
WETLAND DELINEATION

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Humboldt County, CA

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1. INTRODUCTION

The purpose of this study was to identify and delineate wetlands on APN: 211-372-006 near Miranda that could be impacted by commercial cannabis cultivation.

2. WETLAND DEFINITIONS

The 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 conditions do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas."

The State Water Board defines wetlands as:

"An area that is covered by shallow water or where the surface soil is saturated, either year round or during periods of the year; Where that water coverage has caused a lack of oxygen in the surface soil; And has either no vegetation or plants of a type that have adapted to shallow water or saturated soil. Some examples are fresh water marshes, bogs, riparian areas, vernal pools, coastal mud flats and salt marshes."

3. PROJECT AREA DESCRIPTION

Location

The parcel is located at off Dyerville Loop Road approximately 2.5 northeast of Miranda (Section 25, T2S, R3E).

Vegetation

The vegetation in the study area includes non-native grasslands, emergent wetland dominated by and rushes (*Juncus* spp.), and Douglas-fir forest. Oaks (*Quercus* spp.) are often present.

Soil

The soil mapped in the study area is Yorknorth-Windynip complex (USDA, NRCS 2019). This loamy soil is derived from sandstone, mudstone, schist, and earthflow deposits.

Hydrology

The streams and wetlands on the parcel drain into Elk Creek a tributary to the South Fork Eel River.

4. METHODS

Four representative sample plots were evaluated for hydrophytic vegetation, hydric soil, and wetland hydrology using methods described in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual Western Mountains, Valleys, and Coast Region (Version 2.0)* (Army Corps 2010) and the *1987 Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987). The plots represented the variation in vegetation and topography within the wetland and adjacent upland habitat. The wetland determination field data forms are provided in Appendix A. A positive wetland determination is made when all three wetland parameters are present (hydrophytic vegetation, hydric soil, and wetland hydrology).

Field work was conducted by Kyle Wear, M.A., on December 21, 2018 and January 10, 2019. Mr. Wear is a professional botanist and is trained in wetland delineation by the Wetland Training Institute. Mr. Wear has been conducting wetland delineations for over ten years throughout northern California.

Hydrophytic Vegetation

The presence of hydrophytic vegetation in determined by recording the wetland indicator status of each plant species present using the *Western Mountains Valleys and Coast 2016*Regional Wetland Plant List (Army Corps 2016). The indicator status of plants is based on the estimated probability of the species occurring in wetlands. The indicator status categories are:

Obligate Wetland Plants (OBL)	Almost always occur in wetlands	>99% frequency
Facultative Wetland Plants (FACW)	Usually occur in wetlands	67%-99%
Facultative Plants (FAC)	Equally occur wetlands and non-wetlands	33%-67%
Facultative Upland Plants (FACU)	Sometimes occur in wetlands	1%-33%
Obligate Upland Plants (UPL)	Rarely occur in wetlands	<1%

If more than 50% of the dominant plants across all vegetation strata (i.e. trees, shrubs, herbs) are OBL, FACW, or FAC, the vegetation is hydrophytic. Dominance of plants within the plots is determined using the "50/20" rule. This method involves estimating absolute cover of each plant in each vegetation stratum. Dominant plants include the plants with the highest cover that collectively, or individually account for 50% of the total vegetation cover. Additional plants are considered dominant if their cover is at least 20% of the total cover.

Hydric Soil

Indicators of hydric soil include, but are not limited to, a strong hydrogen sulfide (rotten egg) odor, redox concentrations, depleted matrix, and high organic matter content. Soil colors were determined by using a Munsell soil color chart (Gretag Macbeth 2000).

Wetland Hydrology

Indicators of wetland hydrology include, but are not limited to, surface water, high water table, soil saturation, sediment deposits, soil cracks, and oxidized root channels along living roots.

5. RESULTS AND DISCUSSION

Approximately 1.74 acres of emergent wetland were identified in the vicinity of the cannabis cultivation infrastructure (Figure 1). One wetland on the parcel is identified in the *National Wetlands Inventory* (USFWS 2019) and in the *Humboldt County Web GIS* application (Humboldt County 2019).

Hydrophytic Vegetation

Dominant plants in the wetlands include rushes (*Juncus patens* [FACW] and *J. effusus* [FACW]) and pennyroyal (*Mentha pelugium* [OBL]). The adjacent upland grasslands are often dominated by harding grass (*Phalaris aquatica* [FACU]), seaside barely (*Hordeum marinum* [FAC]), dogtail grass (*Cynosurus echinatus* [UPL]), and blue wild rye (*Elymus glaucus* [FACU]). Because of the timimg of the field work in winter, there were several grasses that were not identifiable and likely annual grasses and other herbaceous plants not detectable. The grasslands often include stands of bracken fern (*Pterideum aquilinum* [FACU]). The adjacent forests are often dominated by Douglas fir (*Pseudostuga menziesii* [FACU]) and canyon live oak (*Quercus chryoslepis* [UPL]).

