Aquatic Resource Delineation Report

01/26/2023

Prepared for:
Marko Teovski
APN 208-241-017-000

Prepared by:
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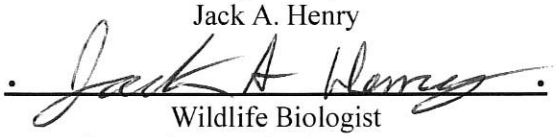

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1.0 Introduction

This document provides the results of an aquatic resource delineation conducted on APN 208-241-017-000 in Humboldt County, California. The purpose of this report is 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 thus hydrologic determinations are tentative, but are based on rational within the method. No jurisdictional wetland was identified as a result of this report.

Location

The study area is located near the confluence of County Line Creek and the Mad River approximately 2.5 aerial miles northeast of Dinsmore, California 95526. The study area occurs in the NW ¼ of Section 36, T2N, R5E, Humboldt County in the Dinsmore, 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 midslope along Eightmile Ridge on the eastern slopes of the Mad River. The elevation of the study area is approximately 3,000 feet about mean sea level. Slopes on the property vary but are generally steep (>30%) with acute areas displaying gradual slopes (<10%). Slopes at the study area were generally gradual, approximately 5%.

Vegetation
The study area consists of a small meadow opening within mixed conifer hardwood timberlands. At the time of the site visit, recent ground disturbance had resulted in the acute area becoming colonized by invasive yellow star thistle (*Centaurea solstitialis*). Prior to ground disturbance, aerial imagery shows the area displaying a grassland plant community. Reference sites within the parcel reveal the study area was likely dominated by nonnatives such as Yorkshire fog (*Holcus lanatus*), sweet vernal grass (*Anthoxanthum odoratum*), Harding grass (*Phalaris aquatica*), Klamath weed (*Hypericum perforatum*), and wild oats (*Avena sp.*). Within the meadow is a small community (approx. 500 s.f.) of spreading rush (*Juncus patens*) situated between two boulders. The spreading rush community appeared to be monotypic with nonnative species encroaching. Although vegetation nearby had been disturbed, the spreading rush plant community appears the same size as historic photographs and is considered undisturbed.

Soils
The project parcel contains three soil types; however sample points occurred within only one of these. (U.S. Department of Agriculture, Natural Resources Conservation, 2016):

- 4426 – Pasturerock-Coyoterock-Maneze complex, 15 to 50 percent slopes, dry. This soil type generally consists of 40% Pasturerock dry, 25% Coyoterock dry, 15%Maneze dry, and 20% other soil components. These soils are sourced from colluvium derived from sandstone and mudstone. Generally, these soils are dominated by clay and loam textures with variable amounts of gravel. These soils are well drained with hydric soils ratings that range from C-D.

Although soil disturbance had occurred within close proximity to the spreading rush community, there was no evidence of it having impacted the size of the community. Soils are considered normal and undisturbed for this report.

Hydrology
The Project Parcel contains multiple watercourses and at least one man-made pond. However, the study area is located outside existing aquatic habitats and does not receive water from or drain water to any watercourse or water body. Hydrology at the study area is chiefly influenced by storm water infiltration and potentially emergent ground water. Direct rainfall and an acute drainage area upslope are the main sources for soil saturation at the study area. There is a potential, given the unlined man-made pond upslope and the topography of the site for the emergence of subsurface groundwater to also factor into soil saturation. The lack of drainage from the study area indicates, if occurring, this emergence results in temporal soil saturation and does not generate overland flows. Rainfall for the 21-22 water year was below average, but given the time of year the site visit occurred, hydrologic observations were considered normal.

Aquatic Resources
Two sample points were placed within the spreading rush plant community to test for wetland parameters. The first sample point [SP01] is located in the eastern portion of the spreading rush community near the center of the plant community. The second sample point [SP02] was located on the western edge of the plant community, to assess conditions at the edge of the feature. Parameters at both sample points were similar with little variation documented.

