Initial Wetlands and Waters Delineation

Pickett Road 2023

Prepared by
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Eureka, CA.
December 2023

For
MAD RIVER PROPERTIES, INC.
MCKINLEYVILLE, CA.

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

Summary of Findings

The approximately 2.5-acre study area contains no discernable jurisdictional (local, state, or federal) wetlands or waters at this time.

Any areas with any positive indicators of wetland setting (soils, hydrology, or vegetation) are considered wetlands under the local McKinleyville Community Plan. Areas with two positive parameters are often considered jurisdictional by the state of California (waters of the state) and areas with three positive parameters are often considered federally jurisdictional waters (waters of the U.S.).

Field work was completed in December of 2023 which is prior to the documented growing season for the region (although herbaceous plants were growing and developing, an indictor of an active growing period) and early in the wet season for the region which can last well into the spring and even summer months. This study was focused on the soils on site and utilized a seasonally appropriate botanical survey (completed in 2023) for further evaluation of the vegetation communities and individual species found within the study area.

As indicated in the botanical survey report and noted during this investigation, there are several individual species present that are positive indicators of hydric vegetation (wetland indicator status of FAC, FACW, or OBL), however, these species were not dominant in the vegetation community present and did not create any significant hydric vegetation communities within the study area. In addition, many of the species encountered were non-native, with many ornamental and some invasive species.

Soils within the study area did not show positive indicators of a wetland setting and were generally soils common to upland pasture and grazeland in the region. There is a layer of brighter colored sandy soil that underlies the site and is common to the McKinleyville plateau. This soil profile is composed of dark loam on the surface and below that a dense, compact layer of bright colored coarse sandy clay loam. This subtending layer was a mix of yellow and brightly orange colored material that may represent a native soil layer derived from similar sources as the coastal bluff or marine up-thrust soils exposed along the coastline. The soil profile was interesting and contains some hard, relict concretions but did not meet any of the criteria for indicators of contemporary wetland soils, this could potentially be a relic of past hydrogeomorphic processes.

No positive primary indicators of wetland hydrology were encountered within the study site. Using the United States Department of Agriculture (USDA) Agricultural Applied Climate Information System (AgCIS) and the Woodley Island weather station data, the average accumulation of rainfall for this area during the beginning of the wet season (October 15 to December 31) is 14.99 inches, 2023 totals for October 15-December 31 were 12.67 inches, slightly below average. No areas of the study site were inundated or saturated within 12 inches of the soil surface at the time of survey.

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

Any and all identified features are included on the included Wetlands and Waters Plot Map, if present.

2023 is a year with slightly below average rainfall.

Recommendations

This initial study did not reveal any areas with positive indicators of wetland vegetation, soils, or hydrology. However, due to the early timing of the field visit the site should be re-surveyed at the established plots later in the hydrologic season when rainfall accumulation would likely have been sufficient to either fill the site from above with input from precipitation or when potential ground water sources are filled and active. McKinleyville wetland regulations indicate that a site will be considered a wetland with only seven consecutive days of inundation. I recommend re-survey in March-April immediately after a period of significant rainfall. The site should be visited just after the cessation of rain and if water levels reach the first 12 inches of the soil profile the site should be monitored until water levels recede. Areas that hold water in the upper portions of the soil profile for seven days after the cessation of rain may be considered one parameter wetlands by the McKinleyville Community Plan. If wetlands are detected, they will be mapped and reported to the appropriate agencies. I recommend avoiding impacts to all wetlands found on site (if any) by adhering to all Federal, State, County, and local ordinances for permitted developments. In general development projects should remain outside of setbacks for waters. Setback measurements should be done according to current guidelines enforced by the lead agency in any permitting situation.

Introduction

The study area was assessed and surveyed for the presence of jurisdictional waters of both the State of California and of the United States of America as required by the federal Clean Water Act (CWA) and California's Porter-Cologne Water Quality Control Act, methodologies used are described in full below. In addition, the site was evaluated for the presence of single parameter wetlands as required by the McKinleyville Community Plan.

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

Setting

The approximately 2.5-acre study area is located in the community of McKinleyville, Humboldt County, California on the Arcata North USGS 7.5' quadrangle. The subject parcel is located east of Central Avenue and the city center (see General Location Map in Attachment A). Elevation on site ranges from 168-175 feet above mean sea level. Parcels included within the study area are listed below.

APN# 510-381-021

The subject parcels and all potential development occur outside of the California coastal zone.

The study area is composed of a relatively flat open area of managed grassland with a single house and several outbuildings. The site is almost surrounded by developed subdivisions. The parcel is bounded by Pickett Road on the north and Gwin Road to the south. Vegetation on site is composed of low-lying grasses and forbs common to disturbed and managed sites in the region. The site is likely mown and has recently held several cattle. Ornamental plantings surround the house and grow on the parcel edges shared by neighbors.

There were no wetlands previously mapped by the either the County of Humboldt or the United States Fish and Wildlife Service (USFWS). See wetland and county resource maps, included in Attachment A, within the study area.

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

Methods

An assessment of potential impacts to adjacent watercourses or wetlands within 500 feet of the subject parcel was conducted by interpretation of aerial photography and resource maps courtesy of Google Earth, the United States Geologic Survey (USGS) 7.5' Arcata North quadrangle map, Humboldt County Web GIS, and USFWS National Wetland Inventory. This assessment was supplemented by an in-field survey of the subject areas. In field survey was conducted on 9

December 2023 by Mr. James Regan. Mr. Regan has a bachelor's degree in Botany and training and experience in wetland delineations and botanical survey and has conducted wetland surveys and delineations in Humboldt, Mendocino, and Trinity counties since 2008.

