

Attachment 4.C

Wetland Delineation Report

Preliminary Results

Humboldt County Application #15280

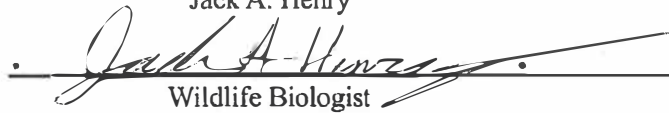
APN 215-172-044-000

11/05/2019

Prepared for:
Skyhawk Farms
14836 Briceland Road,
Whitethorn, CA 95589

Prepared by:

Jack A. Henry



Wildlife Biologist

jhenry@timberlandresource.com



165 South Fortuna Boulevard, Fortuna, CA 95540

707-725-1897 • fax 707-725-0972

trc@timberlandresource.com

1.0 Introduction

This document provides the preliminary results of a wetland delineation conducted on APN 215-172-044-000 in Humboldt County, California. The purpose of this delineation was to delineate the boundaries of a suspected wetland so that regulatory setbacks can be accurately determined and observed by the project. The assessment occurred during the dry season and because wetland hydrology is the limiting factor across most sample points, the site shall be revisited in the spring time to confirm hydrologic observations.

Location

The study area is located near the intersection of Briceland Road and Green Acres Lane approximately 1.7 aerial miles south-southeast of Thorn Junction, Whitethorn, California 95589. The study area occurs in the NW $\frac{1}{4}$ of Section 9, T5S, R2E, Humboldt County in the Briceland, CA 7.5' USGS Quad.

2.0 Definitions

Waters of the United States

Under Section 404 of the Clean Water Act the U.S. Army Corps of Engineers regulate "Waters of the United States" as defined in the Code of Federal Regulations as waters susceptible to use in commerce, including interstate waters and wetlands, all other waters (intrastate waterbodies, including wetlands), and their tributaries (33 CFR 328.3). Areas that are inundated at a sufficient depth and for a sufficient duration to exclude growth of hydrophytic vegetation are subject to Section 404 jurisdiction as "other waters" and are often characterized by an ordinary high water mark, and herein referred to as non-wetland waters. Non-wetland waters, for example, generally include lakes, rivers, and streams.

Section 404 of the CWA protects wetlands federally. In 1989 George H.W. Bush implemented the national "No-net Loss of Wetlands" policy which either avoids the filling of wetlands or mitigates the destruction and/or degradation of wetlands. U.S. Army Corps of Engineers defines wetlands as "areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas."

3.0 Methods

Sample points within the study area were delineated using standard methods defined in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region Version 2.0* (U.S. Army Corps of Engineers 2010) and the *1987 Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987).

Initial field work and delineation data collection was conducted on August 05, 2019. Additional vegetation data was collected on September 05, 2019. Five sample points were assessed for the three wetland parameters: hydrology, hydrophytic vegetation, and hydric soils. Sample Points #1 and #2 were conducted along the southern property boundary where the most prominent wetland indicators are present. Sample Points #3, #4, and #5 were conducted in a single hole spot check method within areas of potential wetland vegetation throughout the grassland habitat. Once wetland parameters are met, hydrophytic vegetative community is used to delineate the boundary between the wetland and upland habitat.

4.0 Results and Discussion

Topography

The property containing the study area is located atop a riparian terrace along the eastern bank of the Mattole River approximately 1,000' above sea level. Slopes at the sampling points are less than 2% and drain west towards the Mattole River.

Vegetation

The study area consists of a nonnative annual grassland habitat. The dominant grass species observed during sampling was sweet vernal grass (*anthoxanthum odoratum*) and silver hairgrass (*aira caryophylla*). Additional herbaceous species recorded include slender wheatgrass (*elymus trachycaulus*), common dandelion (*taraxacum officinale*), curly dock (*rumex crispus*), rushes (*juncus spp.*), and penny royal (*mentha pulegium*). The peripheral slopes consist of Montane Hardwood Conifer

habitat. This habitat type contains coast redwood (*sequoia sempervirens*), Douglas-fir (*pseudotsuga menziesii*), canyon live oak (*quercus chrysolepis*), California bay laurel (*umbellularia californica*), tanoak (*notholithocarpus densiflorus*), and pacific madrone (*arbutus menziesii*) all as co-dominants within the stand.

Soils

The project parcel contains multiple soil types, however sample points occurred within one soil type. (U.S. Department of Agriculture, Natural Resources Conservation, 2016):

- 153 – Conklin, 0 to 2 percent slopes. This soil type's parent material consists of alluvium derived from sedimentary rock. Typical soil profiles are dominated by loam textures with some sand and clay. The natural drainage class is well drained. Approximately 2% of the area has the potential to contain Grannycreek soils which have a positive hydric soil rating.