Sample points revealed the site contains hydrophytic plant communities but lacks hydric soils or wetland hydrology, a common occurrence related to heavy annual rainfall in Humboldt County. SP01 and SP02 met the Rapid Test indicator for Hydrophytic Vegetation. Both sites displayed dominant spreading rush communities with small percentages of encroaching upland nonnative plants. Soils at both sites can be characterized by their dark colored matrixes with no observable redoximorphic features. Both sample points encountered fragments of cobble size rocks at a depth of 18-24 inches which prevented further excavation. These soils are characteristic of grasslands with high production of biomass and do not meet any hydric soil indicator. Although the site visit occurred outside of the normal growing season or hydrologic period for wetlands, enough evidence was present to make a hydrology determination. The

combination of lack of redoximorphic features in the soil, lack of one primary indicator, and lack of two secondary indicators lead to the conclusion that the site does not meet wetland hydrology. The lack of secondary indicators and hydric soils are the most significant factors for ruling out wetland hydrology within the study area. The presence of the spreading rush community is likely a result of episodic soil saturation that does not persist to result in wetland parameters. The study area contains a hydrophytic plant community but no 3 parameter wetland features.

References

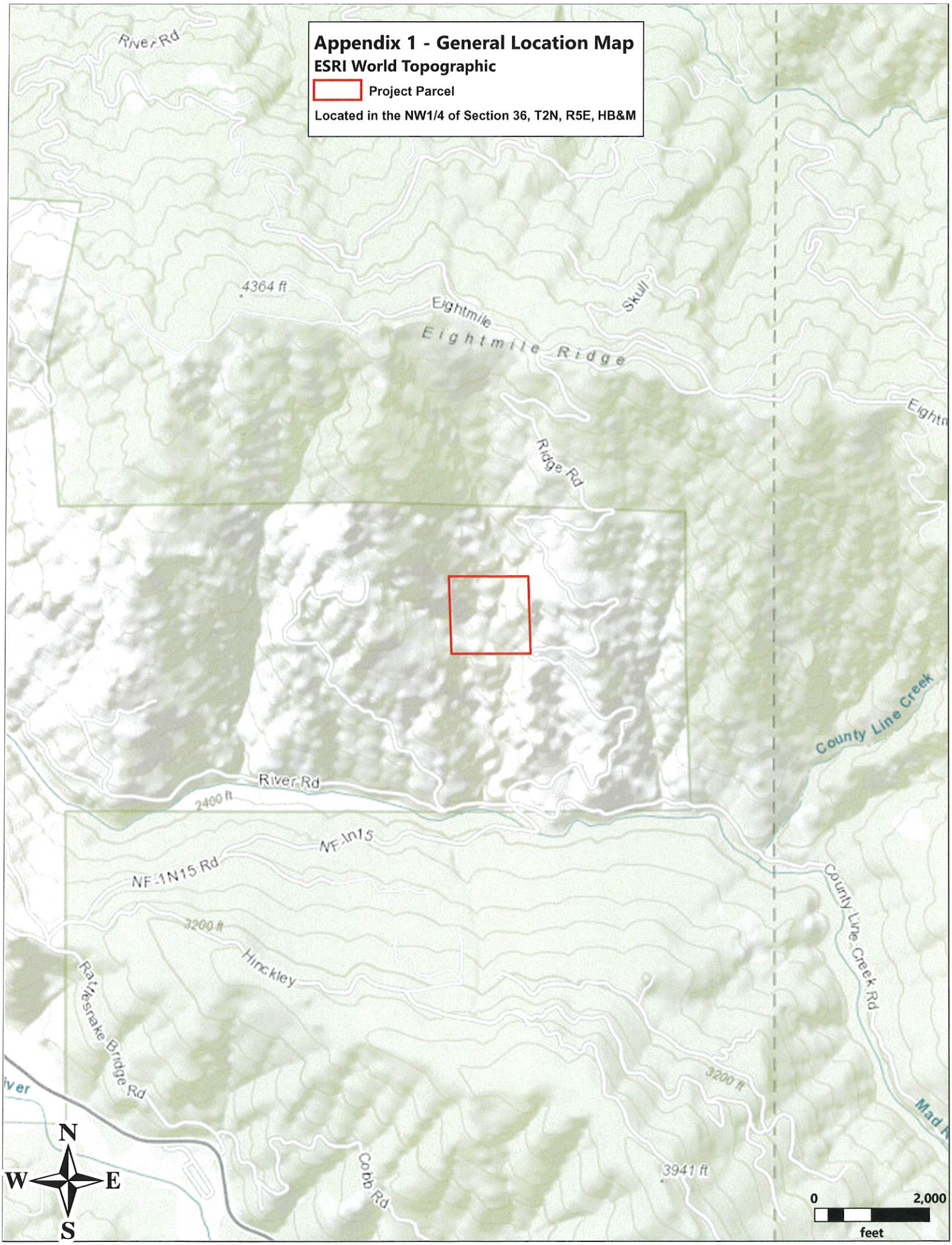
Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1. Vicksburg, MS: U.S. Army Engineer Waterways Experimental Station.

