AQUATIC RESOURCES DELINEATION

APN: 214-142-009

HUMBOLDT COUNTY

Prepared by:

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Prepared for:

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1. INTRODUCTION

This report includes the results an aquatic resources delineation conducted on a portion of APN: 214-142-009 near Redway. The purpose of the study was to determine the extent of wetlands and other aquatic resources that were filled or disturbed from development for cannabis cultivation so that a restoration plan can be developed.

2. DEFINITIONS

Waters of the United States

Waters of the United States are regulated by the U.S Army Corps of Engineers (Army Corps) under the Clean Water Act. Waters of the United States include, but are not limited to, territorial seas, waters used for interstate or foreign commerce and their tributaries, and waters adjacent to the aforementioned, including wetlands.

Army Corps jurisdiction in waters such as creeks and rivers includes the area below the ordinary high water mark, which is the line on the bank established by fluctuations of water that leave physical characteristics such as a distinct line on the bank, shelving, destruction of terrestrial vegetation, and presence of debris.

The Army Corps 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."

Waters of the State

Waters of the state are regulated by the State Water Resources Control Board (Water Board) under the Porter-Cologne Water Quality Control Act. Waters of the state are defined as:

"... any surface water or groundwater, including saline waters, within the boundaries of the state."

Waters of the State includes water in both natural and artificial channels.

The Water Board's definition of a wetland is:

"An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation."

Streamside Management Areas

The Humboldt County General Plan (Humboldt County 2017) recognizes Streamside Management Areas (SMAs) along all streams, which are defined as:

"100 feet, measured as the horizontal distance from the top of bank or edge of riparian drip-line whichever is greater on either side of perennial streams."

"50 feet, measured as the horizontal distance from the top of bank or edge of riparian drip-line whichever is greater on either side of intermittent streams."

3. ENVIRONMENTAL SETTING

Project Location

The parcel is located along Wood Ranch Road approximately 3.75 miles northeast of Redway on the Miranda USGS quadrangle (Non-sectioned area of T3S, R3E).

Soil, Topography, and Hydrology

The soil type mapped in the study area is Coyoterock-Yorknorth complex, 15-50% slopes (United States Department of Agriculture, Natural Resource Conservation Service 2019). This soil type is derived from sandstone, mudstone, and schist parent material. All of the soil components have a non-hydric soil rating. The study area is in a relatively flat, partially graded terrace on an approximately 15% south-facing slope. The elevation ranges from approximately 800-880 feet above sea level. The site includes wetlands and small streams that drain into the South Fork Eel River.

4. METHODS

4.1. Current Conditions

The study was conducted on May 8, 2019 by Kyle Wear, M.A. Mr. Wear has over 20 years of experience conducting floristic surveys and other botanical work in northern California and over ten years of experience conducting wetland delineations. Mr. Wear is also trained in wetland delineation by the Wetland Training Institute.

Federal, State, and County wetland delineation methods follow the *1987 Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual Western Mountains, Valleys, and Coast Region (Version 2.0)* (Army Corps 2010). A positive wetland determination is made when all three wetland parameters (hydrophytic vegetation, hydric, soil, and wetland hydrology) are present. Four sample plots were evaluated for hydrophytic vegetation, hydric, soil, and wetland hydrology. Wetland determination data forms are provided in Appendix A.

Hydrophytic Vegetation

The presence of hydrophytic vegetation in determined by 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 considered to be 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%.

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 are determined by using a standard 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.

Non-Wetland Waters

Non-wetland waters include watercourses with an ordinary highwater mark in addition to ponds, lakes, and other waterbodies.

4.2. Conditions Before Development

National Agricultural Imagery Program (NAIP) images taken before (2014) and after (2016 and 2018) development and Google Earth images (2014 and 2019) were evaluated to determine the extent of filling and disturbance to wetlands on the site. The extent of wetlands and disturbance visible in the photos was mapped with QGIS software that was used to calculate the area of wetland fill and disturbance.

5. RESULTS AND DISCUSSION

There are 1.218 acres of seasonal emergent wetland visible in the 2014 NAIP (Appendix B) and Google Earth images (Appendix C) that were taken before development of the site. The wetlands are distinguishable by the brownish-green patches of rushes (likely *Juncus patens*) in contrast to the lighter green or tan color of the adjacent grasslands, and other lighter green features that are trees and shrubs including oaks, California bay, Douglas-fir, and coyote brush. By 2018, 2.990 acres of grading and development are visible in on the NAIP image, most of which appears to have occurred by 2016 (Figure 1, Table 1). The grading resulted in filling of 0.465 acre of wetland. These areas no longer have wetland characteristics and are under greenhouse pads and roads. 0.753 acres of emergent wetland were delineated in 2019, of which 0.306 acre is within the graded area visible in the aerial images; there is no development on these areas and they still have wetland characteristics. Most of the grading and development outside the wetlands is within the 100-foot wetland setback (of the 2014 wetland extent) required by the Cannabis Cultivation Policy (Water Board 2019). Representative photos of the site are provided Appendix D.

	Total Area (acres)			
Map Feature	2014	2019		
Disturbed Area	0	2.990		
Emergent Wetland	1.218	0.753		
Filled Wetland	0	0.465		
Disturbed Wetland	0	0.306		
Unimpacted Wetland	1.218	0.447		

Table 1. Summary of Wetland Impacts.