Hydrology

Surface hydrology at the site is sourced from direct and indirect rainfall. Precipitation falls directly on the study area and is also delivered from upslope watersheds. Ephemeral drainage swales deliver surface water from upslope watersheds onto the riparian terrace. Of the three drainages within property boundaries none of them have direct downstream connections with any other surface waters. Surface water drains from the site through infiltration into the ground. Run-off may occur but given vegetation densities and slopes at the site the majority of water drains through infiltration.

Wetlands

Paired Sample Points

Neither Sample Points (SP) 1 or 2 met all three parameters that make up the definition of a wetland.

Vegetative communities varied at both sample points. SP 1 contained a mixture of upland herbaceous species intermixed with wetland indicator species. Dominate species at this site consisted of sweet vernal grass (*anthoxanthum odoratum*) and soft rush (*juncus effusus*). Although one of these species is ranked as FACW, they sample point did not exceed 50% dominance for hydrophytic vegetation. The Prevalence Index Test was not utilized because additional indicators were not present to justify this method. SP 2 was also dominated by both wetland plants and upland species. Dominant plant species at SP 2 consists of prairie junegrass, soft rush, and pennyroyal (*mentha pulegium*). This site tested positive for hydrophytic vegetation per the Dominance Test.

Both sample points contained dark soil colors [SP1 = 7.6YR2.5/2-1, SP2 = 2.5Y3/2 and 10YR2/1] with some iron concentrations. SP 1 contained a high enough proportions (10%) of iron concentrations to meet hydric soil indicator F6:Redox Dark Surface. SP 2 contained less redoximorphic features. Approximately 1% of the soil matrix displayed colors related to iron concentrations (7.5YR6/8). This low percentage does not meet the 2% threshold for F6: Redox

Neither SP 1 or SP 2 met indicators for wetland hydrology. Sampling did occur in early September during the dry season. Neither site had surface water, water table, or saturation present. Both sample points met the secondary indicator D2:Geomorphic position, given the flat topography at the site. Vegetation at both sites failed the FAC Neutral Test which uses vegetation dominance to infer hydrology. No additional secondary indicators were observed at either SP 1 or 2. Given the season that sampling occurred in, these sample points will be revisited in the spring to test preliminary results.

Spot Check Sample Points

SP 3-5 were conducted in a spot check manner within potentially hydrophytic vegetation communities present along the flat topography of the property. None of these sample points tested positive for any wetland parameters and thus paired sampling was deemed unnecessary.

Hydrophytic vegetation was not met at SP 3-5. SP 3 was dominated by both sweet vernal grass and soft rush. Vegetation at this site was not predominantly hydrophytic. Vegetation at both SP 4 and 5 contained high proportions of silver hairgrass. SP 4 also contained pennyroyal as a codominant. None of these sites met dominance for hydrophytic vegetation.

No hydric soil indicators were observed at SP 3-5. All three sample points contained dark colored soils (10YR2/2, 10YR2/2, 7.5YR2.5/2) but lacked any redoximorphic features. Soils consisted of clay/loam textures often displaying varying levels of angular structure.

SP 3-5 did not display any primary indicators for wetland hydrology. At the time of the site visit, no surface water, water table, or soil saturation was observed. Secondary wetland hydrology indicator D2:Geomorphic position was met at all sample points. This is characteristic of the flat topography that sampling occurred in. No additional secondary indicators were observed at the sample points. Sampling was performed in early September, during the region's dry season. Seasonal wetland hydrology may be potentially present during wetter times of the growing season. Given the season that sampling occurred in, these sample points will be revisited in the spring to test preliminary results.

References

- Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1. Vicksburg, MS: U.S. Army Engineer Waterways Experimental Station.
- U.S. Army Corps of Engineers. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0), eds. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
- U.S. Army Corps of Engineers. 2016. Western Mountains, Valleys, and Coast Region 2016 Regional Plant List. http://wetland_plants.usace.army.mil/
- U.S. Department of Agriculture, Natural Resources Conservation Service. 2016. Web Soil Survey <http://websoilsurvey.sc.egov.usda>