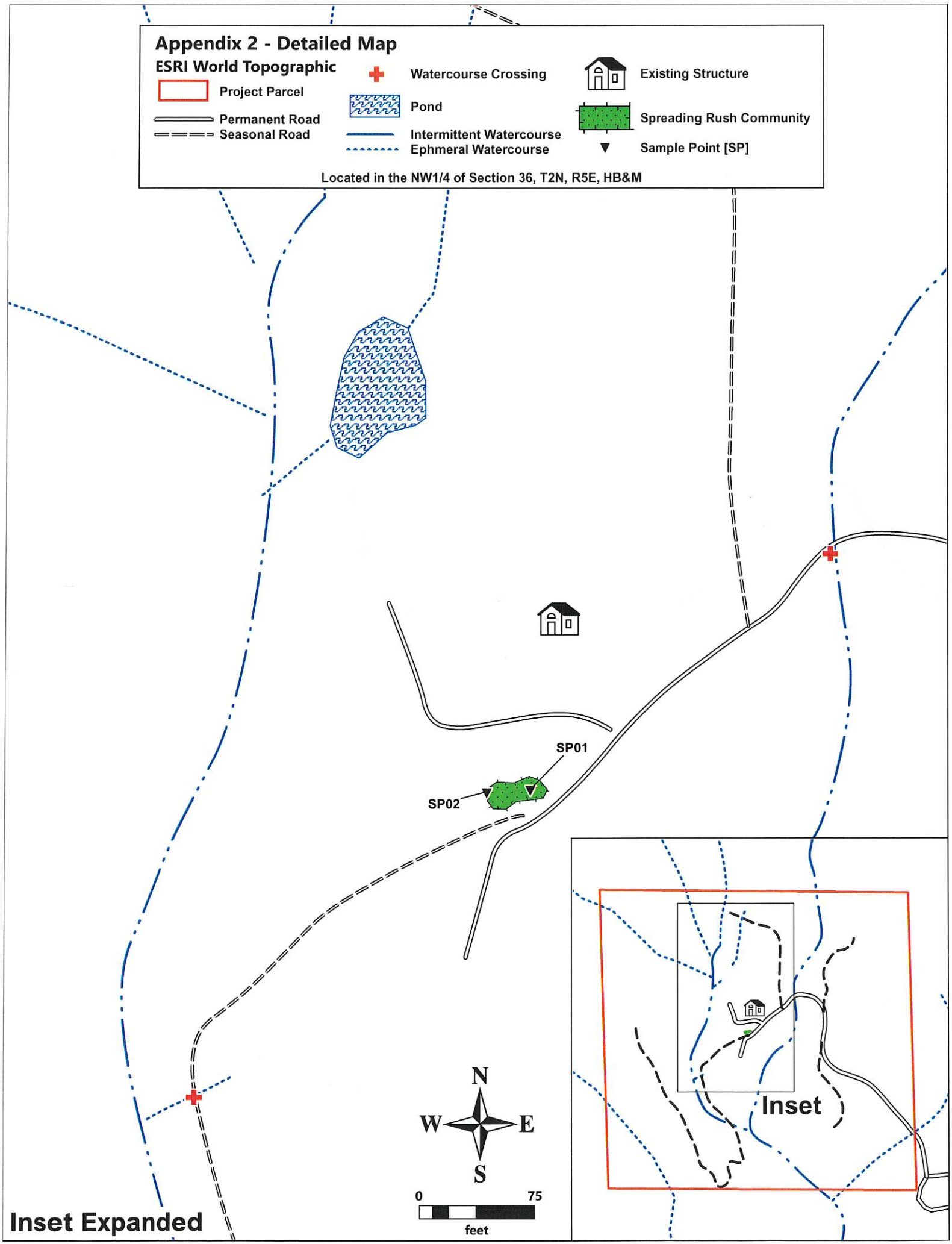
U.S. Army Corps of Engineers. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0), eds. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