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

Potential wetlands and wetland boundaries were assessed using guidelines outlined in the ACOE Wetland Delineation Manual Technical Report Y-87-1 (referred to as the 1987 manual) and the Draft Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region. The 1987 manual provides technical guidelines for identifying wetlands, distinguishing them from non-wetlands, and provides methods for applying the technical guidelines. Three key provisions of the ACOE wetland definition include:

i. Inundated or saturated soil conditions resulting from permanent or periodic inundation by ground or surface water.

ii. A prevalence of vegetation typically adapted for life in saturated soil conditions (hydrophytic vegetation)

iii. The presence of "normal circumstances"

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

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

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

Vegetation

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

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

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

Plants on site were largely non-native. Grass species were often mown/grazed and did not have seed heads or inflorescences generally necessary for identification. A list of species present from the recent botanical survey was used for further guidance. Table 1 contains the grass species present and their respective wetland indicator status, in vegetation plots the grasses were treated as a group (unless otherwise noted) and given a FACU rating based on the number of species with upland characteristics verses the species with hydric ratings. No dominant vegetation on site had a status of FACW or OBL, and few FAC species were dominant in plots, these were outweighed by the other dominant plants with upland or non-indicator status at each sample point.

Table 1. Grass Species Present

Graminoid Species	Common Name	Wetland Indicator Status	Notes
Agrostis capillaris	colonial bentgrass	FAC	Non-native
Anthoxanthum odoratum	sweet vernal grass	FACU	Cal-IPC*: Limited
Avena barbata	slender oat	NI**	Cal-IPC: Moderate
Avena sativa	cultivated oat	UPL	Non-native
Bromus catharticus	rescue grass	NI	Non-native
Cynodon dactylon	Bermuda grass	FACU	Cal IPC: Moderate
Dactylis glomerata	orchard grass	FACU	Cal IPC: Limited
Festuca arundinacea	tall fescue	NI	Cal IPC: Moderate
Festuca myuros	rattail sixweeks grass	NI	Cal-IPC: Moderate

Graminoid Species	Common Name	Wetland Indicator Status	Notes
Holcus lanatus	velvet grass	FAC	Cal-IPC: Moderate
Poa annua	annual bluegrass	FAC	Non-native
Poa pratensis	Kentucky blue grass	FAC	Cal-IPC: Limited

* Californica Invasive Plant Council ranking (an invasive species)

**NI - Non Indicator treated as an upland (UPL) species

Soils

Current USDA soils maps were obtained from the USDA Web Soil Survey and are included in Attachment A. The project area falls into a soil map unit labeled as: **Arcata and Candymountain Soils 0-2% Slopes.** 10 soil pits were excavated during this investigation and are included on the attached Wetland Plot Map. Soils did not show significant indication of hydric conditions and were comparable to upland soil conditions in the region. The soil pits often had a deeper layer of brightly colored, sandy soils. This subtending layer was a mix of yellow and brightly orange colored material that may represent a native soil layer derived from coastal bluff or marine up-thrust. The soil profile was interesting and contains some hard, relict concretions but did not meet any of the criteria for indicators of contemporary wetland soils, this could potentially be a relic of past hydrogeomorphic processes. A representative image of the soils found in the Pickett Road study area is presented below along with an image of a hydric soil from a wetland site in Fortuna, CA (south of McKinleyville), note the greyed out “reduced” condition of the matrix of the known wetland soil and the redoxomorphic concentrations included there compared to the warm brown and bright colors of the Pickett Road sample.

Image 1. Pickett Road Soil

Image 2. Fortuna Wetland Soil

Hydrology

Each observation point for determination and delineation of watercourse and wetland boundaries was examined for indicators of wetland hydrology.

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

This initial study was conducted in December of 2023, a period with slightly below average annual rainfall.

No obvious areas of surface water, saturation or inundation were noted. No primary indicators of wetland hydrology were noted.

Results/Recommendations

Wetlands and Waters Delineation

The approximately 2.5-acre study area contains no discernable jurisdictional (local, state, or federal) wetlands or waters at this time.

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this soil profile is composed of dark loam on the surface and below that a dense, compact layer of very light colored coarse sandy clay loam. This subtending layer was a mix of yellow and brightly orange colored material that may represent a native soil layer derived from similar sources as the coastal bluff or marine up-thrust soils exposed along the coastline. The soil profile was interesting and contains some hard, relict concretions but did not meet any of the criteria for indicators of contemporary wetland soils, this could potentially be a relic of past hydrogeomorphic processes.

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The table below contains a summary of the plot results from the December survey.

Table 2. Wetland Plot Summary

Plot Number	Vegetation	Hydrology	Soils	Notes
1	Negative	Negative	Negative	
2	Negative	Negative	Negative	
3	Negative	Negative	Negative	Possible burn pile site, deeper soils with relict features
4	Negative	Negative	Negative	Plot in swale from cow and travel between ends of parcel
5	Negative	Negative	Negative	
6	Negative	Negative	Negative	
7	Negative	Negative	Negative	Deeper soils with relict features
8	Negative	Negative	Negative	Deeper soils with relict features
9	Negative	Negative	Negative	Lowest point on parcel, likely cattle bedded here
10	Negative	Negative	Negative	

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Any and all identified features, if present, are included on the included Wetlands and Waters Plot Map.

2023 is a year with slightly below average rainfall.