There is an approximately 165-foot stretch of an intermittent stream running through the disturbed portion of Wetland 1. This feature is not visible on the 2014 aerial images. There is evidence of the channel on the 2016 NAIP image and the 2019 Google Earth image. Thus, it may be constructed, enhanced, or a result of the disturbance to the wetland. For example, the lack of vegetation after disturbance may have increased runoff and erosion through the area creating the channel. It is also possible it is not visible due to resolution of the images, or it is obscured by vegetation. There is no other evidence in the aerial images or on the ground at the site indicating other potential watercourse alterations.

The remaining wetlands, which includes the areas that were disturbed, but still have wetland characteristics, and the unimpacted wetlands have hydrophytic vegetation dominated by spreading rush (Juncus patens) and other hydrophytes including spike rush (Eleocharis macrostachya), nut sedge (Cyperus eragrostis), and pennyroyal (Mentha pelugium). The adjacent upland habitat includes grassland dominated by non-native grasses including rattlesnake grass (Briza maxima), wild oat (Avena barbata), and orchard grass (Dactylis glomerata). There are also stands coyote brush (Baccharis pilularis), Douglas-fir (Pseudotsuga menziesii), oaks (Quercus spp.), and California bay (Umbellularia californica).

The soil in the wetlands meets hydric soil indicators F3 (Depleted Matrix) and F6 (Redox Dark Surface). The soil color is 10yr 4/1 or 10yr 3/1 with approximately 10% 7.5yr 5/6 redox concentrations. Primary wetland hydrology indicators observed included Surface Water (A1), High Water Table (A2), and Saturation (A3). The upland soil color was 10yr 2/2 with no redox features or other hydric soil indicators. The upland grassland and forested areas lack indicators of wetland hydrology.

6. REFERENCES

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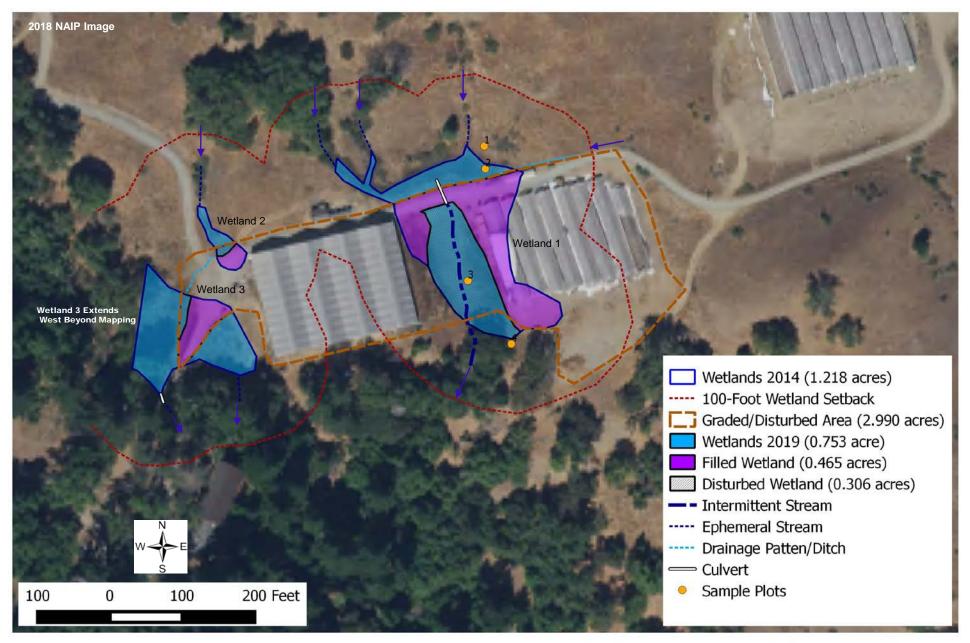
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United States Department of Agriculture, Natural Resource Conservation Service. 2019. *Web Soil Survey*. <u>https://websoilsurvey.sc.egov.usda.gov</u>

Figure 1. Aquatic Resources and Impacts Map.



Appendix A. Wetland Determination Data Forms

VEGETATION - Use scientific names of plants.

	Absolute	Dominant		Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size:) 1		Species?		Number of Dominant Species That Are OBL, FACW, or FAC:(A)
2				Total Number of Dominant
3				Species Across All Strata:
4				
Sapling/Shrub Stratum (Plot size: 30 mail mail		= Total Co	ver	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
1. Baccharis Dilularis	20	Y	UR	Prevalence Index worksheet:
2		•		Total % Cover of: Multiply by:
3				OBL species x 1 =
4				FACW species x 2 =
				FAC species x 3 =
5	7.0	= Total Co		FACU species x 4 =
Herb Stratum (Plot size: 20 - rady)	_0	_ = 1 otal Co	ver	UPL species x 5 =
1. Briza Maxima	60	Y	UPL	Column Totals: (A) (B)
2. Avena barbala	30	_ <u>Y</u>	UPL	Prevalence Index = B/A =
3. Linus bienne	<u> </u>	N	UPL	Hydrophytic Vegetation Indicators:
4 Vicia Sativa		N	UPL	1 - Rapid Test for Hydrophytic Vegetation
5. Hypochairs radicala	2	N	FACS	2 - Dominance Test is >50%
6. torilis arvensis	2	N	YPL	$3 - Prevalence Index is \leq 3.0^{1}$
7	104			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 Vegetation ¹ (Explain)
11				¹ Indicators of hydric soil and wetland hydrology must
		= Total Cov	/er	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)		10121-001		
1				Hydrophytic
2				Vegetation
		= Total Cov		Present? Yes No
% Bare Ground in Herb Stratum		-		
Remarks:				