U.S. Army Corps of Engineers. 2016. Western Mountains, Valleys, and Coast Region 2016 Regional Plant List. http://wetland_plants.usace.army.mil/

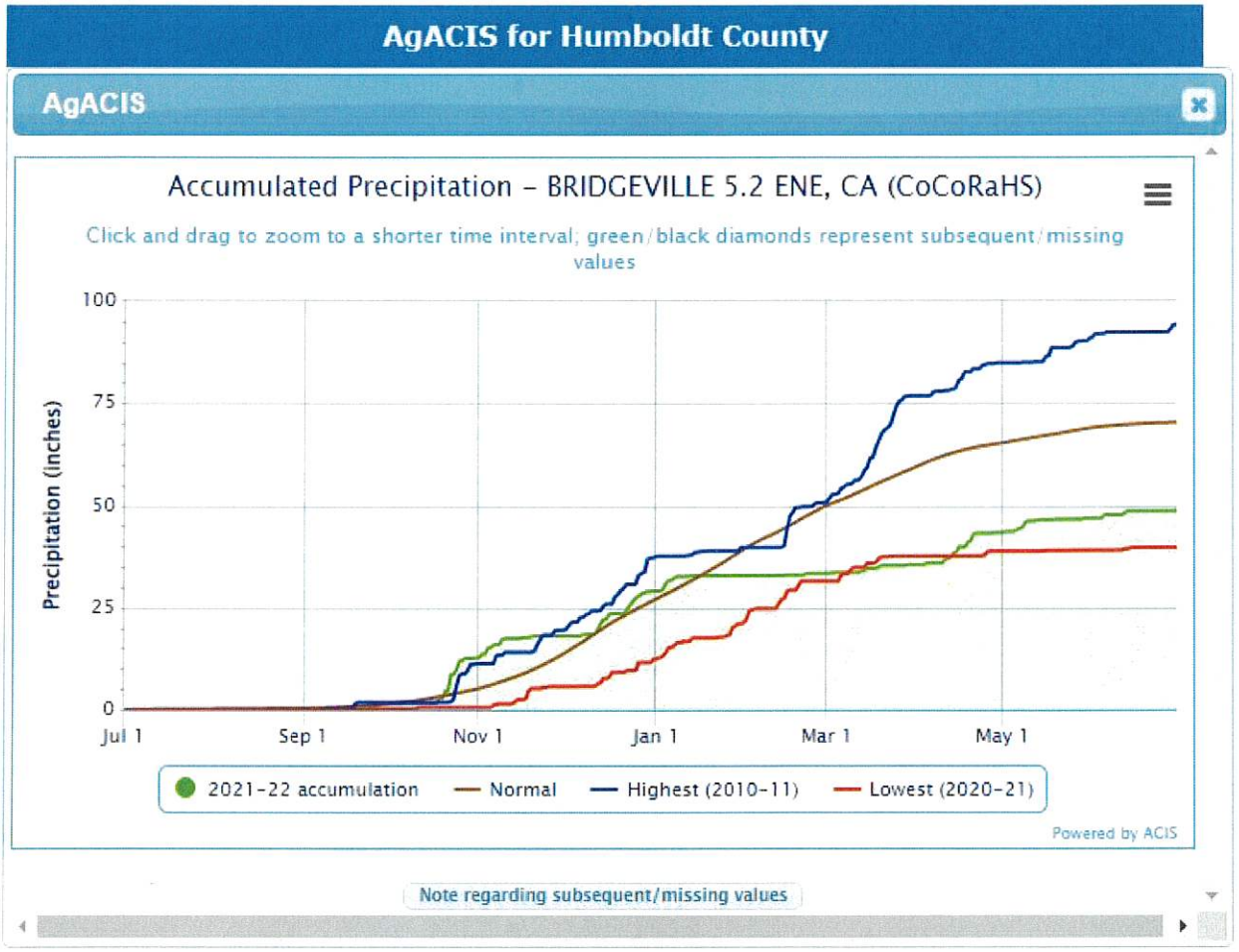
U.S. Department of Agriculture, Natural Resources Conservation Service. 2016. Web Soil Survey http: //websoilsurvey.sc.egov.usda

Winter et al. 1998. Ground water and surface water a single resource. U.S.G.S. Branch of Information Services, Box 25286, Denver, CO.