Recommendations

This initial study did not reveal any areas with positive indicators of wetland vegetation, soils, or hydrology. However, due to the early timing of the field visit the site should be re-surveyed at the established plots later in the hydrologic season when rainfall accumulation would likely have been sufficient to either fill the site from above with input from precipitation or when potential ground water sources are filled and active. McKinleyville wetland regulations indicate that a site will be considered a wetland with only seven consecutive days of inundation. I recommend re-survey in March-April immediately after a period of significant rainfall. The site should be visited just after the cessation of rain and if water levels reach the first 12 inches of the soil profile the site should be monitored until water levels recede. Areas that hold water in the upper portions of the soil profile for seven days after the cessation of rain may be considered one parameter wetlands by the McKinleyville Community Plan. If wetlands are detected, they will be mapped and reported to the appropriate agencies. I recommend avoiding impacts to all wetlands found on site (if any) by adhering to all Federal, State, County, and local ordinances for permitted developments. In general development projects should remain outside of setbacks for waters. Setback measurements should be done according to current guidelines enforced by the lead agency in any permitting situation.

Conditions and Limitations

This report is based on conditions observed and recorded during field visits in December of 2023. This report has not been reviewed nor has concurrence with the conclusions been obtained. Verification by agencies may be necessary in the future. Land use practices and regulations can change, thereby affecting conditions and delineation results described herein.

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

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

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

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

Please feel free to call with any questions.

James Regan

Botanist/Wetland Delineator
707-845-0821

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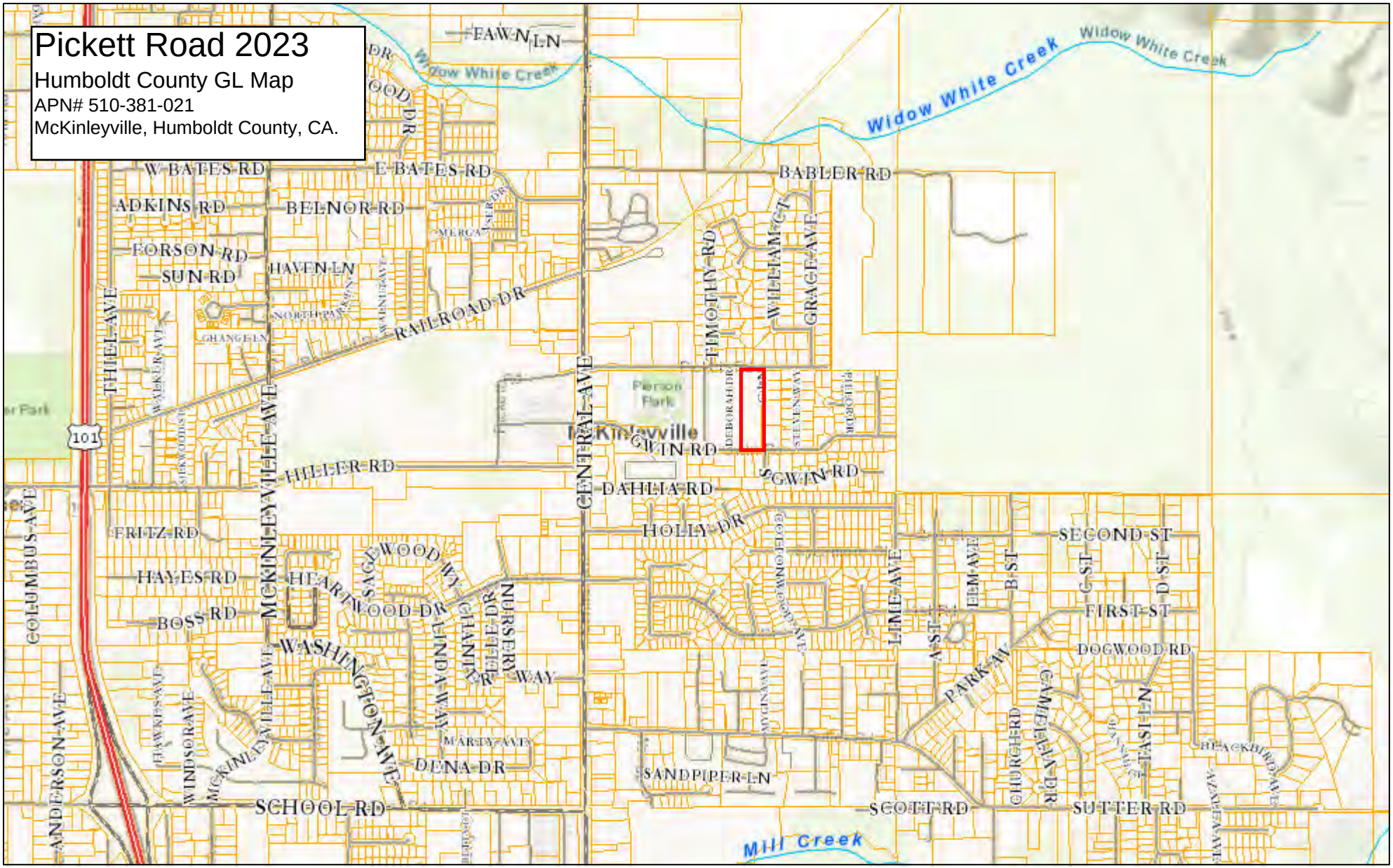
Attachment A

General Location Map, Humboldt County Resource Map, USFWS Wetland Map, USGS Soil Report, Wetland Plot Map



General Location

Humboldt County Planning and Building Department

1/1/2024, 4:31:43 PM Web AppBuilder 2.0 for ArcGIS

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

Highways and Roads
- Principal Arterials
- Minor Arterials
- Major Collectors
- Minor Collectors
- Local Roads
- Private or Unclassified
- Major River or Stream