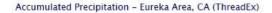
Hydric Soil

Hydric soil observed in the wetlands met indicator F6 (Redox Dark Surface). Soils were generally 10yr 3/1 with approximately 10% 7.5yr 5/6 redox concentrations. Upland soils were generally 10yr 2/2 and lacked redox concentrations.

Wetland Hydrology

Petrushevski APN: 211-372-006

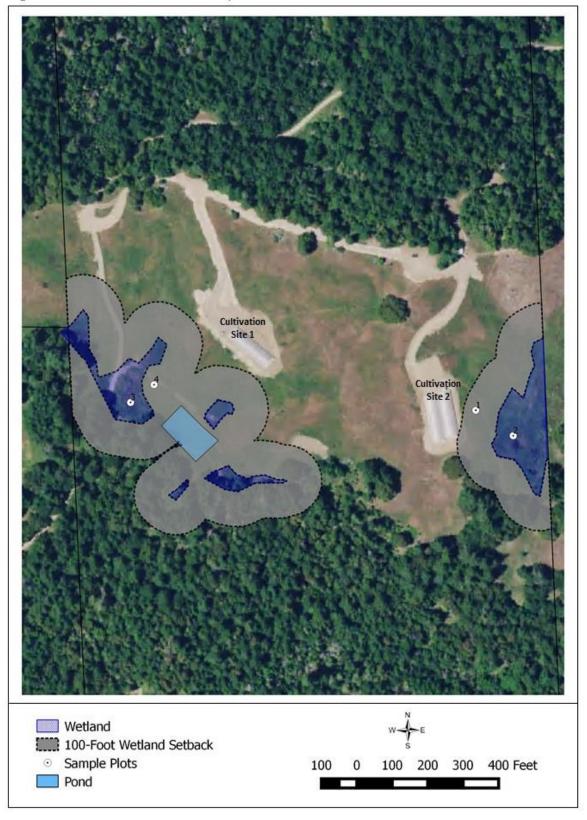
The study was conducted after a period of slightly lower that normal rainfall. Wetland hydrology indicators present in the wetlands included A1 (Surface Water), A2 (High Water Table), and A3 (Saturation). Upland areas lacked a water table or soil saturation within 12 includes of the surface. The culvert draining the roadside ditch onto the hillslope at Cultivation Site 1 was flowing onto the hillslope on January 10th..





3

Figure 1. Wetland Delineation Map.



6. REFERENCES

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https://websoilsurvey.sc.egov.usda.gov

Appendix A. Field Data Forms.

WETLAND DETERMINATION DA		VI – West	ern Mour	ntains, Valley			
Project/Site: APN 211-372-00	<u>φ</u> (City/County:	Hum	boldt	Sampling	Date:	-21-11
Applicant/Owner: D. Petrusherski				_	A Sampling		
Investigator(s): K. Wew							
Landform (hillslope) terrace, etc.):		Local relief	(concave, g	onvex none):	, ,	Slope (%): 10
Subregion (LRR):	_tat. E	4332	62.5	Nyu	157148.6	Datum: _	JAD83
Soil Map Unit Name: Yorknorth -W							
Are climatic / hydrologic conditions on the site typical for this	,	1	F				
Are Vegetation, Soil, or Hydrologys	ignificantly	disturbed?	Are "l	Normal Circumsta	ances" present?	Yes 💢	No
Are Vegetation, Soil, or Hydrology n					y answers in Rem		
SUMMARY OF FINDINGS - Attach site map	showina	samplin	a point la	ocations, tran	nsects, impor	tant featur	es. etc.
Hydrophytic Vegetation Present? Yes N			3		,,		
Hydric Soil Present? Yes N		I I	e Sampled	Area		V	
Wetland Hydrology Present? Yes N		with	in a Wetlan	d? Ye	es No		
Remarks:							
VEGETATION – Use scientific names of plan	ts.						
		Dominant	Indicator	Dominance Te	st worksheet:		
Tree Stratum (Plot size:)		Species?		Number of Dom			
1					FACW, or FAC:	O	_ (A)
2.				Total Number o	of Dominant	3	
3				Species Across	All Strata:	>_	_ (B)
4				Percent of Dom		d	
Sapling/Shrub Stratum (Plot size:)		_= Total Co	ver		FACW, or FAC:	<u> </u>	_ (A/B)
1					dex worksheet:		
2					ver of:		
3				1	X		
4	-			1	x:		į.
5					x		- 1
Herb Stratum (Plot size: 101-radjus		= Total Co	ver		x		1
1. Association (Floridae)					(A)		i
2.							(5)
3. Pteridium aquilinum	20	Y	FACU		e Index = B/A =		
4. Elyons glaws	20	Y	FACU		egetation Indicat		
5. Cynosins echinatus	20	Y	UPL		est for Hydrophyti nce Test is >50%	c vegetation	
6. Runex crisps	10	N	FAC		nce Index is ≤3.01		
7. Circilm volgare	2	N	FACU		logical Adaptation		Inporting
8. Hyperium pertoratum	5	N	FACU	data in F	Remarks or on a s	eparate shee	t)
9. Ofter non-flowering/non	10	N	3	5 - Wetland	Non-Vascular Pia	ants ¹	1
10. Idable - Gresses					Hydrophytic Veg		
11				¹ Indicators of hy	dric soil and wetla	and hydrology	must
Woody Vine Stratum (Plot size:)		= Total Cov	er	ne present, unie	ess disturbed or pr	obiematic.	
1							ĺ
2				Hydrophytic Vegetation		. /	
		= Total Cov	er	Present?	Yes	No X	
% Bare Ground in Herb Stratum							1
romand.							

