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October 18, 2024 Sent Via Email

Elizabeth Lacasia Property Owner

Email: elacasia@gmail.com

Subject: Aquatic Resource Delineation Letter Report for a Residential Parcel at 779 San Carlos Avenue,

El Granada, San Mateo County, California; APN No. 047-105-020

Dear Elizabeth Lacasia:

In response to a request by the County of San Mateo Coastside Design Review Committee to the Property Owner, Huffman-Broadway Group, Inc. (HBG) conducted a study to assess the potential of the property to support wetlands, as defined by the San Mateo County Local Coastal Program criteria.

In summary, based on the steep topography of the property, well drained nature of the soils, absence of hydric soil indicators, and lack of wetland hydrology, HBG determined the property does not support wetlands as defined by the San Mateo County Local Coastal Program.

Please refer to Exhibit 1 ARD Report for delineation methods and technical findings, and call or email me at 415.385.4106 or rperrera@h-bgroup.com if you have any questions or to schedule a site visit.

Sincerely,

Robert F. Perrera

Wetland Regulatory Scientist

Robert F. Perrera

Enclosures

Exhibit 1. ARD Report

Exhibit 1

ARD Report

AQUATIC RESOURCE DELINEATION

779 San Carlos Avenue, El Granada San Mateo County, California



Prepared for

Elizabeth Lacasia Property Owner Email: elacasia@gmail.com

Prepared by

Huffman-Broadway Group, Inc. ENVIRONMENTAL REGULATORY CONSULTANTS

1101 5th Avenue, Suite 205 San Rafael, CA 94901

Contact: Robert F. Perrera

415.385.4106 • \underline{r} perrera@h-bgroup.com

October 2024

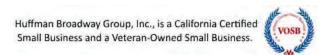


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Citation: Huffman-Broadway Group, Inc. 2024. 779 San Carlos Avenue, El Granada, San Mateo County, California. October.

1.0 INTRODUCTION

On behalf of Elizabeth Lacasia (Property Owner) and in response to a request by the County of San Mateo Coastside Design Review Committee to the Property Owner, Huffman-Broadway Group, Inc. (HBG) conducted a study to determine if the 0.16 acres parcel at 779 San Carlos Avenue, El Granada (Review Area) supports wetlands, as defined by the San Mateo County Local Coastal Program criteria.

Data collection, analysis, identification, and delineation of aquatic resources was conducted consistent with the *Corps' 1987 Wetlands Delineation Manual* (Corps' 1987 Manual), the 2010 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)* and supporting USACE and US EPA guidance documents. The wetland delineation findings presented in Section 5 were based on the San Mateo County Local Coastal Program definition of wetlands as provided in Policy 7.14 *Definition of Wetlands*.

In summary, based on the steep topography of the property, well drained properties of the soil, absence of hydric soil indicators and lack of wetland hydrology, HBG determined the Review Area does not support wetlands as defined by the San Mateo County Local Coastal Program criteria, or aquatic resources defined as Waters of the US subject to Section 404 of the Clean Water Act, or Waters of the State subject to Porter-Cologne Water Quality Control Act.

1.1 Definition of Coastal Zone Wetlands

Wetlands in California's Coastal Zone are regulated under the California Coastal Act (CCA) of 1976, which is administered by the California Coastal Commission (CCC). Section 30121 of the CCA defines "wetlands" as "lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens."

The San Mateo County Local Coastal Program (LCP) defines wetlands as:

"...an area where the water table is at, near, or above the land surface long enough to bring about the formation of hydric soils or to support the growth of plants which normally are found to grow in water or wet ground. Such wetlands can include mudflats (barren of vegetation), marshes, and swamps. Such wetlands can be either fresh or saltwater, along streams (riparian), in tidally influenced areas (near the ocean and usually below extreme high water of spring tides), marginal to lakes, ponds, and man-made impoundments. Wetlands do not include areas which in normal rainfall years are permanently submerged (streams, lakes, ponds and impoundments), nor marine or estuarine areas below extreme low water of spring tides, nor vernally wet areas where the soils are not hydric.

In San Mateo County, wetlands typically contain the following plants: cordgrass, pickleweed, jaumea, frankenia, marsh mint, tule, bullrush, narrow-leaf cattail,

broadleaf cattail, pacific silverweed, salt rush, and bog rush. To qualify, a wetland must contain at least a 50% cover of some combination of these plants, unless it is a mudflat."

2.0 GENERAL SITE DESCRIPTION

The 0.16 acre Review Area is located at 779 San Carlos Avenue, El Granada. Residential development borders the northeastern, southeastern, and southwestern boundary. The intermittent San Agustin Creek flows north to south and is positioned approximately 150 feet to the west of the Review Area's western boundary. The riparian zone associated with the creek, known as the Montecito Riparian Corridor, extends into the southern area of the Review Area¹. Within the Review Area, a small area along the northeastern corner of the parcel has been cleared and story poles erected.