SOIL

Sampling	Doint

1

Profile Description: (Describe to the de	pth needed to document the indicator or confirm	the absence of indicators.)
Depth Matrix	Redox Features	
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture Remarks
016 10yrz/2		<u>CL</u>
alternational experiments on a successive or successive endowing the successive of t		
¹ Type: C=Concentration, D=Depletion, RI	M=Reduced Matrix, CS=Covered or Coated Sand Gra	ains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to a	II LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	3 to the second second second second
Thick Dark Surface (A12) Sandy Mucky Mineral (S1)	Redox Dark Surface (F6) Depleted Dark Surface (F7)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Millerar (S1)	Redox Depressions (F8)	wetland hydrology must be present, unless disturbed or problematic.
Restrictive Layer (if present):		
Туре:		
Depth (inches):		Hydric Soil Present? Yes No
Remarks:		
HYDROLOGY		
Wetland Hydrology Indicators:		
Primary Indicators (minimum of one requir	ed; 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 Water Table (A2)	MLRA 1, 2, 4A, and 4B)	4A, and 4B)
Saturation (A3)	Salt Crust (B11)	Drainage Patterns (B10)
Water Marks (B1)	Aquatic Invertebrates (B13)	Dry-Season Water Table (C2)

- ____ Dry-Season Water Table (C2) ____ Saturation Visible on Aerial Imagery (C9)
- Oxidized Rhizospheres along Living Roots (C3) ____ Geomorphic Position (D2)
 - ____ Shallow Aquitard (D3)
 - ____ FAC-Neutral Test (D5)
 - ____ Raised Ant Mounds (D6) (LRR A)

Inundation Visible on Ae	nial Imagery (B7) Other (Explain in Remarks)	Frost-Heave Hummocks (D7)
Sparsely Vegetated Con	icave Surface (B8)	
Field Observations:	1	
Surface Water Present?	Yes No Depth (inches):	
Water Table Present?	Yes No Depth (inches):	
Saturation Present?	Yes No Depth (inches):	Wetland Hydrology Present? Yes No
(includes capillary fringe)	•	
Describe Recorded Data (str	eam gauge, monitoring well, aerial photos, previous inspe	ctions), if available:
Remarks:		

____ Hydrogen Sulfide Odor (C1)

____ Presence of Reduced Iron (C4)

____ Recent Iron Reduction in Tilled Soils (C6)

Stunted or Stressed Plants (D1) (LRR A)

____ Sediment Deposits (B2)

____ Algal Mat or Crust (B4)

___ Surface Soil Cracks (B6)

____ Drift Deposits (B3)

____ Iron Deposits (B5)

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

Project/Site: APN Z12-14 -009	City/County: Humbold	Sampling	Date: 5-8-19
Applicant/Owner: TRC	Sta	te: CIA Sampling	Point: Z
Investigator(s): Y. Wear	Section, Township, Range: NS	> T35, R3E	
Landform (hillslope, terrace, etc.): base of slope	Local relief (concave, convex, no	ne): CONCINE	Slope (%):
	E 432231.5 Long: N		Datum: NAD 83
Soil Map Unit Name: Correction	yolerock - Yurknorth	NWI classification:	
Are climatic / hydrologic conditions on the site typical for this tim	ne of year? Yes <u>X</u> No (If r	no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrology signi	ficantly disturbed? Are "Normal Ci	rcumstances" present?	Yes <u>X</u> No
Are Vegetation, Soil, or Hydrology nature	rally problematic? (If needed, exp	lain any answers in Rema	arks.)
SUMMARY OF FINDINGS - Attach site map sho	owing sampling point locations	s, transects, import	ant features, etc.
Hydrophytic Vegetation Present? Yes <u>No</u> No	In the Compled Area	d	

Hydric Soil Present? Wetland Hydrology Present?	Yes No Yes No	Is the Sampled Area within a Wetland?	Yes No
Remarks:			

VEGETATION - Use scientific names of plants.

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				
3				Total Number of Dominant Species Across All Strata: 5 (B)
				Species Across Air Strata.
4				Percent of Dominant Species
Cooling/Shrub Chapture (Dict size)		= Total Co	ver	That Are OBL, FACW, or FAC: 100 (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				
internal a		= Total Co	ver	FACU species x 4 =
Herb Stratum (Plot size: 10 - radys	~			UPL species x 5 =
1. Elecharis macrostachya	70	<u> Y </u>	<u>GBL</u>	Column Totals: (A) (B)
2. Juius patens	20	<u> </u>	FACW	Prevalence Index = B/A =
3. Martha pelusion	10	Ý	OBL.	Hydrophytic Vegetation Indicators:
4. Holous Janahis	10	4	FAC	1 - Rapid Test for Hydrophytic Vegetation
5. Pag trivila>	10	7	FAC	2 - Dominance Test is >50%
6. Runex crispis		N	FAC	
•	-			3 - Prevalence Index is ≤3.0 ¹
7				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
8				5 - Wetland Non-Vascular Plants ¹
9				Problematic Hydrophytic Vegetation ¹ (Explain)
10				
11.	70			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
	15	= Total Cov	/er	
Woody Vine Stratum (Plot size:)				
1.				Hydrophytic
2				Vegetation Present? Yes X No
		= Total Cov	<i>i</i> er	
% Bare Ground in Herb Stratum				
Remarks:				