SOIL

Sampling Point:	1	
ators.)		

Depth	Motrix						
(inches)	Matrix Color (moist)	%	Color (moist)	Features % Tv	pe ¹ Loc ²	- Texture	Remarks
	10712/2						
0 10	10/11						
¹ Type: C=C	oncentration, D=Dep	letion RM=Re	duced Matrix CS	=Covered or (Coated Sand (Grains ² Loc	ation: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Applic	able to all LR	Rs, unless other	wise noted.)	Codica Cana (rs for Problematic Hydric Soils ³ :
Histosol			Sandy Redox (S				Muck (A10)
	pipedon (A2)		Stripped Matrix				Parent Material (TF2)
	istic (A3)		Loamy Mucky M	` '	xcept MLRA 1		Shallow Dark Surface (TF12)
	en Sulfide (A4)		Loamy Gleyed N	Matrix (F2)	-		er (Explain in Remarks)
	d Below Dark Surfac	e (A11)	Depleted Matrix	, ,			•
	ark Surface (A12)		Redox Dark Sur	. ,		³ Indicato	rs of hydrophytic vegetation and
	Mucky Mineral (S1)		Depleted Dark S	` '			nd hydrology must be present,
	Gleyed Matrix (S4)		Redox Depressi	ons (F8)		unles	s disturbed or problematic.
	Layer (if present):						
							~/
Depth (in	ches):		_			Hydric Soil	Present? Yes No
Remarks:							
HYDROLO							
Wetland Hy	GY drology Indicators:						
			heck all that apply)		Secon	dary Indicators (2 or more required)
Primary Indi	drology Indicators:			r) ned Leaves (E	39) (except		dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2,
Primary India	drology Indicators: cators (minimum of c		Water-Stair				
Primary India	drology Indicators: cators (minimum of c Water (A1) ater Table (A2)		Water-Stair	ned Leaves (E I, 2, 4A, and 4		W	ater-Stained Leaves (B9) (MLRA 1, 2,
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Primary India Surface High Wa Saturatia Water M Sedimer Drift Der Algal Ma Iron Der Surface Inundati Sparsely Field Obser Surface Water Table Saturation Princludes car	drology Indicators: cators (minimum of content of conte	magery (B7) e Surface (B8) es No _ es No _ es No _	Water-Stain MLRA 1 Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iror Stunted or Other (Expl	ned Leaves (E I, 2, 4A, and 4 B11) rertebrates (B Gulfide Odor (I hizospheres a if Reduced Iro n Reduction in Stressed Plan lain in Remark hes): hes):	13) C1) along Living Roon (C4) Tilled Soils (Cats (D1) (LRR	W Di Si pots (C3) G Si Si (C6) F/ A) Fr	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9) eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7)
Primary India Surface High Wa Saturatia Water M Sedimen Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely Field Obser Surface Water Water Table Saturation Pr (includes cap	drology Indicators: cators (minimum of content of conte	magery (B7) e Surface (B8) es No _ es No _ es No _	Water-Stain MLRA 1 Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iror Stunted or Other (Expl	ned Leaves (E I, 2, 4A, and 4 B11) rertebrates (B Gulfide Odor (I hizospheres a if Reduced Iro n Reduction in Stressed Plan lain in Remark hes): hes):	13) C1) along Living Roon (C4) Tilled Soils (Cats (D1) (LRR	W Di Si pots (C3) G Si Si (C6) F/ A) Fr	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9) eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7)