Appendix 1 - General Location Map
ESRI World Topographic
Project Parcel
Located in the NW1/4 of Section 36, T2N, R5E, HB&M
River Rd
4364 ft
Eightmile
Eightmile Ridge
Skull
Ridge Rd
River Rd
2400 ft
NF-1N15
NF-1N15 Rd
3200 ft
Hinckley
Rattlesnake Bridge Rd
County Line Creek
County Line Creek Rd
3200 ft
3941 ft
Cobb Rd
N
W
E
S
0
2,000
feet


Appendix 2 - Detailed Map
ESRI World Topographic
Project Parcel
Permanent Road
Seasonal Road
Watercourse Crossing
Pond
Intermittent Watercourse
Ephmeral Watercourse
Existing Structure
Spreading Rush Community
Sample Point [SP]
Located in the NW1/4 of Section 36, T2N, R5E, HB&M
SP01
SP02
N
W
E
S
0
75
feet
Inset
Inset Expanded

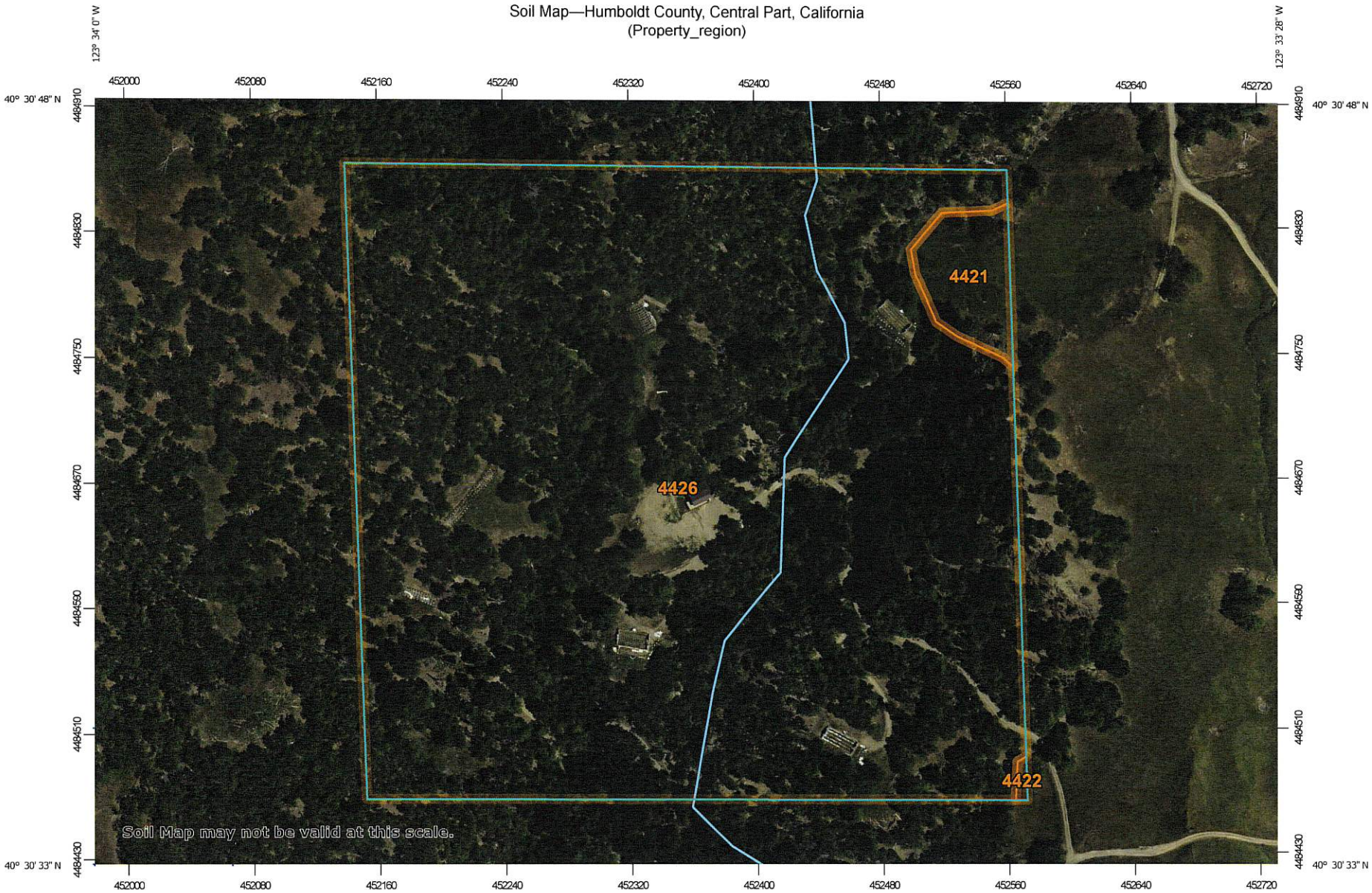
Appendix 3 – Rainfall Data



Rainfall accumulation for the Bridgeville rain meter from July 01, 2021 to June 30, 2022.