SOIL

Sampling Point: ____

2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth	Matrix		Redox Features							
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	_Loc ²	Texture	Remarks		
0-12	104-4/1	90	7.57556	10		~	<u> </u>			
			· /							
			<u></u>							
			-/., .,							
·····										
¹ Type: C=Co	ncentration D=Der	letion RM:	Reduced Matrix, CS	S=Covered	or Coate	d Sand Gr	ains ² Loca	ation: PL=Pore Lining, M=Matrix.		
			LRRs, unless othe					s for Problematic Hydric Soils ³ :		
Histosol			Sandy Redox (2 cm	Muck (A10)		
Histic Ep	pipedon (A2)		Stripped Matrix	-				Parent Material (TF2)		
Black Hi	()		Loamy Mucky I			MLRA 1)		Shallow Dark Surface (TF12)		
	n Sulfide (A4)		Loamy Gleyed)		Othe	r (Explain in Remarks)		
	Below Dark Surfac	e (A11)	Depleted Matrix				31			
	ark Surface (A12)		Redox Dark Su		7)			s of hydrophytic vegetation and		
	lucky Mineral (S1) ileyed Matrix (S4)		Depleted Dark Redox Depress	•	()			d hydrology must be present, disturbed or problematic.		
	ayer (if present):						1			
Type:										
	ches):						Hydric Soil F	Present? Yes 🖌 No		
Remarks:										
rtemanto.										
HYDROLO	GY									
Wetland Hyd	drology Indicators:		· · · · · · · · · · · · · · · · · · ·							
Primary Indic	ators (minimum of c	ne required	d; check all that appl	y)			Second	dary Indicators (2 or more required)		
Surface	Water (A1)		Water-Sta	ined Leave	es (B9) (e	cept	Wa	ater-Stained Leaves (B9) (MLRA 1, 2,		
💥 High Wa	ter Table (A2)			1, 2, 4A, a		·		4A, and 4B)		
X Saturatio	on (A3)		Salt Crust				Dra	ainage Patterns (B10)		
	arks (B1)		Aquatic In		s (B13)			y-Season Water Table (C2)		
Sedimen	t Deposits (B2)		Hydrogen	Sulfide Od	lor (C1)			turation Visible on Aerial Imagery (C9)		
Drift Dep	oosits (B3)		Oxidized F	Rhizospher	res along	Living Root		eomorphic Position (D2)		
Algal Ma	t or Crust (B4)		Presence	of Reduce	d Iron (C4)	Sh	allow Aquitard (D3)		
Iron Dep	osits (B5)		Recent Iro	n Reductio	on in Tilleo	Soils (C6)) 🖌 FA	C-Neutral Test (D5)		
Surface	Soil Cracks (B6)		Stunted or	Stressed	Plants (D	1) (LRR A)	Ra	ised Ant Mounds (D6) (LRR A)		
Inundatio	on Visible on Aerial	magery (B	7) Other (Exp	olain in Re	marks)		Fro	ost-Heave Hummocks (D7)		
	Vegetated Concave	e Surface (I	B8)							
Field Observ	vations:		.)							
Surface Wate	er Present? Y	'es	No <u> </u>	ches):						
Water Table	Present? Y	es <u>X</u> I	No Depth (in	ches): <u>4</u>	1.	_		1		
Saturation Pr	esent? Y	es 📈 I	No Depth (in	ches):	rface	🛫 Wetla	and Hydrology	Present? Yes K No		
(includes cap		,	nitoring well goriel	abotoo ar	viewe ine		f evelletter			
Describe Rec	Sided Data (stream	gauge, mo	onitoring well, aerial	priotos, pre	svious Ins	Jections), I	available:			
Domester										
Remarks:										
			·····							

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

Project/Site: APN: 212-142-009	,	City/Count	y: HmE	old Sampling Date: 5-8-19
Applicant/Owner: TRC	(Sity/Count	y	State:Sampling Point:
Investigator(s): K. Wear				
Landform (hillslope, terrace, etc.):		Local relie	ef (concave, c	convex, none): $COCACC$ Slope (%): 1
Subregion (LRR):	_ Lat. <u>E v</u>	17200		
Soil Map Unit Name: Coyolerock - Yor	Knort	5		NWI classification:
Are climatic / hydrologic conditions on the site typical for this				(If no, explain in Remarks.)
Are Vegetation <u>X</u> , Soil <u>X</u> , or Hydrology <u>X</u> s	ignificantly	disturbed?	Y Are "	Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology n	aturally pro	blematic?	(If ne	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing	sampli	n <mark>g point</mark> lo	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	0 0			
	0 0	1	he Sampled hin a Wetlan	
	0			
Remarks: Area Plot is in a	radeo	1 an	ea, ve	getation has been
dearly disturbed, likely	Sail	+ 7	wel as	say as well
			170001	
VEGETATION – Use scientific names of plan				
Tree Stratum (Plot size:)	Absolute % Cover		nt Indicator ? <u>Status</u>	Dominance Test worksheet:
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				Percent of Dominant Species
		= Total C	over	That Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet:
2				Total % Cover of: Multiply by:
3				OBL species x 1 =
4				FACW species x 2 =
5				FAC species x 3 =
Herb Stratum (Plot size: 10' - radius		= Total C	over	
	20	12	(Ac)	UPL species x 5 = Column Totals: (A) (B)
1. Drus pales	20	<u> </u>	FACK	
2. Cyperus eragrostis 3. Pog trivials	20	<u> </u>	FAC	Prevalence Index = B/A =
3. 109 FAVIOLS 4. Mentha Delusim	20	- <u>-</u>	OBL	Hydrophytic Vegetation Indicators:
5. Pipoucus filinin	2		FAC	1 - Rapid Test for Hydrophytic Vegetation
6. Linun biene	7	N	UPL	2^{2} - Dominance Test is >50% 3 - Prevalence Index is <3.0 ¹
7. Myosofis discolor	2	N	FAC	 4 - Morphological Adaptations¹ (Provide supporting
8. Tr. folim dubium	2	N	FACU	data in Remarks or on a separate sheet)
9. Tr. fol, wh subterraneen	2	N	UPU	5 - Wetland Non-Vascular Plants ¹
10. Hypochaens radicate	2	N	FACY	Problematic Hydrophytic Vegetation ¹ (Explain)
11	- 10-			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
	42	= Total Co	over	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)				
1. 2.				Hydrophytic Vegetation
		= Total Co	over	Present? Yes No
% Bare Ground in Herb Stratum				
Remarks:				