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

Project/Site: APN 211-372-00	6	City/County: H-	meoldt	Sampling Da	ite: 12-21-18
Applicant/Owner: D. Petrusheys)	4)		State:	Sampling Po	int Z
			o, Range: 25, 5		
Landform (hillslope, terrace, etc.):			convex, none):	· •	
Subregion (LRR):			6 Long: N445		
Soil Map Unit Name: Yorkna-th -W.					
		,		•	135 12
Are climatic / hydrologic conditions on the site typical for		,			. /
Are Vegetation, Soil, or Hydrology			Are "Normal Circumstand		
Are Vegetation, Soil, or Hydrology			(If needed, explain any a		
SUMMARY OF FINDINGS – Attach site ma		sampling pol	nt locations, trans	ects, importan	t reatures, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Yes Yes	No	Is the Sam	pled Area		
Hydric Soil Present? Wetland Hydrology Present? Yes Yes	No	within a W	etland? Yes	<u>×</u> No	
Remarks:	140				
VEGETATION - Use scientific names of pl	ants.				
	Absolute			worksheet:	
Tree Stratum (Plot size:)		Species? Statu	Number of Domin		3 (1)
1.			That Are OBL, FA	CW, or FAC:	(A)
2.			Total Number of D		3
3.			Species Across A	I Strata:	(B)
4		= Total Cover	Percent of Domina		100 (A/B)
Sapling/Shrub Stratum (Plot size:)		- Total Covel	That Are OBL, FA		(A/B)
1					ultiply by:
2				x1=	
3				x 2 =	
4			,	x 3 =	
5				x 4 =	
Herb Stratum (Plot size: 101-radius		= Total Cover	1	x 5 =	
1. Junes paters	20	Y FAC	Column Totals: _	(A)	(B)
2. Carex sp. Clooks like	7.0	Y FAC	W Broyslance	ndov = D/A =	
3. C. gynodynama)		or OBL	2 I TOVALETICE	ndex = B/A =etation Indicators	
4.				t for Hydrophytic V	
5. Mertha pulegium	20	Y OBL			goldani
6. Phalais agration + other	20	W ?	3 - Prevalence	e Index is ≤3.0 ¹	
7. dead grasses			4 - Morpholog	ical Adaptations ¹ (F	Provide supporting
8				marks or on a sepa	, ,
9				on-Vascular Plants	
10				ydrophytic Vegetat	
11.			Indicators of hydro	ic soil and wetland disturbed or proble	hydrology must
Woody Vine Stratum (Plot size:)		Total Cover	25 procent, uness		Jinauo,
1			Hudra - L. d.		
2			Hydrophytic Vegetation	./	
		Total Cover	Present?	Yes X No	·
% Bare Ground in Herb Stratum Remarks:					
- · · · · · · · · · · · · · · · · · · ·					

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c	$\boldsymbol{\Gamma}$		
а	u	и	L