Sourced: Applied Climate Information Center (ACIS) – NOAA Regional Climate Center. http://www.rcc-acis.org/
Date Sourced: 01/26/2023

Appendix 4 – NRCS Web Soil Survey

Soil Map—Humboldt County, Central Part, California
(Property_region)



Map Scale: 1:3,440 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 50 100 200 300

Feet
0 150 300 600 900

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

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.

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, Central Part, California
Survey Area Data: Version 7, Sep 6, 2021

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

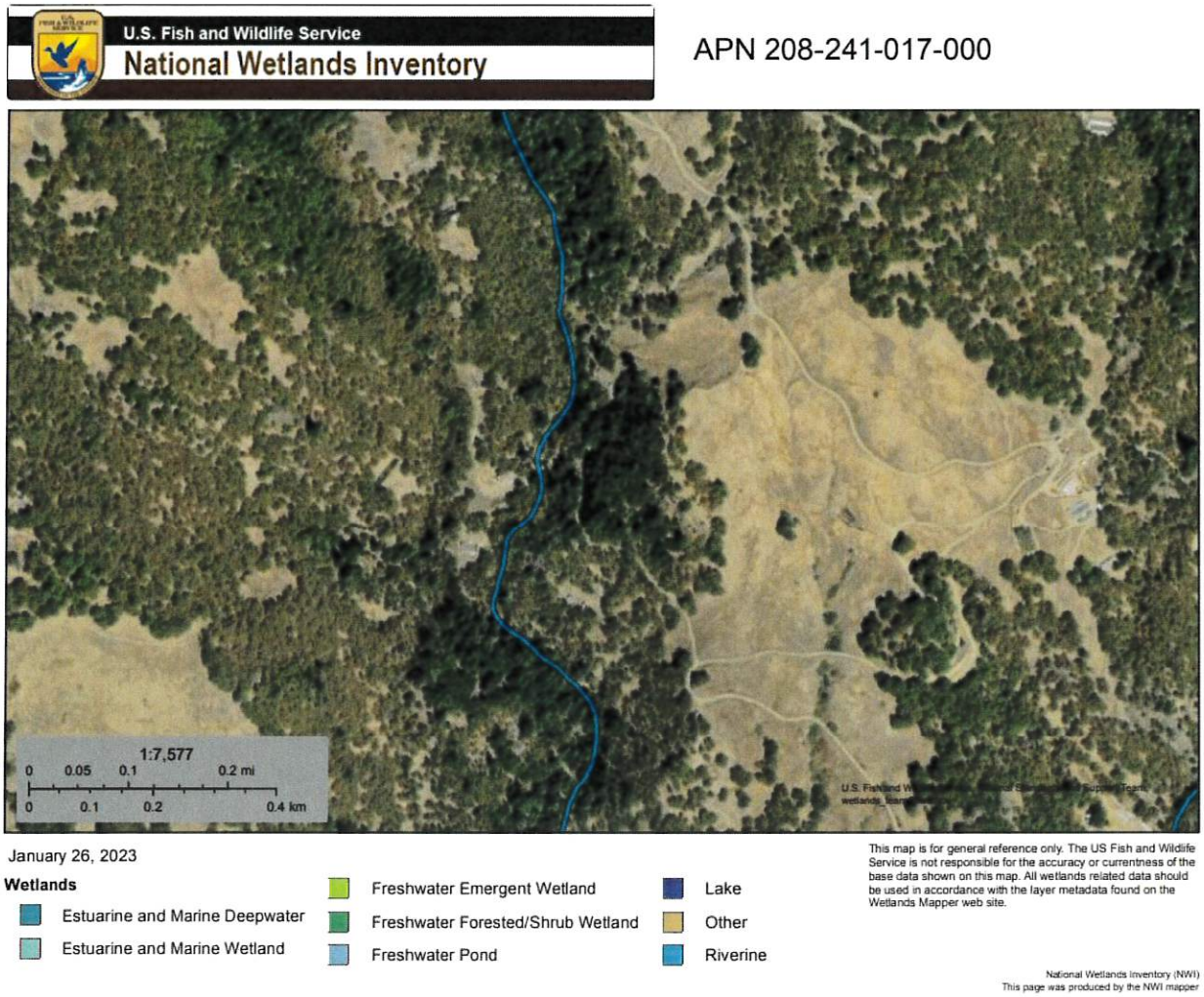
Date(s) aerial images were photographed: Jun 1, 2022—Jun 19, 2022