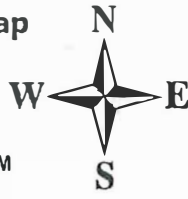
Appendix 1 – Wetland Delineation Map

Wetland Delineation Map
Skyhawk Farms

— Property Boundary

▼ Wetland Sample Point

Located in Sec 09, T5S, R2E, HB&M
2018 NAIP DOQ Image



SP3

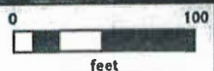
SP4

SP5

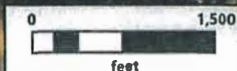
SP2

SP1

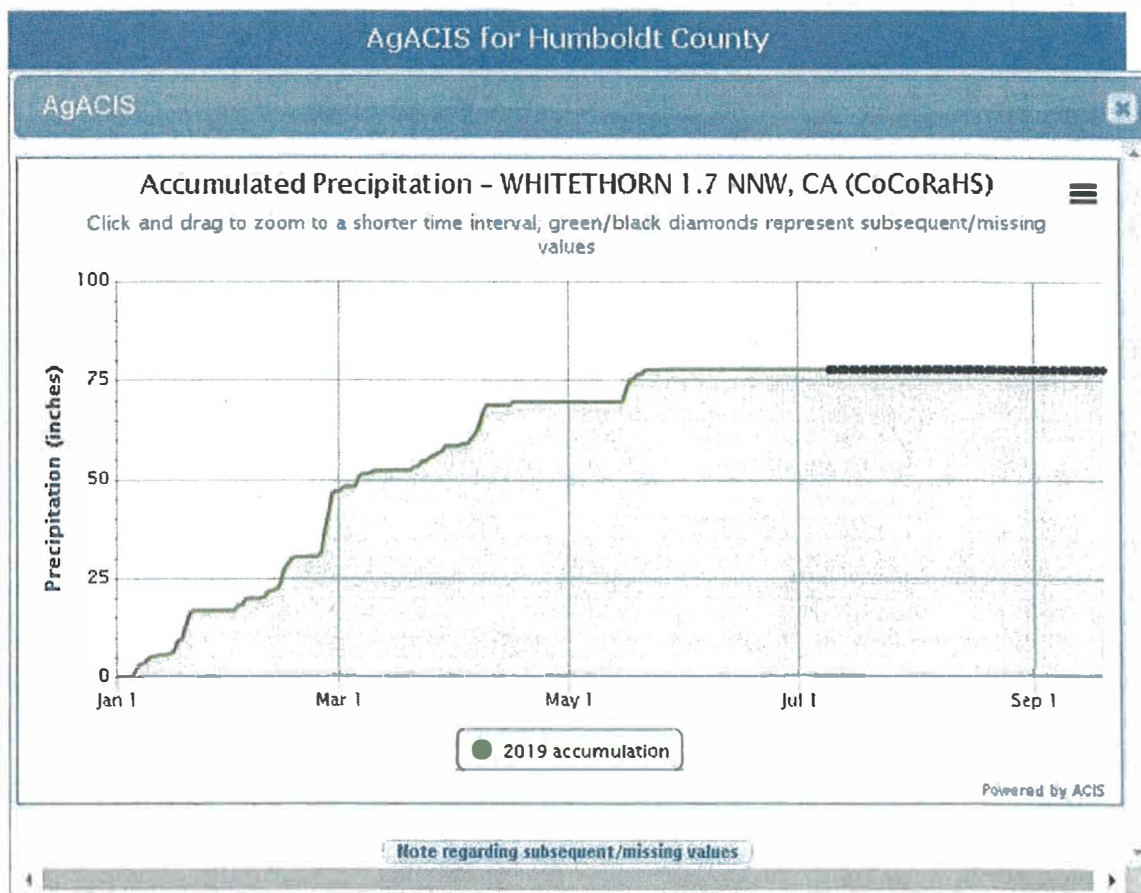
Detailed View



Overview



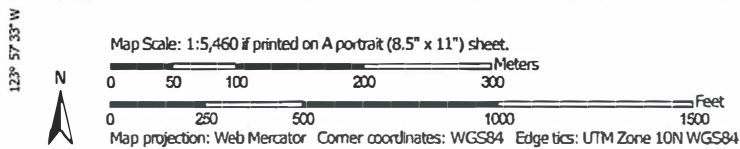
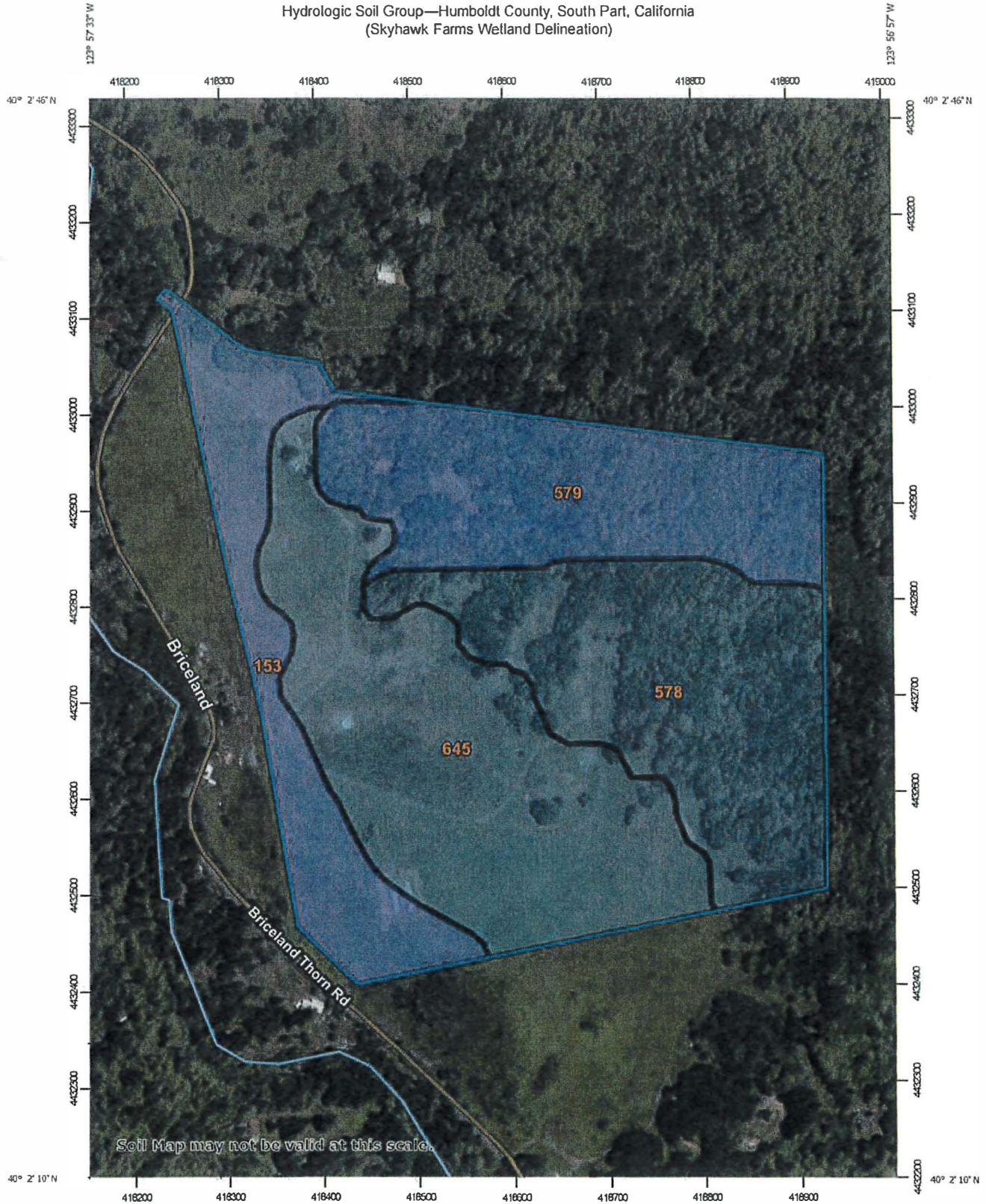
Appendix 2 – Rainfall Data



Sourced: Applied Climate Information Center (ACIS) – NOAA Regional Climate Center. <http://www.rcc-acis.org/>
Date Sourced: 09/19/2019

Appendix 3 – NRCS Web Soil Survey

Hydrologic Soil Group—Humboldt County, South Part, California
(Skyhawk Farms Wetland Delineation)



Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

11/5/2019
Page 1 of 4

09

Hydrologic Soil Group—Humboldt County, South Part, California
(Skyhawk Farms Wetland Delineation)

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

Soil Rating Polygons

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Lines

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Points

 A
 A/D
 B
 B/D

 C
 C/D
 D
 Not rated or not available

Water Features

 Streams and Canals

Transportation

 Rails
 Interstate Highways
 US Routes
 Major Roads
 Local Roads

Background

 Aerial Photography

MAP INFORMATION

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

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

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

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Humboldt County, South Part, California
 Survey Area Data: Version 8, Sep 17, 2019

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

Date(s) aerial images were photographed: Dec 31, 2009—Nov 6, 2017

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

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres In AOI	Percent of AOI
153	Conklin, 0 to 2 percent slopes	B	13.1	15.6%
578	Sproulish-Telegraph-Redwohly complex, 30 to 50 percent slopes	C	23.3	27.7%
579	Sproulish-Gibsoncreek-Redwohly complex, 50 to 75 percent slopes	B	19.0	22.6%
645	Briceland-Tankridge complex, 15 to 50 percent slopes	C	28.6	34.1%
Totals for Area of Interest			83.9	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