Blue Line Streams
- Perennial 1-3
- Perennial >4
- Intermittent
- Subsurface

- Study Area
- City Boundary
- City Boundary (750K)
- Counties
- Parcels (no APN labels)

0 0.125 0.25 0.5 mi
0 0.125 0.25 0.5 mi
RF= 1:18,056 1 in = 1,505 ft

N W E S

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

County Resource Map

Humboldt County Planning and Building Department

1/1/2024, 4:52:20 PM Web AppBuilder 2.0 for ArcGIS

Map Disclaimer:
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Highways and Roads
- Private or Unclassified
- Principal Arterials
- Major River or Stream
- Minor Arterials
- Major Collectors
- Minor Collectors
- Local Roads

Blue Line Streams
- Perennial 1-3
- Perennial >4
- Intermittent
- Subsurface
- City Boundary
- Counties
- <default layer do not remove>
- Streamside Management Areas

Study Area

0 0.05 0.1 0.2 mi
0 0.05 0.1 0.2 mi
RF = 1:9,028 1 in = 752 ft

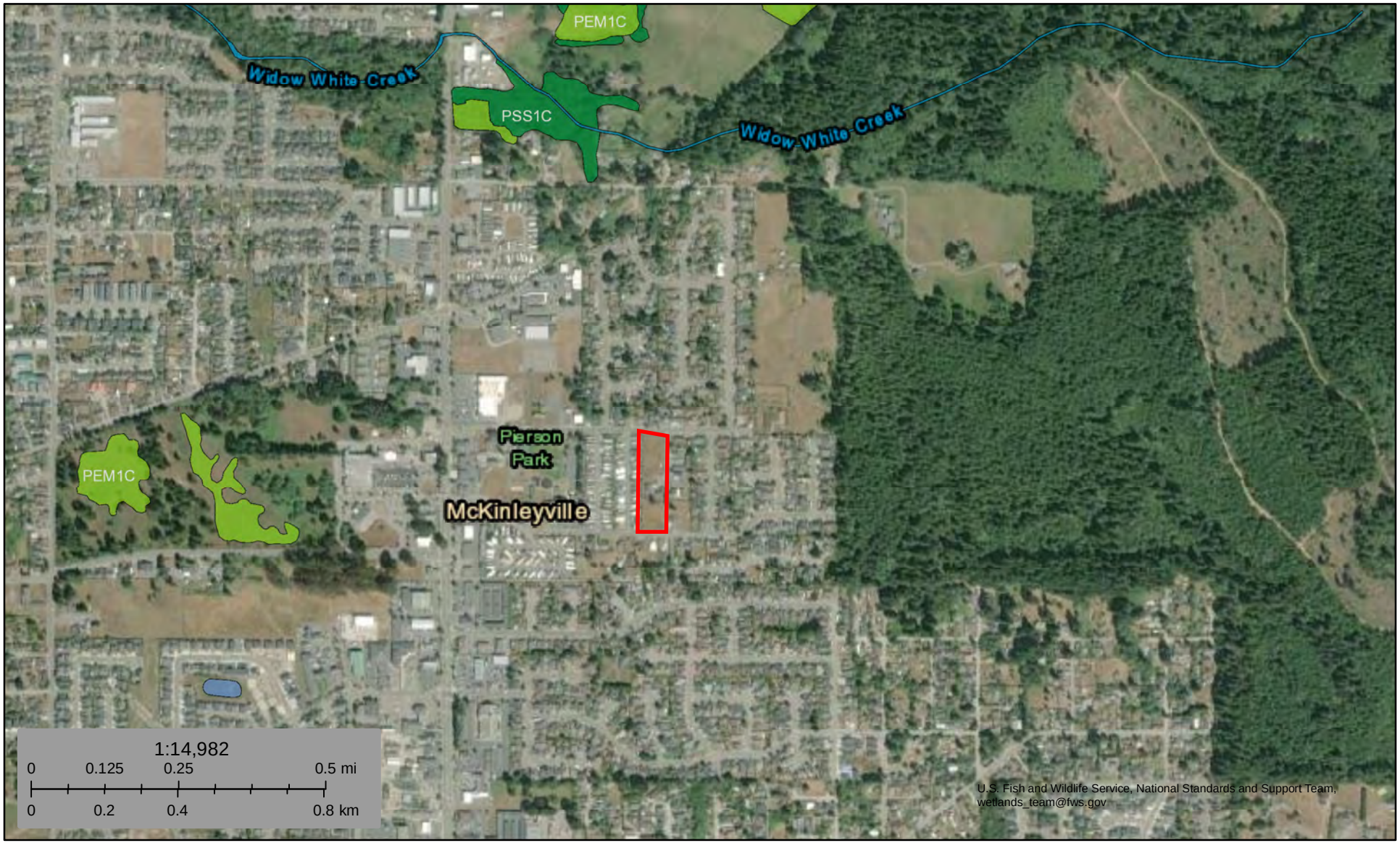
Sources: NRCS
Humboldt County GIS
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

U.S. Fish and Wildlife Service

National Wetlands Inventory

Pickett Road 2023

APN# 510-381-021
McKinleyville, Humboldt County, CA.