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
4421	Highyork-Elkcamp-Airstrip complex, 9 to 30 percent slopes	1.1	2.7%
4422	Highyork-Elkcamp-Airstrip complex, 30 to 50 percent slopes	0.0	0.1%
4426	Pasturerock-Coyoterock-Maneze complex, 15 to 50 percent slopes, dry	41.0	97.2%
Totals for Area of Interest		**42.2**	**100.0%**

Appendix 5 – National Wetland Inventory



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

Appendix 6 – Wetland Delineation Data Sheets
(Western Mountains, Valleys, and Coast Region)

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

Project/Site: APN 208-241-017 City/County: Humboldt Sampling Date: 9/16/22
Applicant/Owner: Marko Teovski State: CA Sampling Point: 01
Investigator(s): J. Henry Section, Township, Range: NW 1/4 Sec. 36, T2N, R5E, HBM
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 5%
Subregion (LRR): A Lat: Long: Datum: NAD83
Soil Map Unit Name: 4426 - Pasturerock - Coyoterock - Manerze NWI classification: N/A
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 X	No	
Hydric Soil Present?	Yes	No X	**Is the Sampled Area within a Wetland?** Yes No X
Wetland Hydrology Present?	Yes	No (?)	

Remarks: Sample point is located in a patch of Juncus patens situated between 2 small boulders.

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: r = 3')			
1. Juncus patens	100	D	FACW
2. Verbana lasiostachys	5	-	
3. Hypericum perforatum	5	-	
4. Centaurea solstitialis	5	-	
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	115 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum <5%

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: (A)
Total Number of Dominant Species Across All Strata: (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: (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:
X 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 X No

Remarks: Approx 500 SF patch of Juncus patens, surrounding area is C. solstitialis and nonnative grasses.

SOIL Sampling Point: 01

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
0-24"	10YR 2/1	100					Loam	
18"	Began finding 1"-4" rocks							
24"	Fragmented rocks prevented going deeper							

[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: Dark matrix but no redox features. Given plant community the area is likely wet over and pot. into spring but not saturated long enough to form redox. Frag. rock may result in drainage/percolation.

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)
- X 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 ?

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

Remarks: Sample point does not display any primary indicators. The plant community is hydrophytic and thus passes the FAC Neutral. No other secondary indicators present. Soils are not hydric so hydrology is unlikely.

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

Project/Site: APN 208-241-017 City/County: Humboldt Sampling Date: 02

Applicant/Owner: Marko Teovski State: CA Sampling Point: 9/16/22

Investigator(s): J. Henry Section, Township, Range: NW 1/4 Sec 36, T2N, R5E, HBM

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 5%

Subregion (LRR): A Lat: Long: Datum: NAD83

Soil Map Unit Name: 4426 NWI classification: N/A

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 X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No (?)	

Remarks: SP on edge of Juncus patch

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: r = 3')			
1. Juncus patens	70	D	FACW
2. Hypericum perforatum	10	–	
3. Centaurea solstitialis	10	–	
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	90 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum 10%

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: ____ (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:

- X 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 X No ____

Remarks: Sampled on western edge of Juncus patch

SOIL

Sampling Point: 02

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
0-18"	10YR 3/1	100					loam	
18"	began encountering rocks							

[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: Dark matrix with no 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)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X 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 (?)

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

Remarks: No primary indicators and only one secondary indicator. Although plant community is hydrophytic the soils indicate no wetland hydrology. Sampling did occur in dry season.