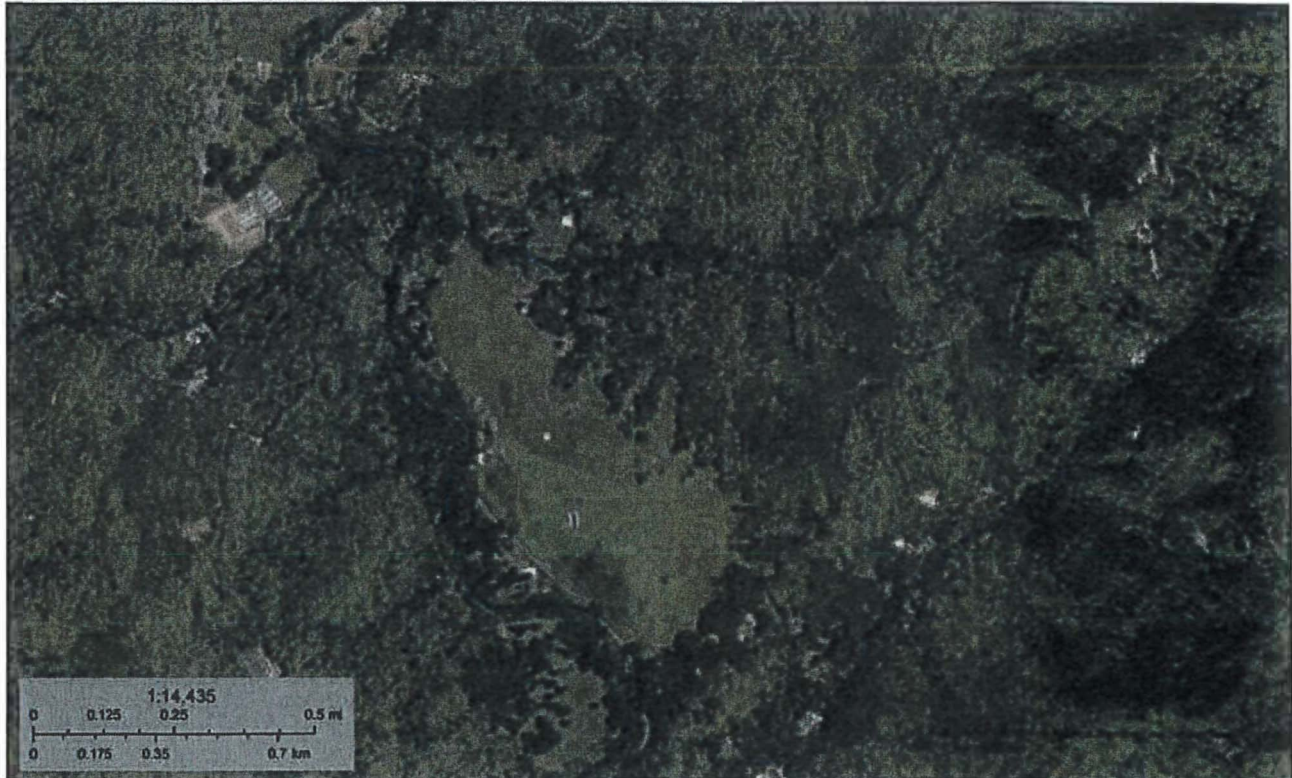
Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Appendix 4 – National Wetland Inventory



Skyhawk Farms Wetland Delineation



November 5, 2019

Wetlands

Estuarine and Marine Deepwater	Freshwater Emergent Wetland	Lake
Estuarine and Marine Wetland	Freshwater Forested/Shrub Wetland	Other
	Freshwater Pond	Riverine

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

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

Data Sourced: National Wetland Inventory Wetlands Mapper. <https://www.fws.gov/wetlands/data/mapper.html>