Sampling Point: ______

	,,,ba.a /2000	o the cop.	h needed to document the indicator or o	committee absorber of maloatoroly
Depth	Matrix		Redox Features	
(inches)	Color (moist)	%	Color (moist) % Type ¹ L	Loc ² Texture Remarks
Pland				
	1073/1	90	25455//2 10 C	1/2 O1
0-12	107 /1	10	7.545/6 10 C	VI A
			ţ.	
<u> </u>				
¹ Type: C=C	oncentration, D=Depl	etion, RM=	Reduced Matrix, CS=Covered or Coated S	Sand Grains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Applica	able to all	_RRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
Histosol	(A1)		Sandy Redox (S5)	2 cm Muck (A10)
1	pipedon (A2)	,	Stripped Matrix (S6)	Red Parent Material (TF2)
	istic (A3)		Loamy Mucky Mineral (F1) (except MI	
1 —	en Sulfide (A4)		Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
	d Below Dark Surface	e (A11)	Depleted Matrix (F3)	
	ark Surface (A12)	, , , ,	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
1	Mucky Mineral (S1)		Depleted Dark Surface (F7)	wetland hydrology must be present,
	Gleyed Matrix (S4)		Redox Depressions (F8)	unless disturbed or problematic.
	Layer (if present):		Redox Depressions (1 0)	unices distarted of problematic.
_	Layer (ii present).			
Type:				\checkmark
Depth (in	ches):			Hydric Soil Present? Yes No No
Remarks:				
HYDROLO	GY			
-	drology Indicators:			
Primary Indi	cators (minimum of o			
V Surface		ne required	; check all that apply)	Secondary Indicators (2 or more required)
Ja Sullace	Water (A1)	ne required	; check all that apply) Water-Stained Leaves (B9) (exce	
	Water (A1) ater Table (A2)	ne required		
High Wa	ater Table (A2)	ne reguired	Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
High Wa	ater Table (A2) on (A3)	ne required	Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
High Water M	ater Table (A2) on (A3) flarks (B1)	ne reguired	 Water-Stained Leaves (B9) (excess MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
High Wa Saturati Water M Sedimen	ater Table (A2) on (A3) farks (B1) nt Deposits (B2)	ne reguired	Water-Stained Leaves (B9) (excellent MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
High Was Saturati Water Management Sediment Drift De	ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3)	ne reguired	Water-Stained Leaves (B9) (excellent form) MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livi	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ing Roots (C3) Geomorphic Position (D2)
High Was Saturati Water Management Sediment Drift De	ater Table (A2) on (A3) farks (B1) nt Deposits (B2)	ne required	Water-Stained Leaves (B9) (excellent form) MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livit Presence of Reduced Iron (C4)	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)
High Wall Saturati Water M Sedimei Drift De	ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3)	ne required	Water-Stained Leaves (B9) (excellent form) MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livi	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)
High Wa Saturati Water M Sedimen Drift De Algal Ma	ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)	ne required	Water-Stained Leaves (B9) (excellent form) MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livit Presence of Reduced Iron (C4)	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)
High Wa Saturati Water N Sedimen Drift De Algal Ma Iron Dep Surface	ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)		Water-Stained Leaves (B9) (excess MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livity Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sign Stunted or Stressed Plants (D1) (Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ing Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
High Wa Saturati Water M Sedimen Drift Dep Algal Ma Iron Dep Surface Inundati	ater Table (A2) on (A3) farks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6)	magery (B7	Water-Stained Leaves (B9) (excess MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livity Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Stantal Stunted or Stressed Plants (D1) (C) Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ing Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) oils (C6) FAC-Neutral Test (D5) (LRR A) Raised Ant Mounds (D6) (LRR A)
High Waler Mater M	ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial In	magery (B7	Water-Stained Leaves (B9) (excess MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livity Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Stantal Stunted or Stressed Plants (D1) (C) Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ing Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) oils (C6) FAC-Neutral Test (D5) (LRR A) Raised Ant Mounds (D6) (LRR A)
High Waler Mater M	ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial In y Vegetated Concave vations:	magery (B7 Surface (B	Water-Stained Leaves (B9) (excess MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livi Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S Stunted or Stressed Plants (D1) (C4) Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ing Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) oils (C6) FAC-Neutral Test (D5) (LRR A) Raised Ant Mounds (D6) (LRR A)
High Wa Saturati Water M Sedimen Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely Field Obser Surface Wat	ater Table (A2) on (A3) farks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial In y Vegetated Concave vations:	magery (B7 Surface (E	Water-Stained Leaves (B9) (excess MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livid Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Society Stunted or Stressed Plants (D1) (C1) Other (Explain in Remarks) Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ing Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) (LRR A) Raised Ant Mounds (D6) (LRR A)
High Waler Mater M	ater Table (A2) on (A3) farks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial In y Vegetated Concave vations:	magery (B7 Surface (B es	Water-Stained Leaves (B9) (excess MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livi Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S Stunted or Stressed Plants (D1) (C1) Other (Explain in Remarks) Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ing Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) oils (C6) FAC-Neutral Test (D5) (LRR A) Frost-Heave Hummocks (D7)
High Water Mater Table Saturation P	ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial In y Vegetated Concave vations: er Present? Ye resent? Ye resent?	magery (B7 Surface (B es	Water-Stained Leaves (B9) (excess MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livid Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Society Stunted or Stressed Plants (D1) (C1) Other (Explain in Remarks) Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ing Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) (LRR A) Raised Ant Mounds (D6) (LRR A)
High Wa Saturati Water N Sedimen Drift Den Algal Ma Iron Den Surface Inundati Sparsely Field Obser Surface Wat Water Table Saturation P (includes ca	ater Table (A2) on (A3) farks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial In y Vegetated Concave vations: ter Present? Present? Ye present? Ye publicate (A2)	magery (B7 Surface (E es <u> </u>	Water-Stained Leaves (B9) (excess MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livity Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sicurity Stunted or Stressed Plants (D1) (Other (Explain in Remarks) Depth (inches): Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ing Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) oils (C6) FAC-Neutral Test (D5) (LRR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No
High Wa Saturati Water N Sedimen Drift Den Algal Ma Iron Den Surface Inundati Sparsely Field Obser Surface Wat Water Table Saturation P (includes ca	ater Table (A2) on (A3) farks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial In y Vegetated Concave vations: ter Present? Present? Ye present? Ye publicate (A2)	magery (B7 Surface (E es <u> </u>	Water-Stained Leaves (B9) (excess MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livi Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S Stunted or Stressed Plants (D1) (C1) Other (Explain in Remarks) Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ing Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) oils (C6) FAC-Neutral Test (D5) (LRR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No
High Water Mater M	ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial In y Vegetated Concave vations: ter Present? Present? Ye pillary fringe) corded Data (stream	magery (B7 Surface (E es	Water-Stained Leaves (B9) (excess MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livity Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Stantal Control (Explain in Remarks) Other (Explain in Remarks) Depth (inches): Depth (inches): Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ing Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) oils (C6) FAC-Neutral Test (D5) (LRR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No No Stions), if available:
High Water Mater Table Saturation Particulates carbes carbes Resident Mater Table Saturation Particulates Carbes Resident Mater Mate	ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial In y Vegetated Concave vations: ter Present? Present? Ye pillary fringe) corded Data (stream	magery (B7 Surface (E es	Water-Stained Leaves (B9) (excess MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livity Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Stantal Control (Explain in Remarks) Other (Explain in Remarks) Depth (inches): Depth (inches): Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ing Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) oils (C6) FAC-Neutral Test (D5) (LRR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No No Stions), if available:
High Water Mater Table Saturation Particulates carbes carbes Resident Mater Table Saturation Particulates Carbes Resident Mater Mate	ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial In y Vegetated Concave vations: ter Present? Present? Ye pillary fringe) corded Data (stream	magery (B7 Surface (E es	Water-Stained Leaves (B9) (excess MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livity Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Stantal Control (Explain in Remarks) Other (Explain in Remarks) Depth (inches): Depth (inches): Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ing Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) oils (C6) FAC-Neutral Test (D5) (LRR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No No Stions), if available:
High Water Mater Table Saturation Particulates carbes carbes Resident Mater Table Saturation Particulates Carbes Resident Mater Mate	ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial In y Vegetated Concave vations: ter Present? Present? Ye pillary fringe) corded Data (stream	magery (B7 Surface (E es	Water-Stained Leaves (B9) (excess MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livity Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Stantal Control (Explain in Remarks) Other (Explain in Remarks) Depth (inches): Depth (inches): Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ing Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) oils (C6) FAC-Neutral Test (D5) (LRR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No No Stions), if available:
High Water Mater Table Saturation Particulates carbes carbes Resident Mater Table Saturation Particulates Carbes Resident Mater Mate	ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial In y Vegetated Concave vations: ter Present? Present? Ye pillary fringe) corded Data (stream	magery (B7 Surface (E es	Water-Stained Leaves (B9) (excess MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livity Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Stantal Control (Explain in Remarks) Other (Explain in Remarks) Depth (inches): Depth (inches): Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ing Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) oils (C6) FAC-Neutral Test (D5) (LRR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No
High Water Mater M	ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial In y Vegetated Concave vations: ter Present? Present? Ye pillary fringe) corded Data (stream	magery (B7 Surface (E es	Water-Stained Leaves (B9) (excess MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livity Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Stantal Control (Explain in Remarks) Other (Explain in Remarks) Depth (inches): Depth (inches): Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ing Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) oils (C6) FAC-Neutral Test (D5) (LRR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No Litions), if available:

