ner Printer Statistical SP	// = . =	an an An Ald Colorado	
Demorko:					
Remarks:					

US Army Corps of Engineers

Project/Site: Hanson Preliminary		City/Co	ounty:Lake Co.		Sampling	Date:4/30/202	0
Applicant/Owner:Brian Hanson			-	State:CA	Sampling	Point:WSP14	
Investigator(s):Steve Zalusky, Leigh Zalusky		Section	n, Township, Ra	nge:S.31 T16N-R8W			
Landform (hillslope, terrace, etc.): Depression		Local	relief (concave,	convex, none): none		Slope (%):()	
Subregion (LRR):C - Mediterranean California	Lat: 38	55.574	'N	Long:-122 46.983'W		Datum: WGS	84
Soil Map Unit Name: Clear Lake Variant clay, drained				NWI classific	ation:2B3	.3	
Are climatic / hydrologic conditions on the site typical for this	time of ye	ar? Ye	es (No () (If no, explain in R	emarks.)	1000	
	gnificantly		~ ~	"Normal Circumstances" p		Yes 💿 No	0
	iturally pro			eeded, explain any answe		~	C
SUMMARY OF FINDINGS - Attach site map sl	howing	samp	oling point l	ocations, transects	, importa	ant features,	etc.
Hydrophytic Vegetation Present? Yes 💿 No	0						
Hydric Soil Present? Yes 💿 No			Is the Sampled	d Area			
Wetland Hydrology Present? Yes No Remarks:			within a Wetla	nd? Yes 🖲	No (0	
	Absolute	Domin	ant Indicator	Dominance Test work	sheet:		
Tree Stratum (Use scientific names.)	% Cover	Specie	es? <u>Status</u>	Number of Dominant S			
1	67		0.70	That Are OBL, FACW,	or FAC:	2	(A)
2				Total Number of Domin			
3		·		Species Across All Stra	ta:	2	(B)
4 Total Cover:	%			Percent of Dominant Sp		100.0	
Sapling/Shrub Stratum	%0			That Are OBL, FACW,	or FAC:	100.0 %	(A/B)
1	<i>a</i>			Prevalence Index wor	ksheet:	04.05 1778 20 10	
2				Total % Cover of:		Multiply by:	
3				OBL species	× 1		
4				-	75 x 2		
5 Total Cover:	%		<u></u>	FACU species	25 x 3 x 4		
Herb Stratum	%			UPL species	x 5	•	
1.Carex praegracilis	35	Yes	FACW		00 (A)	v	(B)
² Juncus Balticus	20	Yes	FACW	-			,
3. Polypogon monspeliensis	20	No	FACW	Prevalence Index		2.25	
4. Rumex crispus	15	No	FAC	Hydrophytic Vegetatio		ors:	
5. Lotus corniculatus	10	No	FAC	Dominance Test is			
6	2			Prevalence Index is Morphological Ada			
7				data in Remark			ng
8. Total Cover:	100			- Problematic Hydro	phytic Veg	etation ¹ (Explain)
Woody Vine Stratum	100%						
1.				¹ Indicators of hydric so	il and wet	land hydrology r	nust
2				be present.			
Total Cover:	%			Hydrophytic Vegetation			
% Bare Ground in Herb Stratum% % Cover	of Biotic C	Crust	%		s 💽	No 🔿	

Remarks:

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Samn	ling	Point:	WS	SP	14

(inches)	Matrix		Redo	x Feature	es		n the abse			
	Color (moist)	Co	lor (moist)	%	Type1	Loc ²	Textur	e ³	Re	emarks
18	10YR/2.5/1	<u>100</u> 2.5Y	R/4/4	5	RM	<u>M</u>	Silt Loam			
Black Hydric Soil Histos Histic Black Hydrog Stratifi 1 cm M Deplet Thick Sandy Sandy	Concentration, D=Depl res: Clay, Silty Clay, S Indicators: (Applicabl ol (A1) Epipedon (A2) Histic (A3) gen Sulfide (A4) ed Layers (A5) (LRR D) ed Below Dark Surface Dark Surface (A12) Mucky Mineral (S1) Gleyed Matrix (S4) a Layer (if present):	iandy Clay, Loar e to all LRRs, ur :)	n, Sandy Clay	Loam, S e noted.) ox (S5) atrix (S6) oky Miner yed Matri latrix (F3) k Surface park Surfa	andy Loam al (F1) x (F2)) (F6) ice (F7)	•	Indicat Indicat 1 o 2 o Re 0 Ot	ors for Prot cm Muck (A cm Muck (A educed Verl ed Parent M her (Explain tors of hydr	ilt Loam, Silt, L olematic Hydric 9) (LRR C) .10) (L RR B)	: Soils:
Restrictiv	e Layer (if present):							070		
Type:	San an an									
Depth (inches):		2 				Hydric	Soil Prese	nt? Yes 🖲	No 🔿
Primary Ind Surfac High V Satura Vater Sedim Drift D Surfac Inunda	ydrology Indicators: dicators (any one indicators) e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriveri ent Deposits (B2) (Nor eposits (B3) (Nonriveri e Soil Cracks (B6) ttion Visible on Aerial In Stained Leaves (B9)	ne) iriverine) ine)	Presence	st (B12) vertebrat Sulfide (Rhizosph of Reduc	Odor (C1) eres along æd Iron (C4 tion in Plow	4)		Water M Sedimer Drift Dep Drainage Dry-Sea Thin Mur Crayfish Saturation Shallow	idicators (2 or r arks (B1) (Rive at Deposits (B2 oosits (B3) (Riv Patterns (B10 son Water Tab ck Surface (C7 Burrows (C8) on Visible on Ae Aquitard (D3) utral Test (D5)	erine)) (Riverine) verine))) le (C2)