The latitude and longitude of the center of the Review Area are approximately 37.874467 N and -122. 510039 W, encompassing portions of the USGS 7.5 minute Montara Mountain quadrangle. Refer to Appendix A, Figure 1 for the Review Area Location, Figure 2 for the USGS Topographic Map of the Review Area, Figure 3 for Aerial Image of the Review Area, and Figure 4 for FEMA Flood Zone Mapping, Figure 5 for the NRCS Soils Map, and Figure 6 for the USFWS National Wetlands Inventory Map.

<u>Note:</u> In addition to the Review Area HBG made general observations of land conditions abutting to the Review Area. Based on aerial imagery reviewed prior to the site visit, the parcel along Avenue Balboa that abuts the southeastern boundary of the Review Area completely removed and replaced what appears to be an extension of the riparian zone with general residential landscaping such as grass, a patio, retaining wall and other landscape features. Based on Google Earth Pro measuring tool the area of vegetation removed was approximately 80'x20' or 160 square feet.

2.1 Topography & Hydrology

Topography

Based on the site visit and review of the topographic map prepared by Turnrose Land Surveying company dated July 6, 2020, the majority of the Review Area slopes from the boundary along San Carlos Avenue south/southwest at a 5.5:1 / 18% slope. Approximately 20-25 linear feet from the southern boundary, the slope flattens as shown on the topographic map and confirmed in the field. The topographic survey of the Review Area is provided in Appendix 4.

Hydrology

There were no signs of surface water being directed onto the Review Area from San Carlos Avenue or visible culverts. Hydrology within the Review Area is likely due to direct precipitation.

¹ Riparian corridor is shown on the Turnrose Land Survey map dated July 6, 2020 (Appendix 4)

2.2 Soils

A review of the Natural Resources Conservation Service (NRCS) Soil Survey maps for San Mateo County shows two soil types occurring in the Review Area. The *Tierra loam, steep, eroded* (*TeE2*) occurs on the majority of the Review Area, and *Farallone loam, gently sloping (FaB)* occurs on the southern portion of the review Area.

Field investigations confirmed that the NRCS soils mapping for TeE2 is somewhat accurate and the soils mapping for FaB is relatively accurate throughout the Review Area. The TeE2 soil profile indicates a Bt² horizon at 17-37 inches with "clay" soils, but HBG found the loam layer extended much further through the soil profile. In addition, the TeE2 properties listed a restrictive feature from 10-24 inches, but no such layer was found with soil pits dug to down to 29 inches.

2.3 Vegetation

Nomenclature used for plant names follows *The Jepson Manual, 2nd edition* and changes made to this manual as published on the Jepson Interchange Project website. Wetland indicator status ratings are defined based on qualitative ecological descriptions and assigned following the classification of Lichvar (2012). Indicator status ratings include the following categories:

- Obligate wetland plants (OBL) Plants that almost always occur in wetlands.
- Facultative wetland plants (FACW) Plants that usually occur in wetlands, but may occur in non-wetlands.
- Facultative plants (FAC) Plants that occur in wetlands and non-wetlands.
- Facultative upland plants (FACU) Plants that usually occur in non-wetlands, but may occur in wetlands.
- Upland plants (UPL) Almost never occur in wetlands.

Vegetation that does not have one of the five indicator status rating listed in the Regional Wetland Plant List is referred to as Not Listed (NL) on the wetland determination data forms and is assumed to never occur in wetlands.

The portion of the property above the riparian zone is dominated by coyote brush (*Baccharis pilularis (NL)*), poison oak (*Toxicodendron diversilobum (FAC)*), pampas grass (*Cortaderia selloana (FACU)*), and French broom (*Genista monspessulana (NL)*). Within the riparian zone, the tree stratum was dominated by arroyo willow (*Salix lasiolepis (FACW)*), and the vine stratum was dominated by California blackberry (*Rubus ursinus (FACU)*), and poison oak (*Toxicodendron diversilobum (FAC)*). In addition, less than 1% cover of twinberry (*Lonicera involucrate (FAC)*) was observed, one individual sedge was found that is likely tall flatsedge (*Cyperus eragrostis (FACW)*) and two individual horsetail plants which are likely tall scouring rush (*Equisetum hyemale (FACW)*) plants were observed.

² A Bt horizon is one that contains illuvial layer lattice clays.

3.0 DELINEATION METHODS

3.1 Overview of Sampling Methodology

HBG conducted its investigation on October 4, 2024. The investigation focused on identifying and mapping aquatic resources meeting the San Mateo County Local Coastal Program definitions of wetlands. The Western Mountains, Valleys, and Coast Regional manual was followed when determining the presence or absence of wetland vegetation, hydric soil, and wetland hydrology indicators.