SOIL

Sampling Point: __

3

Profile Desc Depth	Matrix		Redo	x Features				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
3-12	10413/1	90	7.5755/6	10	C	m	a	
				· ······				ele companya en la companya de la co
			• • • • • • • • • • • • • • • • • • •					
	properties D=D	enletion RM	/≓Reduced Matrix, CS	S=Covered	or Coate		ains ² l o	cation: PL=Pore Lining, M=Matrix.
			I LRRs, unless other			a ouna on		ors for Problematic Hydric Soils ³ :
_ Histosol			Sandy Redox (n Muck (A10)
_	pipedon (A2)		Stripped Matrix					Parent Material (TF2)
	stic (A3)		Loamy Mucky	lineral (F1)	(except	MLRA 1)	Ver	y Shallow Dark Surface (TF12)
Hydroge	en Sulfide (A4)		Loamy Gleyed	Matrix (F2)			Oth	er (Explain in Remarks)
	d Below Dark Surf	ace (A11)	Depleted Matrix				2	
-	ark Surface (A12)		Redox Dark Su					ors of hydrophytic vegetation and
	lucky Mineral (S1)		Depleted Dark	•)			and hydrology must be present,
	Bleyed Matrix (S4)		Redox Depress	ions (F8)			unles	ss disturbed or problematic.
	Layer (ii present)	•						
Type: Depth (ind	abac):						Hydric Soil	Present? Yes X No
emarks:	unes).						Hyune Son	
DROLO	GY							
etland Hy	drology Indicato							
etland Hy imary Indic	drology Indicator cators (minimum c		ed; check all that appl					ndary Indicators (2 or more required)
etland Hydi imary Indic	drology Indicator cators (minimum o Water (A1)		🖌 Water-Sta	ined Leaves		cept		
etland Hyd imary Indio Surface High Wa	drology Indicator cators (minimum c Water (A1) ater Table (A2)		Water-Sta	ined Leaves 1, 2, 4A, an		cept	V	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
etland Hyd imary India Surface High Wa Saturatio	drology Indicator cators (minimum c Water (A1) oter Table (A2) on (A3)		Water-Sta MLRA Salt Crust	ined Leaves 1, 2, 4A, an (B11)	d 4B)	ccept	V	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
etland Hy imary India Surface _ High Wa _ Saturatia _ Water M	drology Indicator cators (minimum c Water (A1) hter Table (A2) on (A3) larks (B1)		_k Water-Sta MLRA Salt Crust Aquatic In	ined Leaves 1, 2, 4A, an (B11) vertebrates	(B13)	ccept	v c	Vater-Stained Leaves (B9) (MLRA 1, 2 , 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
etland Hy imary India Surface High Wa Saturatia Water M Sedimer	drology Indicator cators (minimum c Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2)		▲ Water-Sta MLRA — Salt Crust — Aquatic In — Hydrogen	ined Leaves 1, 2, 4A, an (B11) vertebrates Sulfide Odd	(B13) (C1)	-	V C C	Vater-Stained Leaves (B9) (MLRA 1, 2 , 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9
etland Hy imary Indic Surface High Wa Saturatio Water M Sedimer Drift Dep	drology Indicator cators (minimum c Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3)		Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F	ined Leaves 1, 2, 4A, an (B11) vertebrates Sulfide Odo Rhizosphere	(B13) or (C1) as along	Living Roo	V C C ts (C3) C	Vater-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)
etland Hyd imary India Surface High Wa Saturatia Water M Sedimer Drift Dep Algal Ma	drology Indicator cators (minimum of Water (A1) hter Table (A2) on (A3) larks (B1) ht Deposits (B2) posits (B3) at or Crust (B4)		Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence	ined Leaves 1, 2, 4A, an (B11) vertebrates Sulfide Odo Rhizosphere of Reduced	(B13) or (C1) es along fron (C4	Living Roo	V □ □ ts (C3)S	Vater-Stained Leaves (B9) (MLRA 1, 2 , 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Seomorphic Position (D2) Shallow Aquitard (D3)
etland Hyd rimary India Surface High Wa Saturatia Water M Sedimer Drift Dep Algal Ma Iron Dep	drology Indicator cators (minimum of Water (A1) hter Table (A2) on (A3) larks (B1) ht Deposits (B2) posits (B3) at or Crust (B4) posits (B5)		Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro	ined Leaves 1, 2, 4A, an (B11) vertebrates Sulfide Odo Rhizosphere of Reduced n Reduction	ad 4B) (B13) or (C1) es along fron (C4 n in Tilleo	Living Roo) I Soils (C6	LS (C3)	Vater-Stained Leaves (B9) (MLRA 1, 2 , 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) Shallow Aquitard (D3) GC-Neutral Test (D5)