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

Project/Site: APW Z11-372-006	,	City/County: 14m	601d Sampling Date: 12-21-18
Applicant/Owner: D. Petrusheuski			State: CA Sampling Point: 3
Investigator(s): K. Wear			
			convex, none): Slope (%):
Landform (billslope, terrace, etc.):	15 4	37969 91	Land: 4457155. 4 Datum: NAD 83
Soil Map Unit Name: Yorkharth - Win	dynip	1	
Are climatic / hydrologic conditions on the site typical for thi	is time of ye		(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology	significantly	disturbed? Are '	'Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology	naturally pro	blematic? (If ne	eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing	sampling point l	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes N	٠٠		
Hydric Soil Present? Yes N	No	Is the Sampled	_/
	4o	within a Wetlar	nd? Yes No
Remarks:			
VEGETATION – Use scientific names of plan			
VEGETATION - Ose scientific frames of piar	Absolute	Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)		Species? Status	Number of Dominant Species
1			That Are OBL, FACW, or FAC:(A)
2			Total Number of Dominant
3			Species Across All Strata: (B)
4			Percent of Deminant Species 4 427
		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Plot size:)			Prevalence Index worksheet:
1			Total % Cover of: Multiply by:
2.			OBL species x 1 =
3			FACW species x 2 =
4			FAC species x 3 =
5		= Total Cover	FACU species x 4 =
Herb Stratum (Plot size: 10'-radiys		Total Cover	UPL species x 5 =
1. Juneus elkusus	30	FACW	Column Totals: (A) (B)
2. Junes palms	30	Y FACW	Prevalence Index = B/A =
3. Mentha pulegra	10	W PARCOUN	Hydrophytic Vegetation Indicators:
4. Phalais aqualiza		W FACU	Rapid Test for Hydrophytic Vegetation
5. Madia sp ?	5	<u> </u>	2 - Dominance Test is >50%
6			3 - Prevalence Index is ≤3.0 ¹
7			4 - Morphological Adaptations ¹ (Provide supporting
8			data in Remarks or on a separate sheet)
9			5 - Wetland Non-Vascular Plants ¹
10			Problematic Hydrophytic Vegetation¹ (Explain)
11			Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)		= Total Cover	, and a second s
1			Hydrophytic
2.			Hydrophytic Vegetation
		= Total Cover	Present? Yes No
% Bare Ground in Herb Stratum			
Remarks:			