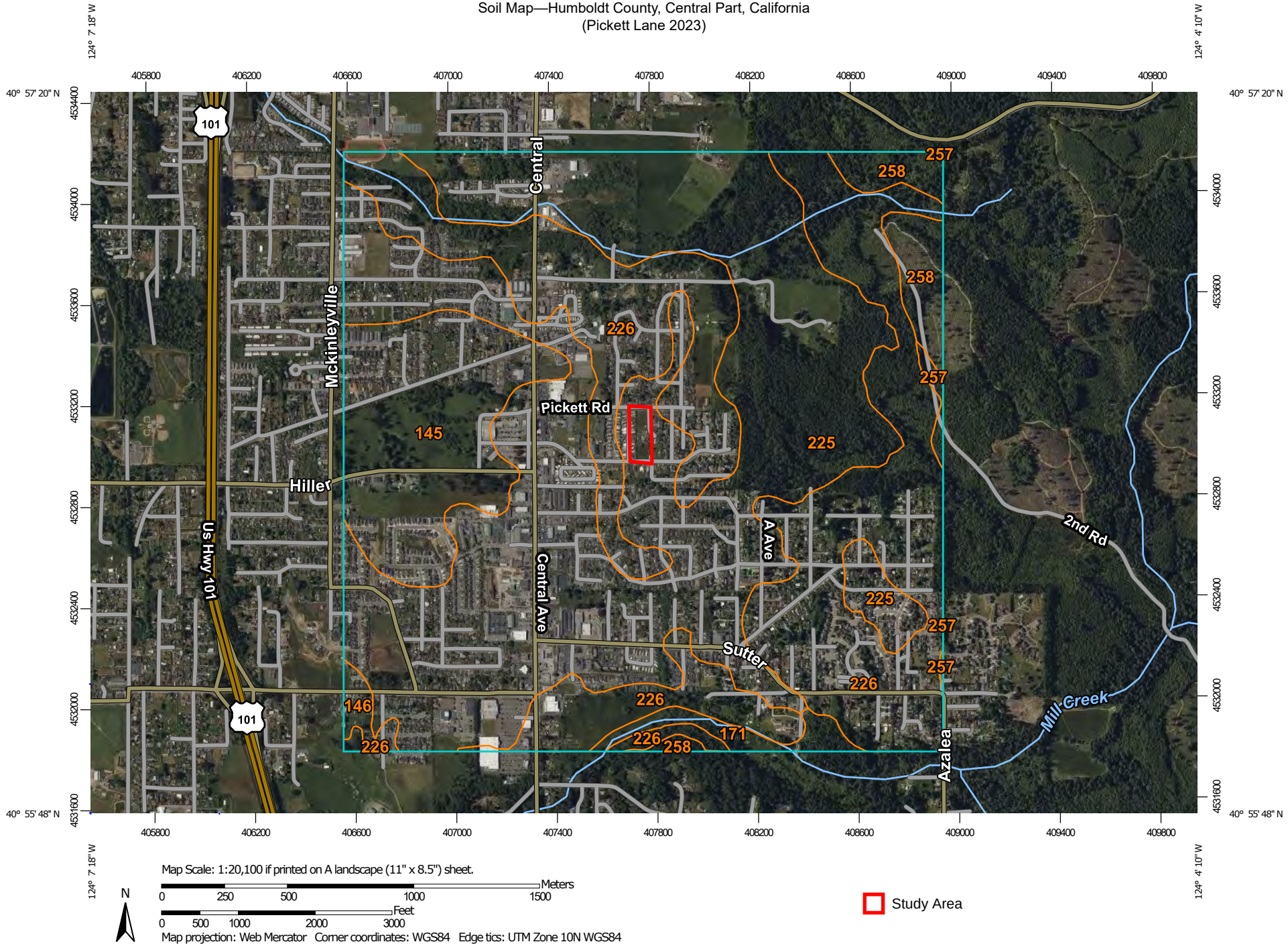
January 2, 2024

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.

Wetlands

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

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper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124° 4' 10" W
40° 57' 20" N
40° 55' 48" N
405800
406200
406600
407000
407400
407800
408200
408600
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409400
409800
4534400
4534000
4533600
4533200
4532800
4532400
4532000
4531600
101
Central
Mckinleyville
Pickett Rd
Hillcrest
Us Hwy 101
Central Ave
A Ave
2nd Rd
Sutter
Azalea
Mill Creek
257
258
226
145
225
146
171
Map Scale: 1:20,100 if printed on A landscape (11" x 8.5") sheet.
Meters
0 250 500 1000 1500
Feet
0 500 1000 2000 3000
N
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84
Study Area

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

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

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

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

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

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

Soil Survey Area: Humboldt County, Central Part, California
Survey Area Data: Version 10, Aug 28, 2023

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

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

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
145	Halfbluff-Tepona-Urban Land, 0 to 2 percent slopes	155.7	11.1%
146	Halfbluff-Tepona-Urban Land, 2 to 9 percent slopes	7.4	0.5%
171	Worswick-Arlynda complex 0 to 2 percent slopes	18.7	1.3%
225	Arcata and Candymountain soils, 0 to 2 percent slopes	708.3	50.5%
226	Arcata and Candymountain soils, 2 to 9 percent slopes	466.8	33.3%
257	Lepoil-Candymountain complex, 2 to 15 percent slopes	4.8	0.3%
258	Lepoil-Espa-Candymountain complex, 15 to 50 percent slopes	42.0	3.0%
Totals for Area of Interest		**1,403.8**	**100.0%**

Pickett Road 2023

Wetland Plot Map

APN# 510-381-021

McKinleyville, Humboldt County, CA.