**Appendix 5 – Wetland Delineation Data Sheets
(Western Mountains, Valleys, and Coast Region)**

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

Project/Site: Skyhawk Farm City/County: Humboldt Sampling Date: 08/05/19
 Applicant/Owner: Jesse Gray/Matt Humeche State: CA Sampling Point: 1
 Investigator(s): J. Henry Section, Township, Range: NW1/4 Sec. 9, T5S, R2E
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): None Slope (%): 2%
 Subregion (LRR): A Lat: 40.03825 Long: -123.45477 Datum: NAD83
 Soil Map Unit Name: 153- Conklin 0-2% slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland?	Yes <u> </u> No <u>X</u>
Hydric Soil Present?	Yes <u>X</u> No <u> </u>		
Wetland Hydrology Present?	Yes <u> </u> No <u>X</u>		
Remarks:			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>r = 30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)	
1. <u> </u>					Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>20</u> x 1 = <u>20</u> FACW species <u>35</u> x 2 = <u>70</u> FAC species <u>11</u> x 3 = <u>33</u> FACU species <u>65</u> x 4 = <u>260</u> UPL species <u>400</u> x 5 = <u>2000</u> Column Totals: <u>131</u> (A) <u>8</u> (B) Prevalence Index = B/A = <u>2.9</u>
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
= Total Cover					
Sapling/Shrub Stratum (Plot size: <u>r = 15'</u>)					
1. <u> </u>				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> </u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0' <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> 5 - Wetland Non-Vascular Plants ¹ <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>					
= Total Cover					
Herb Stratum (Plot size: <u>r = 5'</u>)					
1. <u>Anthoxanthum odoratum</u>	<u>40</u>	<u>D</u>	<u>FACU</u>		
2. <u>Juncus effusus</u>	<u>35</u>	<u>D</u>	<u>FACW</u>		
3. <u>Aina canyophylla</u>	<u>25</u>	<u>—</u>	<u>FACU</u>		
4. <u>Mentha pulegium</u>	<u>20</u>	<u>—</u>	<u>OBL</u>		
5. <u>Vicia spp.</u>	<u>10</u>	<u>—</u>	<u>FAC</u>		
6. <u>Juncus marginatus</u>	<u>5</u>	<u>—</u>	<u>FACW</u>		
7. <u>Rumex crispus</u>	<u>1</u>	<u>—</u>	<u>FAC</u>		
8. <u> </u>					
9. <u> </u>					
10. <u> </u>					
11. <u> </u>					
= Total Cover <u>136</u>					
Woody Vine Stratum (Plot size: <u> </u>)					
1. <u> </u>				Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>	
2. <u> </u>					
= Total Cover					
% Bare Ground in Herb Stratum <u>5%</u>					
Remarks: <u>Site appeared upland dominant with patches of FACW/OBL species. Could have sampled further from potential wetland</u>					

SOIL

Sampling Point: 1

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texturg	Remarks
	Color (moist)	%	Color (moist)	%				
0-2"								Organic Layer
2"-10"	7.5YR ^{2.5/1}	90	7.5YR ^{6/8}	10	C	M	SCLA	
10"-16"	7.5YR ^{2.5/1}	90	7.5YR ^{6/8}	10	C	M	SCLA	

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if present):

Type: N/A
Depth (inches): N/AHydric Soil Present? Yes X No Remarks: Site likely becomes inundated during wet season but not long enough to influence vegetation

HYDROLOGY

Wetland Hydrology Indicators:

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes No X Depth (inches):

Water Table Present? Yes No X Depth (inches):

Saturation Present? Yes No X Depth (inches):

(Includes capillary fringe)

Wetland Hydrology Present? Yes No X

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

Remarks:

FAC Neutral = 1:1
Fail

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

Project/Site: Skyhawk Farm City/County: Humboldt Sampling Date: 08/05/11
 Applicant/Owner: Jesse Gray / Matt Hunecke State: CA Sampling Point: 2
 Investigator(s): J. Henry Section, Township, Range: NW 1/4 Sec 9, T5S, R2E, W11W
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-2%
 Subregion (LRR): A Lat: 40.03830 Long: -123.95479 Datum: NAD83
 Soil Map Unit Name: 153 - Conklin 0-2% slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present?	Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present?	Yes <u>X</u> No <u> </u>	
Remarks:		

VEGETATION – Use scientific names of plants.