Prior to the site visit, the Property Owner, at the request of HBG, trimmed dense vegetation along the eastern boundary down to the southwestern boundary. The purpose of trimming the vegetation was to gain access to the lower part of the Review Area. This section of the review area had the highest potential to support hydric soils and wetland hydrology indicators due to the slope converging onto a topographic flat area.

In preparation for the field investigations, HBG identified existing landforms that would likely contain potential aquatic resources (wetlands and other waters) within the Review Area by reviewing (1) the topographic survey conducted by Turnrose Land Surveying company; (2) a report prepared by Coast Ridge Ecology dated September 1, 2022; (3) letters prepared by the Committee for Green Foothills; (4) USGS topographic mapping; (5) NRCS soil survey data; (6) USFWS National Wetland Inventory mapping; and (7) communications with Coast Ridge Ecology principal biologist Patrick Kobernus. In addition, Coast Ridge Ecology principal biologist Patrick Kobernus met HBG biologist, Robert Perrera, onsite to provide an overview of their studies, discuss general site conditions and access points.

4.0 AQUATIC RESOURCES TECHNICAL FINDINGS

The following sections discuss hydrophytic vegetation, hydric soil, and wetland hydrology conditions observed at the Review Area. Sample Point locations are shown on Appendix 1, Figure 7, Wetland Determination Data Forms documenting this information are in Appendix 2, and representative photographs of the Review Area are provided in Appendix 3.

Normal circumstances were present, climatic conditions were typical for October when the field work occurred, and vegetation, soil, and hydrology conditions were not naturally problematic or significantly disturbed. Although the vegetation had been trimmed at SP-2, the trees, vines, and shrubs that occupied this area were still visible.

4.1 Sample Locations

Sample locations were selected based on the convergent slope near the southwestern boundary, the general site topography, and the landform features. Soil pits were dug by shovel and using a hand auger to a minimum depth of 13 inches and a maximum depth of 50 inches. Vegetation and hydrologic conditions were observed within a 5 foot radius sampling plot surrounding the pits and soil, and vegetation and hydrology observations were recorded on Wetland Determination Data Forms – Western Mountains, Valleys, and Coast Region, Version 2.0.

Vegetation, soil, and hydrology observations were made at four (4) sample point locations. Two of the sample points, SP-1 and SP-3 were positioned on a flat landform feature where the slope converged, and sample points SP-2 and SP-4 where taken on the hillslope which dominated 90% of the Review Area.

4.2 Field Indicators of Hydric Soil Conditions

Understanding the soil color, type of redoximorphic feature, soil texture and organic matter content is important to determine if a soil is hydric or not. Soil texture also provides an indication of soil permeability. For example, a thick clay layer near the surface may indicate a "restrictive" layer preventing water from moving down the soil profile resulting in saturation, a high water table or ponding. A loamy soil allows water to move vertically and horizontally through the profile, and in the absence of a restrictive layer, soil saturation, high water table and ponding is minimized depending on its position within the landscape.

Landform & Soil Texture:

SP-1 and SP-3 were taken on a landform described as flat where the hillslope converged to this flat topographic area. SP-1 and SP-3 are located uphill from the creek well above its flood plain. Soil texture throughout the profile varied from a Loam near the surface to a Loamy Sand and Silty Loam. No restrictive horizon was observed. NRCS soils mapping for this area indicates that these soils formed on a flood plain or alluvial fan and have a restricted layer at depths of 80".

SP-2 and SP-4 were taken on the hillslope. Soil texture throughout the profile varied from a Silty Loam near the surface to Loamy Sand. <u>No restrictive</u> horizon was observed from 0"-34". NRCS soils mapping for this area indicates these soils form on hills, support clay from the B-C horizon

and have a restricted layer at depths 10"-24".

Soil Color:

The matrix color for SP-1 and SP-3 ranged from 10YR 2/1, 3/1 and 3/2. At SP-1 redoximorphic features in the form of reduced iron was found within a 2" layer of silty loam from 28"-30". It should be noted a 2" layer of redox at this depth does not meet any of the hydric soil indicators. SP-2 and SP-4 matrix color ranged from 10YR 3/2 and 3/3 with no redoximorphic features.

In summary, based on the soil color, texture, and lack of significant redoximorphic features, the Review Area does not support Hydric Soils.

4.3 Field Indicators of Wetland Hydrology Conditions

No primary hydrologic indicators were observed, no surface water, saturation or a water table was observed, and the Review Area is not situated within a flood plain. Within SP-1 and SP-3 one secondary indicator, FAC-Neutral Test (D5) was recorded. Refer to Figure 4 FEMA Flood Zone Mapping for the Review Area flood hazard zone.