Vetland Hydrimary India Surface High Wa Saturatio Water Ma Sedimer Drift Dep Algal Ma Iron Dep Surface	drology Indicator cators (minimum c Water (A1) tter Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6)	<u>f one requir</u>	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or	ined Leaves 1, 2, 4A, an (B11) vertebrates Sulfide Odo Rhizosphere of Reduced n Reduction Stressed P	(B13) or (C1) es along Fron (C4 n in Tilleo Plants (D	Living Roo) I Soils (C6	LIS (C3)	Vater-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)
etland Hyd imary India Surface High Wa Saturatio Water M Sedimer Drift Dep Drift Dep Algal Ma Iron Dep Surface Inundatio	drology Indicator cators (minimum c Water (A1) tter Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aeri	<u>f one requir</u> al Imagery (i	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or B7)Other (Exp	ined Leaves 1, 2, 4A, an (B11) vertebrates Sulfide Odo Rhizosphere of Reduced n Reduction	(B13) or (C1) es along Fron (C4 n in Tilleo Plants (D	Living Roo) I Soils (C6	LIS (C3)	Vater-Stained Leaves (B9) (MLRA 1, 2 , 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) Shallow Aquitard (D3) GC-Neutral Test (D5)
etland Hyd imary India Surface High Wa Saturatia Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely	drology Indicator cators (minimum c Water (A1) hter Table (A2) on (A3) larks (B1) ht Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aeria y Vegetated Conc	<u>f one requir</u> al Imagery (i	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or B7)Other (Exp	ined Leaves 1, 2, 4A, an (B11) vertebrates Sulfide Odo Rhizosphere of Reduced n Reduction Stressed P	(B13) or (C1) es along Fron (C4 n in Tilleo Plants (D	Living Roo) I Soils (C6	LIS (C3)	Vater-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) GAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
etland Hyd rimary India Surface High Wa Saturatia Water M Sedimer Drift Dep Algal Ma Iron Dep Iron Dep Surface Inundatia Sparsely eld Obser	drology Indicator cators (minimum c Water (A1) hter Table (A2) on (A3) larks (B1) ht Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aeria y Vegetated Conc	f one requir al Imagery (ave Surface	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or B7) Other (Exp (B8)	ined Leaves 1, 2, 4A, an (B11) vertebrates Sulfide Odo Rhizosphere of Reduced n Reduction Stressed P plain in Rem	d 4B) (B13) or (C1) es along i Iron (C4 n in Tilleo Plants (D narks)	Living Roo) I Soils (C6 I) (LRR A)	LIS (C3)	Vater-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) GAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Vetland Hyd rimary India Surface High Wa Saturatia Water Ma Sedimer Drift Dep Algal Ma Iron Dep Iron Dep Surface Inundatia Sparsely eld Obserri urface Wate	drology Indicator cators (minimum of Water (A1) hter Table (A2) on (A3) larks (B1) ht Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aeria Vegetated Conc: vations: er Present?	f one requir al imagery (i ave Surface Yes	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or B7)Other (Exp (B8)	ined Leaves 1, 2, 4A, an (B11) vertebrates Sulfide Odo Rhizosphere of Reduced n Reduction Stressed P plain in Rem ches):	d 4B) (B13) or (C1) es along d Iron (C4 n in Tilleo Plants (D narks)	Living Roo) I Soils (C6 I) (LRR A)	LIS (C3)	Vater-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) GAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
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etland Hyd <u>rimary India</u> Surface High Wa Saturatio Vater Ma Sedimer Drift Dep Algal Ma Iron Dep Iron Dep Surface Inundatia Sparsely eld Observert varface Water face Water aturation Per Carlonger Surface Carlonger Sparsely eld Observert Sparsely eld Observert Sparsely 	drology Indicator cators (minimum of Water (A1) her Table (A2) on (A3) larks (B1) ht Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aeria / Vegetated Conc: vations: er Present? Present? pesent?	f one requir al Imagery (I ave Surface Yes Yes Yes	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or B7) Other (Exp (B8) No Depth (in No Depth (in	ined Leaves 1, 2, 4A, an (B11) vertebrates Sulfide Odo Rhizosphere of Reduced n Reduction Stressed P olain in Rem ches): ches): ches):	d 4B) (B13) or (C1) es along i Iron (C4 n in Tilleo Plants (D narks)	Living Room) I Soils (C6) I) (LRR A)		Vater-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) GAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Vetland Hyd rimary India Surface High Wa Saturatio Vater M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundation Sparsely Vater Table aturation Pen ncludes cap	drology Indicator cators (minimum of Water (A1) her Table (A2) on (A3) larks (B1) ht Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aeria / Vegetated Conc: vations: er Present? Present? pesent?	