Tree Stratum	Plot size: <u>r = 30'</u>	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:			
1. <u> </u>		<u> </u>	<u> </u>	<u> </u>		Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)		
2. <u> </u>					Total Number of Dominant Species Across All Strata: <u>1</u> (B)			
3. <u> </u>					Percent of Dominant Species That Are OBL, FACW, or FAC: <u>200%</u> (A/B)			
4. <u> </u>								
<u> </u> = Total Cover					Prevalence Index worksheet:			
Sapling/Shrub Stratum (Plot size: <u>r = 15'</u>)					Total % Cover of: <u> </u> Multiply by: <u> </u>			
1. <u> </u>		<u> </u>	<u> </u>	<u> </u>	OBL species <u>30</u> x 1 = <u>30</u>			
2. <u> </u>					FACW species <u>40</u> x 2 = <u>80</u>			
3. <u> </u>					FAC species <u> </u> x 3 = <u>0</u>			
4. <u> </u>					FACU species <u>75</u> x 4 = <u>300</u>			
5. <u> </u>					UPL species <u>20</u> x 5 = <u>100</u>			
<u> </u> = Total Cover					Column Totals: <u>145</u> (A) <u>480</u> (B)			
Herb Stratum (Plot size: <u>r = 5'</u>)					Prevalence Index = B/A = <u>2.8</u>			
1. <u>Anthoxanthum odoratum</u>		<u>75</u>	<u>D</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0' <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> 5 - Wetland Non-Vascular Plants ¹ <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.			
2. <u>Juncus effusus</u>						<u>40</u>	<u>D</u>	<u>FACW</u>
3. <u>Mentha pulegium</u>						<u>30</u>	<u>D</u>	<u>OBL</u>
4. <u> </u>						<u> </u>	<u> </u>	<u> </u>
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>					
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>					
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>					
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>					
9. <u> </u>	<u> </u>	<u> </u>	<u> </u>					
10. <u> </u>	<u> </u>	<u> </u>	<u> </u>					
11. <u> </u>	<u> </u>	<u> </u>	<u> </u>					
<u>145</u> = Total Cover					Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>			
Woody/Vine Stratum (Plot size: <u> </u>)								
1. <u> </u>		<u> </u>	<u> </u>	<u> </u>				
2. <u> </u>								
<u>5%</u> = Total Cover								
% Bare Ground in Herb Stratum <u>5%</u>								
Remarks:								

Sampling Point: 2

[illegible]

HYDROLOGY

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

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

Project/Site: Skyhawk Farm City/County: Humboldt Sampling Date: 09/05/19
 Applicant/Owner: Jesse Gray/Matt Hummelke State: CA Sampling Point: 3
 Investigator(s): J. Henry Section, Township, Range: NW 1/4 Sec 9, T5S, R2E
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): None Slope (%): 0-2%
 Subregion (LRR): A Lat: 40.038824 Long: -123.95667 Datum: NAD83
 Soil Map Unit Name: 153 - Conklin 0-2% slopes NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland?	Yes <u> </u> No <u>X</u>
Hydric Soil Present?	Yes <u> </u> No <u>X</u>		
Wetland Hydrology Present?	Yes <u> </u> No <u>X</u>		
Remarks:			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>r = 30'</u>)				Dominance Test worksheet:	
1. <u> </u>	Absolute % Cover	Dominant Species?	Indicator Status	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>1</u> (A)
2. <u> </u>				Total Number of Dominant Species Across All Strata:	<u>2</u> (B)
3. <u> </u>				Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>50%</u> (AB)
4. <u> </u>				Prevalence Index worksheet:	
				Total % Cover of:	Multiply by:
				OBL species <u>5</u>	x 1 = <u>5</u>
				FACW species <u>75</u>	x 2 = <u>150</u>
				FAC species <u>0</u>	x 3 = <u>0</u>
				FACU species <u>40</u>	x 4 = <u>160</u>
				UPL species <u>90</u>	x 5 = <u>450</u>
				Column Totals:	<u>120</u> (A) <u>385</u> (B)
Saolino/Shrub Stratum (Plot size: <u>r = 15'</u>)				Prevalence Index = B/A = <u>3.6</u>	
1. <u> </u>				Hydrophytic Vegetation Indicators:	
2. <u> </u>				1 - Rapid Test for Hydrophytic Vegetation	
3. <u> </u>				2 - Dominance Test is >50%	
4. <u> </u>				3 - Prevalence Index is ≤3.0 ¹	
5. <u> </u>				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
6. <u> </u>				5 - Wetland Non-Vascular Plants ¹	
7. <u> </u>				Problematic Hydrophytic Vegetation ¹ (Explain)	
8. <u> </u>				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
9. <u> </u>				Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>	
10. <u> </u>				Remarks:	
11. <u> </u>					
Herb Stratum (Plot size: <u>r = 5'</u>)					
1. <u>Juncus effusus</u>	<u>75</u>	<u>0</u>	<u>FACW</u>		
2. <u>Anthoxanthum odoratum</u>	<u>40</u>	<u>0</u>	<u>FACU</u>		
3. <u>Mentha pulegium</u>	<u>5</u>	<u>-</u>	<u>OBL</u>		
4. <u> </u>					
5. <u> </u>					
6. <u> </u>					
7. <u> </u>					
8. <u> </u>					
9. <u> </u>					
10. <u> </u>					
11. <u> </u>					
Woody Vine Stratum (Plot size: <u> </u>)					
1. <u> </u>					
2. <u> </u>					
% Bare Ground in Herb Stratum <u>10%</u>					