_	
, 1	

	3
Sampling Point:	

Profile Desc Depth	cription: (Describe Matrix		Redo	x Feature	s			
(inches)	Color (moist)	%	Color (moist)		Type ¹			Remarks
0+12	10yr 3/1	90	7.5755/6	10		m	<u>CL</u>	
	* (/	_	· i					
1Tuno: C=C	anaantration D-Da	nlotion DM-D	laduard Matrix C	C-Cauara	d or Coots		-i 2 _{1 a}	ention: DI -Doro Lining M-Metrix
	oncentration, D=De Indicators: (Appli					u Sanu Gra		cation: PL=Pore Lining, M=Matrix. ors for Problematic Hydric Soils ³ :
Histosol		ouble to un El	_ Sandy Redox (cu.,			m Muck (A10)
	pipedon (A2)	_	Stripped Matrix	. ,				D Parent Material (TF2)
1	istic (A3)	_	_ Loamy Mucky		1) (except	MLRA 1)		y Shallow Dark Surface (TF12)
	en Sulfide (A4)		_ Loamy Gleyed	,	, .	,		er (Explain in Remarks)
Deplete	d Below Dark Surfa		Depleted Matri					, ,
	ark Surface (A12)		Kedox Dark Su	urface (F6)			3Indicate	ors of hydrophytic vegetation and
	Mucky Mineral (S1)	_	Depleted Dark		7)			and hydrology must be present,
	Gleyed Matrix (S4)		_ Redox Depres	sions (F8)			unles	ss disturbed or problematic.
	Layer (if present):							
1								
	ches):						Hydric Soi	I Present? Yes No No
Remarks:								
HYDROLO	GY							
Wetland Hy	drology Indicators	3:		4,				
Primary Indi	cators (minimum of	one required;	check all that app	ly)			Seco	ndary Indicators (2 or more required)
Surface	Water (A1)		Water-Sta	ained Leav	es (B9) (e	xcept	v	Vater-Stained Leaves (B9) (MLRA 1, 2,
High Wa	ater Table (A2)		MLRA	1, 2, 4A, a	and 4B)			4A, and 4B)
💃 Saturati	on (A3)		Salt Crus	t (B11)			[Orainage Patterns (B10)
Water N	Marks (B1)		Aquatic Ir	overtebrate	es (B13)			Ory-Season Water Table (C2)
Sedime	nt Deposits (B2)		Hydrogen	Sulfide O	dor (C1)		8	Saturation Visible on Aerial Imagery (C9)
Drift De	posits (B3)		Oxidized	Rhizosphe	res along	Living Root	ts (C3) (Geomorphic Position (D2)
1	at or Crust (B4)			of Reduce	,	,		Shallow Aquitard (D3)
	posits (B5)					d Soils (C6)		FAC-Neutral Test (D5)
	Soil Cracks (B6)				,	1) (LRR A)	F	Raised Ant Mounds (D6) (LRR A)
1	on Visible on Aerial			plain in Re	emarks)		F	Frost-Heave Hummocks (D7)
	y Vegetated Concar	ve Surface (B8	3)					
Field Obser				, (ŧ			
Surface Wat			Depth (ir			_		
Water Table		Yes 🗶 No		ıches); 🛨				1
Saturation P (includes car		Yes No	Depth (in	iches): 🔼	surfac	と Wetia	nd Hydrolog	y Present? Yes No
	corded Data (strear	m gauge, moni	toring well, aerial	photos, pro	evious inst	pections), if	f available:	
						,		
Remarks:								