Attachment B
ACOE Wetland Plot Forms

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

Project/Site: Pickett Lane City/County: McKinleyville/Humboldt Sampling Date: 12/9/23

Applicant/Owner: VALADAO APN: 510-381-021 State: CA Sampling Point: 1

Investigator(s): J. REGAN Section, Township, Range:

Landform (hillslope, terrace, etc.): TERRACE Local relief (concave, convex, none): NONE Slope (%): 0%-1%

Subregion (LRR): A Lat: 40.9435 Long: -124.0958 Datum: WGS 84

Soil Map Unit Name: ARCATA and CANDYMOUNTAIN 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 _____	No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	

Remarks: WINTER VISIT, VEGETATION LOW + MOW/GRAZED

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 10m d)			
1. Cotoneaster sp. (Seedlings)	1%	Yes	NI
2.			
3.			
4.			
5.			
	1% = Total Cover		
Herb Stratum (Plot size: 1 m²)			
1. Rumex acetosella	15	Yes	FACU
2. Hypochaeris radicata	10		FACU
3. Trifolium repens	15	Yes	FAC
4. Fragaria chilensis	8		FACU
5. Grasses *	50	Yes	*FACU
6.			
7.			
8.			
9.			
10.			
11.			
	98% = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 2%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 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.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: * See grammoid list in report body 4/12 species are fac, remainder are upland species. Fails prevalence. Consider FACU here

SOIL

Sampling Point: 1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-19"	10YR 3/3	100%					loam	
20"+	10YR 3/2	80%					loam	
	10YR 5/6	19%					Sandy clay loam	Bright soils, not reduced
	10YR 6/6	1%					"	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Bright colored soil layer underlies site, similar to other McKinleyville sites. Not reduced but sometimes with hard contrasting concretions

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ 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)

Secondary Indicators (2 or more required)

- ___ 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 X Depth (inches): _____

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

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

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

Project/Site: Pickett Lane City/County: McKinleyville/Humboldt Sampling Date: 12/9/23

Applicant/Owner: VALADAO APN: 510-381-021 State: CA Sampling Point: 2

Investigator(s): J. Regan Section, Township, Range:

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-2-1%

Subregion (LRR): A Lat: 40.9435 Long: -124.0958 Datum: WGS 84

Soil Map Unit Name: Arcata and Candymountain 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 ____	No X	Is the Sampled Area within a Wetland? Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks: Winter visit, vegetation low + mown/grazed

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 10md)			
1. Cotoneaster sp.	1%	Yes	FACU
2.			
3.			
4.			
5.			
	1% = Total Cover		
Herb Stratum (Plot size: 1m²)			
1. Rumex acetosella	15		FACU
2. Hypochaeris radicata	10		FACU
3. Trifolium repens	20	Yes	FAC
4. Taraxacum officinale	5		FACU
5. Grasses *	50+	YES	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	100% = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	10% = Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	20	x 3 =	60
FACU species	80	x 4 =	320
UPL species	1	x 5 =	5
Column Totals:	101 (A)		385 (B)

Prevalence Index = B/A = 3.8

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 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.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:

* See report + Plot 1: 4/12 Grasses are FAC, remainder are FACU → UPL

SOIL

Sampling Point: 2

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-20"	10yr 3/2	100					loam/clay	
20"+	10yr 3/2	80%					clay Loam (some salty grit)	
	10yr 5/6	15%					"	
	10 yr 6/6	5%					"	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Bright colored soils underlie unreduced soils,

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ 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)

Secondary Indicators (2 or more required)

- ___ 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 X Depth (inches): _____

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

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

Fails FAC Neutral test

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

Project/Site: Pickett Lane City/County: McKinleyville/Humboldt Sampling Date: 12/9/23

Applicant/Owner: VALADAO APN: 510-381-021 State: CA Sampling Point: 3

Investigator(s): J. Regan Section, Township, Range:

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-2-1%

Subregion (LRR): A Lat: 40.9435 Long: -124.0958 Datum: WGS 84

Soil Map Unit Name: Arcata and Candymountain 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 _____	No X	
Hydric Soil Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Wetland Hydrology Present?	Yes _____	No X	

Remarks: Winter visit, vegetation low + mown/grazed

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 1m²)			
1. Hypochoeris radicata	10%		FACU
2. Trifolium repens	25%	Yes	FAC
3. Grasses *	60%	Yes	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	95% = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		
% Bare Ground in Herb Stratum _____			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	25	x 3 =	75
FACU species	70	x 4 =	280
UPL species		x 5 =	
Column Totals:	95 (A)		355 (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[1]

___ 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.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks:

*See notes in plot 1 + report. 4/12 Grass species are FAC, remainder are FACU → UPL

SOIL

Sampling Point: 3

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16"	10yr 3/2	100					loam	
17-20"	10 yr 2/1	100					fine loam	Ash?
21 +	10 yr 2/1	40%	10yr 4/6	40%			Coarse sandy loam	bright sandy soil
			10yr 5/8	20%				hard relict nodules

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Potentially site of burn pile in past
Deeper soils w/ relict features NOT REDUCED

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ 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)

Secondary Indicators (2 or more required)

- ___ 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 X Depth (inches): _____

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

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

Soils FAC neutral test

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

Project/Site: Pickett Lane City/County: McKinleyville/Humboldt Sampling Date: 12/9/23
Applicant/Owner: Valadao APN: 510-381-021 State: CA Sampling Point: 4
Investigator(s): J. Regan Section, Township, Range:
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-2-1%
Subregion (LRR): A Lat: 40.9435 Long: -124.0958 Datum: WGS 84
Soil Map Unit Name: Arcata and Candymountain 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 ____	No X	
Hydric Soil Present?	Yes ____	No X	Is the Sampled Area within a Wetland? Yes ____ No X
Wetland Hydrology Present?	Yes ____	No X	

Remarks: Winter visit, vegetation low + mown/grazed. Plot 4 is on packed ground, route between yards, along fenceline