US Army Corps of Engineers

2-Cynosurus echinatus 30 No Not Listed 3-Juncus Balticus 20 No FAC 4-Plantago lanceolata 10 No FAC 5.	Project/Site: Hanson Preliminary		City/Count	y:Lake Co		San	pling Date:	4/30/202	0
andform (tillslope, terrace, etc.): Depression Local relief (concave, convex, none): none Slope (%).0 ubbregion (LRR): C - Mcditterranean California Lat:38.55.585N Long -122.46.866/W Datum WGS84 fold Map Unit Name: Clear Lake Variant clay, drained NW (dassification2B3.3 NW (converting) Datum WGS84 reveloate/hydrologic conditions on the site typical torb is time of year? Yes (Inceded, explain any ansvers in Remarks.) NW (fine, explain in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes (No (Inceded, explain any ansvers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes (No (Inceded, explain any ansvers) Hydrophytic Vegetation Present? Yes (No (Inceded, explain any ansvers) Yet (Use scientific names.) % Cover. Species Access and Strata: 1 (Inceded, explain and species 1.	pplicant/Owner:Brian Hanson				State:CA	Sam	pling Point:	WSP15	
ubitegion (LRR) C - Mcditernanaan California Lat:38 55.585N Long-122 46.866/W Datum WGS84 oil Map Unit Name: Clear Lake Variant clax, drained NVM classification:2B3.3 re climatic / hydrologic conditions on the site typical for this time of year? Yes () No () (If no, explain in Remarks.) re Vegatation Soil () or Hydrology () naturally problematic? (If ne eded, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. No () Is the sampled Area Hydrophylic Vegatation Present? Yes () No () Is the sampled Area Wetland Hydrology Present? Yes () No () () Z	nvestigator(s): Steve Zalusky, Leigh Zalusky		Section, T	ownship, Ra	ange:S.31 T16N-R8W				
Soil Map Unit Name: Clear Lake Variant clay, drained NMC classification 2B3,3 we vegetation Soil or Hydrologic conditions on the site typical for this time of year? Yes (If no, explain in Remarks.) we Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transacts, important features, etc. Hydrophytic Vegetation Present? Yes (In No (In edided, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transacts, important features, etc. Hydrophytic Vegetation Present? Yes (In No (In edided, explain any answers in Remarks.) VEGETATION Tree Stratum (Use scientific names.) Absolute Dominant Indicator 1.	andform (hillslope, terrace, etc.): Depression		Local relie	ef (concave,	convex, none):none		SI	ope (%):()	
ver elimatic / hydrologic conditions on the site typical for this time of year? Yes ● No ● (If no, explain in Remarks.) No ● (If no, explain in Remarks.) ver Vegetation ☐ Soil ☐ or Hydrology ☐ alignificantly disturbed? Are "Normal Circumstances" present? Yes ● No ● SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes ● No ● Hydrophytic Vegetation Present? Yes ● No ● Yee Stratum (Use scientific names.) 1.	Subregion (LRR):C - Mediterranean California	Lat:38 5	55.585'N		Long:-122 46.866'W		Dat	um:WGS	84
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tre Vegetation Sol or Hydrology naturally problematic? (ff 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 Hydrophytic Vegetation Present? Yes No Yes No No Hydrophytic Vegetation Present? Yes No Yes No No Teee Stratum (Use scientific names.) % Cover Species? 1.	Are climatic / hydrologic conditions on the site typical for this	time of ye	ar? Yes (No () (If no, explain in	Remar	ks.)		
we Vegetation Soll 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 Is the Sampled Area Wetland Hydrology Present? Yes No Is the Sampled Area Wetland Hydrology Present? Yes No Is Teee Stratum (Use scientific names.) % Cover Species? Status 1.	re Vegetation Soil or Hydrology si	gnificantly	disturbed?	P Are	"Normal Circumstances"	prese	nt? Yes (No	0
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No Is the Sampled Area within a Wetland? Yes		aturally pro	oblematic?	(lf n	eeded, explain any answ	ers in	Remarks.)		
Hydric Soil Present? Yes No Is the Sampled Area within a Wetland? Yes No Remarks: Yes No No No No No No //EGETATION ////////////////////////////////////		a a.		10				eatures,	etc.
Wetland Hydrology Present? Yes No No within a Wetland? Yes No No Remarks: Absolute Dominant Indicator % Ownersenter No Image: Status Dominance Test worksheet: Number of Dominant Species 1.	Hydrophytic Vegetation Present? Yes 🕥 No	•							
Remarks: Dominant Indicator Dominant Species 1	Hydric Soil Present? Yes 🕥 No	•	ls t	he Sample	d Area				
Absolute Dominant Indicator Tree Stratum (Use scientific names.) % Cover Species? Status 1.	Wetland Hydrology Present? Yes O No	\bullet	wit	hin a Wetla	nd? Yes 🔿		No 💿		
Absolute % Cover Dominant Indicator Species? Dominance Test worksheet: 1	Remarks:								
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3. Interference Interfere	1	% Cover	Species?	Status			-	0	(A)
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Total Cover: % Sapling/Shrub Stratum Total Cover: % 1. Total Cover: % 2. Total % Cover of: Multiply by: 3. Total Cover: % 4. Total Cover: % 5. Total Cover: % 1. Total Cover: % 1. Total Cover: % 1. Total Cover: % 2. Total Cover: % 1. Total Cover: % 2. Total Cover: % 1. Total Cover: % 2. Total Cover: % 3. Total Cover: % 1. Total Cover: Mo 2. Total Cover: % 3. Total Cover: % 4. Total Cover: 100 % 7. Total Cover: 100 % 8. Total Cover: 100 % 1. Total Cover: % <t< td=""><td></td><td></td><td></td><td>- 10 </td><td>- Species Across All Str</td><td>ata:</td><td></td><td>1</td><td>(B)</td></t<>				- 10 	- Species Across All Str	ata:		1	(B)
Sapling/Shrub Stratum Out of the construction of the constru		07							
2.		. 70			That Are OBL, FACW		.C. ()).0 % ((A/B)
3. OBL species x 1 = 0 4. FACW species x 2 = 0 5. FAC species 30 x 3 = 90 FACU species 40 Yes FACU 1. Bromus hordeaceus 40 Yes FACU 2. Cynosurus echinatus 30 No Not Listed 3.Juncus Balticus 20 No FAC 4. Prevalence Index = B/A = 4.00 4. Hydrophytic Vegetation Indicators: Dominance Test is >50% 6. Obschedule Prevalence Index is \$3.0^1 Woody Vine Stratum Total Cover: 100% 1. Total Cover: % Voody Vine Stratum Total Cover: % 1. Total Cover: %	1	7				rkshe	et:	× 5	
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10 10		NOTON.	and the second s	FAC				4.00	
6. Prevalence Index is ≤3.0 ¹ 7. Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) 8. Problematic Hydrophytic Vegetation ¹ (Explain) Woody Vine Stratum 1 1. 1 2. Total Cover: You You 1. 1 2. Total Cover: You You	-	10	No	FAC					
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2 Total Cover: % Hydrophytic Vegetation	Woody Vine Stratum	100%			Particular and a second second second second second second	oil and	d wetland h	ydrology n	nust
Vegetation									
% Bare Ground in Herb Stratum % % Cover of Biotic Crust % Present? Yes 🔿 No 💿	Total Cover:				Vegetation	~		-	