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

Project/Site: APW 211-372-0	206	City/County: Hun	12-21-1 Sampling Date: 12-21-1	
Applicant/Owner: D. Petrusheus			State: CA Sampling Point: 4	
			nge: 25, T25, £3E	
			convex, (one): Slope (%):	
Landiorni (ruisiope lerrace, etc.):	EV	12998C a	LANG: 4457170.6 Datum: NADS	
Soil Map Unit Name: 10-Knarth - Wi	indinip		NWI classification:	
Are climatic / hydrologic conditions on the site typical for	or this time of ye	•	,	
Are Vegetation, Soil, or Hydrology	significantly	disturbed? Are	*Normal Circumstances" present? Yes No	
Are Vegetation, Soil, or Hydrology	naturally pro	oblematic? (If ne	eeded, explain any answers in Remarks.)	
SUMMARY OF FINDINGS – Attach site m	ap showing	sampling point l	ocations, transects, important features, etc.	
Hydrophytic Vegetation Present? Yes	No 🗡			
Hydric Soil Present? Yes	_ No	is the Sampled	/X .	
Wetland Hydrology Present? Yes			nd? Yes No	
Remarks:				
VEGETATION – Use scientific names of p	olants.			
	Absolute		Dominance Test worksheet:	
Tree Stratum (Plot size:) 1		Species? Status	Number of Dominant Species That Are OBL, FACW, or FAC: (A)	
2.			Total Number of Dominant	
3.			Species Across All Strata: (B)	
4.			Percent of Dominant Species	
One than (Olive In Olive In Ol		_ = Total Cover	That Are OBL, FACW, or FAC: 25 to (A/B)	
Sapling/Shrub Stratum (Plot size:)			Prevalence Index worksheet:	
1.			Total % Cover of: Multiply by:	
2			OBL species x 1 =	
3.			FACW species x 2 =	
4			FAC species x 3 =	
v. 1		= Total Cover	FACU species x 4 =	
Herb Stratum (Plot size: 10 - radin		10(a) 00(c)	UPL species x 5 =	
1. Phalais aquatice		Y FACU	Column Totals: (A) (B)	
2. Horden marinum	20	Y FAC	Prevalence Index = B/A =	
3. Elymus glaucus	10	Y FACU	Hydrophytic Vegetation Indicators:	
4. Cynosurus echinalis		1 UPL	1 - Rapid Test for Hydrophytic Vegetation	
5. Rimex acetoselle		W FALU	2 - Dominance Test is >50%	
6			3 - Prevalence Index is ≤3.0 ¹	
7			4 - Morphological Adaptations (Provide supporting	
8			data in Remarks or on a separate sheet)	
9			5 - Wetland Non-Vascular Plants ¹	
10.			Problematic Hydrophytic Vegetation ¹ (Explain)	
11.			Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Woody Vine Stratum (Plot size)		= Total Cover	to prosent, unless distanced of problematic.	
Woody Vine Stratum (Plot size:)				
1.			Hydrophytic Vegetation /	
			AeAerarion /	
2			Present? Yes No /	
		= Total Cover	Present? Yes No	

	Ц	
Sampling Point:	ı	

Depth	ription: (Describe t Matrix	o tne aepth	needed to document the indicator or co Redox Features	ontinin the absence of indicators.)
(inches)	Color (moist)	%	Color (moist) % Type¹ Lo	oc ² Texture Remarks
0-12	10-172/2	100		
0 1	1071 6/6	100		
1Type: C=C	oncentration D=Depl	etion PM-E	Reduced Matrix, CS=Covered or Coated Sa	nd Grains. ² Location: PL=Pore Lining, M=Matrix.
			RRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
Histosol			_ Sandy Redox (S5)	2 cm Muck (A10)
	pipedon (A2)	_	Stripped Matrix (S6)	Red Parent Material (TF2)
	istic (A3)	-	Loamy Mucky Mineral (F1) (except MLI	
	en Sulfide (A4)	***	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
	d Below Dark Surface	e (A11)	Depleted Matrix (F3)	
	ark Surface (A12)	. /	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
	Mucky Mineral (S1)	_	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy C	Gleyed Matrix (S4)	_	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive	Layer (if present):			
Туре:				. 1
Depth (in	ches):			Hydric Soil Present? Yes No
Remarks:				
HYDROLO Wetland Hy	GY drology Indicators:			
Primary Indi	cators (minimum of o	ne required;	check all that apply)	Secondary Indicators (2 or more required)
Surface	Water (A1)		Water-Stained Leaves (B9) (except	water-Stained Leaves (B9) (MLRA 1, 2,
High Wa	ater Table (A2)		MLRA 1, 2, 4A, and 4B)	4A, and 4B)
Saturati	on (A3)		Salt Crust (B11)	Drainage Patterns (B10)
Water N	farks (B1)		Aquatic Invertebrates (B13)	Dry-Season Water Table (C2)
Sedime	nt Deposits (B2)		Hydrogen Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (C9)
Drift De	posits (B3)		Oxidized Rhizospheres along Livin	g Roots (C3) Geomorphic Position (D2)
Algal Ma	at or Crust (B4)		Presence of Reduced Iron (C4)	Shallow Aquitard (D3)
Iron De	posits (B5)		Recent Iron Reduction in Tilled So	ils (C6) FAC-Neutral Test (D5)
Surface	Soil Cracks (B6)		Stunted or Stressed Plants (D1) (L	RR A) Raised Ant Mounds (D6) (LRR A)
Inundati	ion Visible on Aerial Ir	magery (B7)	Other (Explain in Remarks)	Frost-Heave Hummocks (D7)
Sparsel	y Vegetated Concave	Surface (B8	B)	
Field Obser	vations:		,	
Surface Wat	ter Present? Ye	es No	o X Depth (inches):	
Water Table	Present? Ye	es N	o X Depth (inches):	
Saturation P		es No		Wetland Hydrology Present? Yes No
(includes ca	pillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:				
Remarks:				