f one requir al Imagery (I ave Surface Yes Yes Yes	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or B7)Other (Exp (B8)	ined Leaves 1, 2, 4A, an (B11) vertebrates Sulfide Odo Rhizosphere of Reduced n Reduction Stressed P olain in Rem ches): ches): ches):	d 4B) (B13) or (C1) es along i Iron (C4 n in Tilleo Plants (D narks)	Living Room) I Soils (C6) I) (LRR A)		Vater-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) GAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) rost-Heave Hummocks (D7)
rimary India Surface High Wa Saturatio Water M Sedimer Algal Ma Iron Dep Surface Inundati Sparsely ield Obser urface Wate /ater Table aturation Pr ncludes cap escribe Rec	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aeria / Vegetated Conci vations: er Present? Present? Present? pillary fringe) corded Data (streat	f one requir al Imagery (I ave Surface Yes Yes Yes Tes	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or B7)Other (Exp (B8) Depth (in Depth (in Depth (in Depth (in Depth (in Depth (in	ined Leaves 1, 2, 4A, an (B11) vertebrates Sulfide Odo Rhizosphere of Reduced n Reduction Stressed P olain in Rem ches): ches): photos, prev	ed 4B) (B13) or (C1) es along Iron (C4 n in Tillec Plants (D narks) vious ins	Living Room) I Soils (C6 I) (LRR A) 	Ls (C3) F F F F F F F	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Seomorphic Position (D2) Shallow Aquitard (D3) (AC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) irost-Heave Hummocks (D7)
Vetland Hyd rimary India Surface High Wa Saturatio Water M Sedimer Drift Deg Algal Ma Iron Deg Surface Inundation Sparsely Vetla Obser urface Water Vater Table aturation Pen ncludes cap escribe Red	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aeria / Vegetated Conci vations: er Present? Present? Present? pillary fringe) corded Data (streat	f one requir al Imagery (I ave Surface Yes Yes Yes Tes	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or B7)Other (Exp (B8) Depth (in Depth (in Depth (in Depth (in Depth (in Depth (in	ined Leaves 1, 2, 4A, an (B11) vertebrates Sulfide Odo Rhizosphere of Reduced n Reduction Stressed P olain in Rem ches): ches): photos, prev	ed 4B) (B13) or (C1) es along Iron (C4 n in Tillec Plants (D narks) vious ins	Living Room) I Soils (C6 I) (LRR A) 	Ls (C3) F F F F F F F	Vater-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)
etland Hyd imary India Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundation Sparsely eld Obser urface Wate fater Table aturation Pen Cludes cap escribe Rec	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aeria / Vegetated Conci vations: er Present? Present? Present? pillary fringe) corded Data (streat	f one requir al Imagery (I ave Surface Yes Yes Yes Tes	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or B7) Other (Exp (B8) No Depth (in No Depth (in	ined Leaves 1, 2, 4A, an (B11) vertebrates Sulfide Odo Rhizosphere of Reduced n Reduction Stressed P olain in Rem ches): ches): photos, prev	ed 4B) (B13) or (C1) es along Iron (C4 n in Tillec Plants (D narks) vious ins	Living Room) I Soils (C6 I) (LRR A) 	Ls (C3) F F F F F F F	Vater-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)
etland Hyd imary India Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundation Sparsely eld Obser urface Wate aturation Ph cludes cap escribe Rea	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aeria / Vegetated Conci vations: er Present? Present? Present? pillary fringe) corded Data (streat	f one requir al Imagery (I ave Surface Yes Yes Yes Tes	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or B7)Other (Exp (B8) Depth (in Depth (in Depth (in Depth (in Depth (in Depth (in	ined Leaves 1, 2, 4A, an (B11) vertebrates Sulfide Odo Rhizosphere of Reduced n Reduction Stressed P olain in Rem ches): ches): photos, prev	ed 4B) (B13) or (C1) es along Iron (C4 n in Tillec Plants (D narks) vious ins	Living Room) I Soils (C6 I) (LRR A) 	Ls (C3) F F F F F F F	Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (CS Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