US Army Corps of Engineers

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rofile Description: (Describ Depth Matrix		Redox Featu	res			
inches) Color (moist)	%Cold	or (moist)%	Type ¹		Texture ³	Remarks
ype: C=Concentration, D=De	epletion, RM=Reduc	ed Matrix. ² Locati	on: PL=Pore	Lining, RC=F	Root Channel, M=N	/latrix.
	1					It Loam, Silt, Loamy Sand, Sa
dric Soil Indicators: (Applica Histosol (A1)	ible to all LRRS, unle	Sandy Redox (S5)			1 cm Muck (A	olematic Hydric Soils: 9) (LRR C)
Histic Epipedon (A2)		Stripped Matrix (S6			2 cm Muck (A	
Black Histic (A3) Hydrogen Sulfide (A4)		Loamy Mucky Mine Loamy Gleyed Mat			Reduced Vert Red Parent M	
Stratified Layers (A5) (LRF	2 C)	Depleted Matrix (F:	10 St.		Other (Explain	er man en anne a l'eren an l'anne
1 cm Muck (A9) (LRR D)		Redox Dark Surfac				
Depleted Below Dark Surfa Thick Dark Surface (A12)	ice (A11)	Depleted Dark Surf Redox Depressions				
Sandy Mucky Mineral (S1)	H	Vernal Pools (F9)			⁴ Indicators of hydr	ophytic vegetation and
Sandy Gleyed Matrix (S4)					wetland hydrold	ogy must be present.
strictive Layer (if present):						
Туре:						
Depth (inches):					Judric Soil Preser	
Depth (inches):				H	Hydric Soil Preser	nt? Yes No 🖲
marks:					Hydric Soil Preser	nt?Yes 🔿 No 💽
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