Sampling Point: 3

HYDROLOGY

US Army Corps of Engineers

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

Project/Site: Skyhawk Farms City/County: Humboldt Sampling Date: 9/05/19
 Applicant/Owner: Jesse Gray / Matt Hummel State: CA Sampling Point: 4
 Investigator(s): J. Henry Section, Township, Range: NW 1/4 Sec 9, T5S, R2E H13&M
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): None Slope (%): 0-2
 Subregion (LRR): LRR:A Lat: 40.03894 Long: -123.95635 Datum:
 Soil Map Unit Name: 153-Conklin 0-2% slopes NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <u></u> No <u>X</u>	Is the Sampled Area within a Wetland?	Yes <u></u> No <u>X</u>
Hydric Soil Present?	Yes <u></u> No <u>X</u>		
Wetland Hydrology Present?	Yes <u></u> No <u>X</u>		
Remarks:			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u></u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
1. <u></u>				
2. <u></u>				
3. <u></u>				
4. <u></u>				
<u></u> = Total Cover				Prevalence Index worksheet: Total % Cover of: <u></u> Multiply by: OBL species <u></u> x 1 = <u></u> FACW species <u></u> x 2 = <u></u> FAC species <u></u> x 3 = <u></u> FACU species <u></u> x 4 = <u></u> UPL species <u></u> x 5 = <u></u> Column Totals: <u></u> (A) <u></u> (B) Prevalence Index = B/A = <u></u>
<u></u> = Total Cover				
<u></u> = Total Cover				
<u></u> = Total Cover				
<u></u> = Total Cover				
<u></u> = Total Cover				Hydrophytic Vegetation Indicators: <u>No</u> 1 - Rapid Test for Hydrophytic Vegetation <u>No</u> 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0' 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants ¹ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
<u></u> = Total Cover				
<u></u> = Total Cover				
<u></u> = Total Cover				
<u></u> = Total Cover				
<u></u> = Total Cover				
<u></u> = Total Cover				
<u></u> = Total Cover				
<u></u> = Total Cover				
<u></u> = Total Cover				
<u></u> = Total Cover				
<u></u> = Total Cover				Hydrophytic Vegetation Present? Yes <u></u> No <u>X</u>
<u></u> = Total Cover				
Woody Vine Stratum (Plot size: <u></u>) 1. <u></u> 2. <u></u> 3. <u></u> 4. <u></u> 5. <u></u> 6. <u></u> 7. <u></u> 8. <u></u> 9. <u></u> 10. <u></u> 11. <u></u> <u>142</u> = Total Cover				
% Bare Ground in Herb Stratum <u>1.5%</u> <u></u> = Total Cover				
Remarks: <u>Failed both Rapid and Dominance tests, with No prevalence test due to lack of other indicators.</u>				

Sampling Point: 4

HYDROLOGY

US Army Corps of Engineers

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

Project/Site: Skyhawk Farm City/County: Humboldt Sampling Date: 9/05/19
 Applicant/Owner: Jessa Gray / Matt Humeche State: CA Sampling Point: 5
 Investigator(s): J. Henry Section, Township, Range: NW 1/4 Sec 9, T5S, R2E
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): None Slope (%): 0-2%
 Subregion (LRR): A Lat: 40.03892 Long: -123.455872 Datum: NAD83
 Soil Map Unit Name: 153 - Conklin 0-2% slopes NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present?	Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present?	Yes <u> </u> No <u>X</u>	
Remarks:		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>r = 30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>
= Total Cover			

Sapling/Shrub Stratum (Plot size: <u>r = 1.5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>
= Total Cover			

Herb Stratum (Plot size: <u>r = 5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Arisaema caryophylla</u>	<u>80</u>	<u>D</u>	<u>FACU</u>
2. <u>Juncus effusus</u>	<u>15</u>	<u>-</u>	<u>FACW</u>
3. <u>Anthriscus odoratum</u>	<u>5</u>	<u>-</u>	<u>FACU</u>
4. <u>Taraxacum officinale</u>	<u>2</u>	<u>-</u>	<u>FACU</u>
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>
9. <u> </u>	<u> </u>	<u> </u>	<u> </u>
10. <u> </u>	<u> </u>	<u> </u>	<u> </u>
11. <u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>102</u> = Total Cover			

Woody Vine Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>
= Total Cover			

% Bare Ground in Herb Stratum 10%

Remarks: Failed both Rapid and Dominance tests. No prevalence test due to lack of other indicators.

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>15</u>	x 2 = <u>30</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>87</u>	x 4 = <u>348</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>102</u> (A)	<u>378</u> (B)

Prevalence Index = B/A = 3.7

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤3.0'

 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

 5 - Wetland Non-Vascular Plants¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?	Yes <u> </u> No <u>X</u>
---------------------------------	-----------------------------

Sampling Point: 5

HYDROLOGY

US Army Corps of Engineers