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ = Total Cover		
Herb Stratum (Plot size: 1 m²)			
1. Hypochaeris radicata	10%		FACU
2. Trifolium repens	20%	Y	FAC
3. Prunella vulgaris	10%		FACU
4. Fragaria chilonensis	10%		FACU
5. Grasses *	30%	Y	FACU*
6.			
7.			
8.			
9.			
10.			
11.			
	100% = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	20	x 3 =	60
FACU species	80	x 4 =	320
UPL species		x 5 =	
Column Totals:	100 (A)		380 (B)

Prevalence Index = B/A = 3.8

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 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.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:
* Grass tp mown + low. 4/12 species in botany report are FAC, rest are FACU → UPL all are NON-NATIVE

SOIL

Sampling Point: 4

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-13	10YR 3/2	100					Clay loam	
14-20+	10YR 3/4	40?						
	10YR 3/6	20?					Sandy clay	
	10YR 4/3	40?						

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

No reduced matrix, bright sandy soils below warm brown soils.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ 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)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- X 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 X Depth (inches): _____

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

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

Site is in a swale created by travel between yards.

Fails Fac Neutral test

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

Project/Site: Pickett Lane City/County: McKinleyville/Humboldt Sampling Date: 12/9/23
Applicant/Owner: VALADAO APN: 510-381-021 State: CA Sampling Point: 5
Investigator(s): J. REGAN Section, Township, Range:
Landform (hillslope, terrace, etc.): TERRACE Local relief (concave, convex, none): NONE Slope (%): 02-1%
Subregion (LRR): A Lat: 40.9435 Long: -124.0958 Datum: WGS 84
Soil Map Unit Name: ARCATA and CANDYMOUNTAIN 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 _____ No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____ No X	
Wetland Hydrology Present?	Yes _____ No X	

Remarks: WINTER VISIT, VEGETATION LOW + MOWN/GRAZED

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 1 m²)			
1. Hypochaeris radicata	15%	Y	FACU
2. Trifolium repens	15%	Y	FAC
3. Fragaria chiloensis	15%	Y	FACU
4. Grasses *	50%	Y	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	95% = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		
% Bare Ground in Herb Stratum _____			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 25% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: (A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 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.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks:
* Grass sp mown = from botanical survey 4/12 grass species are FAC, rest are FACU – UPL

SOIL

Sampling Point: 5

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-21+	10yr 3/3	100					Clay loam	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ 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)

Secondary Indicators (2 or more required)

- ___ 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 X Depth (inches): _____

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

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

Soils FAC neutral test

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

Project/Site: Pickett Lane City/County: McKinleyville/Humboldt Sampling Date: 12/9/23
Applicant/Owner: Valadao APN: 510-321-021 State: CA Sampling Point: 6
Investigator(s): J. Regan Section, Township, Range:
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0%-1%
Subregion (LRR): A Lat: 40.9435 Long: -124.0958 Datum: WGS 84
Soil Map Unit Name: Arcata and Candymountain 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 ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks: Winter visit, vegetation low + mown/grazed

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ = Total Cover		
Herb Stratum (Plot size: 1 m²)			
1. Raphanus Sativus	15%	Y	NI
2. Trifolium repens	15%	Y	FAC
3. Geranium dissectum	5%		NI
4. Rumex acetosella	10%		FACU
5. Hypochaeris radicata	10%		FACU
6. Grasses *	50	Y	FACU
7.			
8.			
9.			
10.			
11.			
	105% = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 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.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:
*Grasses mown, 4/12 identified species are FAC, rest are FACU–UPL, all non-native

SOIL

Sampling Point: 6

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16"	10yr 3/2	100					Loam	
17-18"+	10yr 3/2	17%					Sandy clay loam	
	10yr 4/4	80%					"	Compact layer
	10 yr 5/6	8%					"	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Not a reduced matrix, bright soils are not redox features or are too deep.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ 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)

Secondary Indicators (2 or more required)

- ___ 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 X Depth (inches): _____

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

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

Fails FAC neutral test

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

Project/Site: Pickett Lane City/County: McKinleyville/Humboldt Sampling Date: 12/9/23
Applicant/Owner: VALADAO APN: 510-381-021 State: CA Sampling Point: 7
Investigator(s): J. REGAN Section, Township, Range:
Landform (hillslope, terrace, etc.): TERRACE Local relief (concave, convex, none): NONE Slope (%): 02-1%
Subregion (LRR): A Lat: 40.9435 Long: -124.0958 Datum: WGS 84
Soil Map Unit Name: ARCATA and CANDYMOUNTAIN 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 _____ No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____ No X	
Wetland Hydrology Present?	Yes _____ No X	

Remarks: WINTER VISIT, VEGETATION LOW + MOWN/GRAZED

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 1m²)			
1. Leontodon saxatilis	5		FACU
2. Hypochoeris radicata	10	Y	FACU
3. Trifolium repens	10	Y	FAC
4. Rumex acetosella	10	Y	FACU
5. Geranium dissectum	5		NI
6. Grasses *	50?	Y	FACU
7.			
8.			
9.			
10.			
11.			
	90? = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 25? (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 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.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: * Grasses mown, From botanical report 4/12 grass sp are FAC, rest are FACU – upl

SOIL

Sampling Point: 7

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20"	10yr 2/2	99	10yr 5/6	1	*	M	Clay loam	Coarse is had concretions
21"+	10yr 3/2	80%	10yr 5/6, 6/6	20%	*		Sandy clay loam	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks: Bright Soils underlay as at Plots 1-4, 6. Hard Concretions present in bright Soils, NOT Reduced Matrix

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ 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)

Secondary Indicators (2 or more required)