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

Project/Site: APN: 212-142-007	City/County: 1+JmboldL Sampling Date: 5-9-19
Applicant/Owner: TRC	State: CM Sampling Point:
Investigator(s): K.W.ew	Section, Township, Range: WS, T35, R3E
Landform (hillslope, terrace, etc.): Lillslope	Local relief (concave, convex, none); hone Slope (%); 5
Subregion (LRR): 14	# E 432242. 4 Long: N 4446833. 4 Datum: NADES
Soil Map Unit Name: Coyotevack - York	North NWI classification:
Are climatic / hydrologic conditions on the site typical for this time	e of year? Yes No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology signific	
Are Vegetation, Soil, or Hydrology natural	ally problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map show	wing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No 📉	
Hydric Soil Present? Yes No	Is the Sampled Area
Wetland Hydrology Present? Yes No	
Remarks:	

VEGETATION - Use scientific names of plants.

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Deminant
3				Total Number of Dominant Species Across All Strata: (B)
Δ				
······································		= Total Co		Percent of Dominant Species 122
Sapling/Shrub Stratum (Plot size: 301 - valus		- Total Co	ver	That Are OBL, FACW, or FAC: 176 (A/B)
1. Quercus garryonn	10	Y	FACU	Prevalence Index worksheet:
2. Pseudotsa menzicsii	10	7	FACU	Total % Cover of: Multiply by:
3. Undelalling Califonice	10		FAC	OBL species x 1 =
3. Unselonora can soma			France	FACW species x 2 =
4				FAC species x 3 =
5				FACU species x 4 =
Herb Stratum (Plot size: 10' - radus		= Total Co	ver	UPL species x 5 =
1. Briza maxima	Y	40	UPL	Column Totals: (A) (B)
2. Dachills glomeraly	Y	10	FACU	Prevalence Index = B/A =
3. Inspurcky	<u>1</u>	10_	UPL	Hydrophytic Vegetation Indicators:
4. Anthoxanthin odoralon	N	5	FACU	1 - Rapid Test for Hydrophytic Vegetation
5. Morgalin sp	N	5	M	2 - Dominance Test is >50%
6. Ranunuls sp	N	5	3	3 - Prevalence Index is ≤3.0 ¹
7. Sistrinchim bellun	N	2	FACW	4 - Morphological Adaptations ¹ (Provide supporting
8. Victa hirz-La	N	2	PPL	data in Remarks or on a separate sheet)
9. El-musalques	W	7	FACJ	5 - Wetland Non-Vascular Plants ¹
10. Calocharlos tolmici	W	2	UPL	Problematic Hydrophytic Vegetation ¹ (Explain)
11. Tr. Colum Sublerrance	6	2	JYL	¹ Indicators of hydric soil and wetland hydrology must
		= Total Cov	/er	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)				
1				Hydrophytic
2				Vegetation
		= Total Cov	/er	Present? Yes No
% Bare Ground in Herb Stratum		10(01/00)		
Remarks:				

SOIL

1

Sampling Point: _

Profile Description: (D	escribe to the dept	h needed to document the indicator or o	confirm the absence of indicators.)
	Matrix	Redox Features	
(inches) Color (1	Color (moist) % Type ¹ L	_oc ² Texture Remarks
6-16 10,00	12		
	, 		
	· · · · · · · · · · · · · · · · · · ·		
	D=Depiction DM-	Reduced Matrix, CS=Covered or Coated S	Sand Grains. ² Location: PL=Pore Lining, M=Matrix.
		LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	(Applicable to all	Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	,	Loamy Mucky Mineral (F1) (except MI	
Hydrogen Sulfide (A	(4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Da	k Surface (A11)	Depleted Matrix (F3)	
Thick Dark Surface	(A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Miner	. ,	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matr		Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if pr	esent):		
Туре:			\sim
Depth (inches):			Hydric Soil Present? Yes No
Remarks:			
IYDROLOGY			
Wetland Hydrology Inc	licators:		
Primary Indicators (mini	mum of one required	; check all that apply)	Secondary Indicators (2 or more required)
Surface Water (A1)		Water-Stained Leaves (B9) (exce	water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A	\ 2)	MLRA 1, 2, 4A, and 4B)	4A, and 4B)
Saturation (A3)	,	Salt Crust (B11)	Drainage Patterns (B10)
Water Marks (B1)		Aquatic Invertebrates (B13)	Dry-Season Water Table (C2)
Sediment Deposits	(B2)	Hydrogen Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)		Oxidized Rhizospheres along Livi	
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	Shallow Aquitard (D3)
Iron Deposits (B5)		Recent Iron Reduction in Tilled Second	oils (C6) FAC-Neutral Test (D5)
Surface Soil Cracks	(B6)	Stunted or Stressed Plants (D1) ((LRR A) Raised Ant Mounds (D6) (LRR A)
Inundation Visible of Application	n Aerial Imagery (B7	 Other (Explain in Remarks) 	Frost-Heave Hummocks (D7)
Sparsely Vegetated	Concave Surface (E	38)	
Field Observations:	······································	1	
Surface Water Present?	Yes 1	No Depth (inches):	
Water Table Present?	Yes N	No Depth (inches):	
Saturation Present?	Yes		Wetland Hydrology Present? Yes No X
(includes capillary fringe			
Describe Recorded Data	i (stream gauge, mo	nitoring well, aerial photos, previous inspec	ctions), if available:
Remarks:			

Appendix B. Comparison of 2014, 2016, and 2019 NAIP Images.



Appendix C. Comparison of 2014 and 2019 Google Earth Images.



Appendix D. Representative Photos



Photo 1. Ephemeral stream flowing into Wetland 1, looking north from near the road.



Photo 2. Wetland 1, looking southwest towards greenhouses.



Photo 3. Wetland 2, looking south.



Photo 4. Ephemeral stream draining into Wetland 2, looking north.



Photo 5. Wetland 3, looking south from road.



Photo 6. Road drainage feature from Wetland 2, looking northeast.

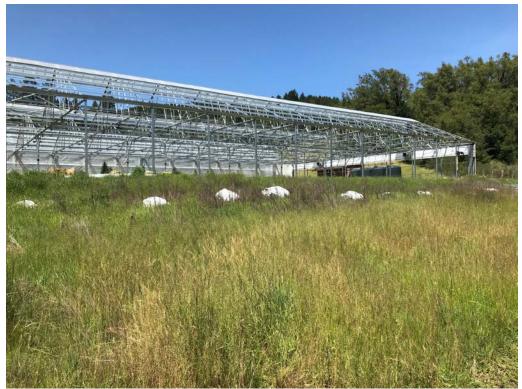


Photo 7. Greenhouses adjacent to Wetland 1, looking west.



Photo 8. Cultivation area on fill in Wetland 1, looking east.



Photo 9. Intermittent stream through disturbed portion of Wetland 1, looking south from road.



Photo 10. Intermittent stream through disturbed portion of Wetland 1, looking north.