- ___ 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 X Depth (inches): _____

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

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

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

Remarks: Fails FAC Neutral test

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

Project/Site: Pickett Lane City/County: McKinleyville/Humboldt Sampling Date: 12/9/23

Applicant/Owner: Valadao APN: 510-381-021 State: CA Sampling Point: 8

Investigator(s): J. Regan Section, Township, Range:

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-2%

Subregion (LRR): A Lat: 40.9435 Long: -124.0958 Datum: WGS 84

Soil Map Unit Name: Arcata and Candymountain 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 ____ No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____ No X	
Wetland Hydrology Present?	Yes ____ No X	

Remarks: Winter visit, vegetation low + mown/grazed

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 10 md)			
1. Calycanthus sp. (seedlings)			
2.			
3.			
4.			
5.			
	____ = Total Cover		
Herb Stratum (Plot size: 1m2)			
1. Hypochaeris radicata	10%		FACU
2. Trifolium repens	20%	Y	FAC
3. Rumex acetosella	15%		FACU
4. Grasses *	50%	Y	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	95% = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		
% Bare Ground in Herb Stratum ____			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	20	x 3 =	60
FACU species	75	x 4 =	300
UPL species	____	x 5 =	360
Column Totals:	95% (A)		360 (B)

Prevalence Index = B/A = 3.78

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 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.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: * Grass mown; from botany report 4/12 grass sp. are FAC, rest are FACU-UPL all are non-native

SOIL

Sampling Point: 8

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-19"	10yr 3/2	100?					loam	
10+	10yr 3/2	10%					Sandy clay loam w/ hard relict concretions	
	10 yr 4/6	80%	10yr 6/8	10%				
	10 yr 6/8	10%						

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Hard relict concretions in bright sandy soils deeper in pit, NOT reduced NOT INDICITIVE of Contemporary wetland Setting.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ 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)

Secondary Indicators (2 or more required)

- ___ 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 X Depth (inches): _____

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

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

Soils FAC Neutral test

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

Project/Site: Pickett Lane City/County: McKinleyville/Humboldt Sampling Date: 12/9/23
Applicant/Owner: Valadao APN: 510-321-021 State: CA Sampling Point: 9
Investigator(s): J. Regan Section, Township, Range:
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0%-1%
Subregion (LRR): A Lat: 40.9435 Long: -124.0958 Datum: WGS 84
Soil Map Unit Name: Arcata and Candymountain 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 _____	No X	Is the Sampled Area within a Wetland? Yes _____ No X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	

Remarks: Winter visit, vegetation low + mown/grazed * Lower point on parcel *

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 10m d)			
1. Cotoneaster sp.	30%	Y	NI
2. Vaccinium ovatum	15%	Y	FACU
3. Lonicera involucrata	5%		FAC
4.			
5.			
	50% = Total Cover		
Herb Stratum (Plot size: 1m²)			
1. Poa annua	5%		FAC
2. Hypochaeris radicata	10%	Y	FACU
3. Rumex acetosella	10%	Y	FACU
4. Geranium dissectum	5%		NI
5. Grass sp. poa annua	50%	Y	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	80% = Total Cover		
Woody Vine Stratum (Plot size: 10m d)			
1. Rubus ursinus	2%	Y	FACU
2.			
	2% = Total Cover		

% Bare Ground in Herb Stratum 15%

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 6 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 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.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks:

SOIL

Sampling Point: 9

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-8"	10 YR 3/2	100					loam	
9-18"+	10 YR 3/2	60%	10 YR 4/6	40%				
	10 YR 4/6	40%						NOT a redox feature, mixed matrix

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

No depleted or reduced soils, brighter colors do not appear to be redox.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ 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)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- X 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 X Depth (inches): _____

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

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

Shallowly concave site, likely spot where cows rested

Soils for Neutral test

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

Project/Site: Pickett Lane City/County: McKinleyville/Humboldt Sampling Date: 12/9/23

Applicant/Owner: Valadao APN: 510-381-021 State: CA Sampling Point: 10

Investigator(s): J. Regan Section, Township, Range:

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0%-1%

Subregion (LRR): A Lat: 40.9435 Long: -124.0958 Datum: WGS 84

Soil Map Unit Name: Arcata and Candymountain 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 ____ No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____ No X	
Wetland Hydrology Present?	Yes ____ No X	

Remarks: Winter visit, vegetation low + mown/grazed

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ = Total Cover		
Herb Stratum (Plot size: 1m²)			
1. Hypochaeris radicata	10%		FACU
2. Leontodon saxatilis	8%		FACU
3. Prunella vulgaris	5%		FACU
4. Rumex acetosella	12%	Y	FACU
5. Trifolium repens	15%	Y	FAC
6. Grasses *	50%	Y	FACU
7.			
8.			
9.			
10.			
11.			
	100% = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	15	x 3 =	45
FACU species	85	x 4 =	340
UPL species	0	x 5 =	0
Column Totals:	100 (A)		385 (B)

Prevalence Index = B/A = 3.85

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 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.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:

* Grass is mown, Grass species from botanical survey: 4/12 species are FAC, rest are FACU-Upl and all are non-native

SOIL

Sampling Point: 10

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16"	10yr 3/3	100					loam	
17"-20"	10yr 3/3	97%	10yr 4/3	3%	C	M	loamy clay	Faint Contrast
21"+	10yr 3/3	60%	10yr 4/3, 4/4	40%	C	M	clay loam	Faint Contrast

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks: Pantastic Soil → is faint at too deep

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ 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)

Secondary Indicators (2 or more required)

- ___ 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 X Depth (inches): _____

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

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

Fails Fac Neutral test