Also noteworthy, no willow roots were encountered when digging the soil pits at SP-1 and SP-3. You may expect to encounter many roots when digging pits to depths of 50" in a thick willow riparian zone, however no roots were encountered. This, along with the absence of hydric soils and well drained nature of the soils, suggests the water table is very deep influencing the willow roots to grow more vertical then horizontal near the surface.

In summary, based on the absence of surface and subsurface hydrology, topographic slopes, and its position within the landscape outside of the flood plain, the Review Area does not support Wetland Hydrology.

4.4 Field Indicators of Hydrophytic Vegetation Conditions

Dominant vegetation at SP-1 and SP-3 included arroyo willow (*Salix lasiolepis (FACW)*) in the tree stratum, and California blackberry (*Rubus ursinus (FACU)*) and poison oak (*Toxicodendron diversilobum (FAC)*) in the vine stratum. Dominant vegetation at SP-4 included coyote brush, French broom, poison oak and pampas grass. Vegetation at SP-2 was sparce due to the clearing of vegetation when the story poles were installed, but signs of California blackberry (*Rubus ursinus (FACU)*), poison oak (*Toxicodendron diversilobum (FAC)*), and coyote brush were visible.

In summary, SP-1 and SP-3 did support a dominance of hydrophytic vegetation and SP-2 and SP-4 did not support a dominance of hydrophytic vegetation.

5.0 SUMMARY OF FINDINGS

In the absence of hydric soils and wetland hydrology, the well-drained nature of the loamy soils, the absence of a restrictive layer near the surface, and the absence of willow roots near the surface, it is likely the arroyo willows at SP-1 and SP-3 are not acting as hydrophytes but are able to survive by accessing ground water at depths of below 50" (4.2 feet) in a non-wetland habitat.

Based on these technical findings, the Review Area does not support wetlands as defined Coastal Zone Act or San Mateo County Local Coastal Program.

6.0 REFERENCES

- Federal Geographic Data Committee. 2013. Classification of wetlands and deepwater habitats of the United States. FGDC-STD-004-2013. Second Edition. Wetlands Subcommittee, Federal Geographic Data Committee and U.S. Fish and Wildlife Service, Washington, DC.
- Kobernus, Patrick. 2022. Clarification on the Status of Arroyo Willow, Concave Topography and Hydric Soils Within Riparian Corridors and Wetlands. Coast Ridge Ecology. September 1.
- Lichvar, R., N. Melvin, M. Butterwick, and W. Kirchner. 2012. *National Wetland Plant List Indicator Status Definition*. US Army Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory.
- Roberts, Lennie. Committee for Green Foothills. Letter sent to Monowitz, Leung, and Jia at San Mateo County Planning. 2022. *PLN2021-00478 Owner-Applicant: Rodrigo Lacasia-Barrios, Location: San Carlos Avenue, El Granada; APN: 047-105-020. Proposed construction of a new 2,226 sq. ft. three-story, single-family residence with attached 795 sq. ft. ADU and 374 sq. ft. garage on a 7,070 sq. ft. parcel associated with a staff level Coastal Development Permit (CDP) and Variance.* September 15.
- Roberts, Lennie. Committee for Green Foothills Green Foothills. Letter sent to Monowitz, Steve, San Mateo County & Carl, Dan and Rexing, Stephanie. Coastal Commission. 2024. PLN2021-00478 Owner-Applicant: Rodrigo Lacasia-Barrios, Location: San Carlos Avenue, El Granada; APN: 047-105-020. Proposed construction of a new 2,226 sq. ft. three-story, single-family residence with attached 795 sq. ft. ADU and 374 sq. ft. garage on a 7,070 sq. ft. parcel associated with a staff level Coastal Development Permit (CDP) and Variance. September 7.
- US Army Corps of Engineers Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*. Technical Report Y-87-1. US Army Engineer Waterways Experiment Station, Vicksburg, MS.
- US Army Corps of Engineers. 1992a. *Regional Interpretation of the 1987 Manual*. Memorandum. February 20.
- US Army Corps of Engineers. 1992b. *Clarification and Interpretation of the 1987 Manual*. Memorandum. March 8.
- 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)*, ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-10-3. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

US Department of Agriculture, Natural Resources Conservation Service. Web Soil Survey (WSS). http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx

Appendix 1

Figures 1-7



Figure 1. Review Area Location

Proposed Single-Family Residence Project 779 San Carlos Avenue, El Granada, San Mateo County

Huffman-Broadway Group, Inc. **ENVIRONMENTAL REGULATORY CONSULTANTS**

Spatial Reference:
Name: NAD 1983 2011 StatePlane California III FIPS 0403 Ft US
Scale: 1:50.00
Date Map Created: 10/16/2024
HBG GIS Analyst: Agie Gilmore & Deland Wing
HBG PM: Robert F: Perrera

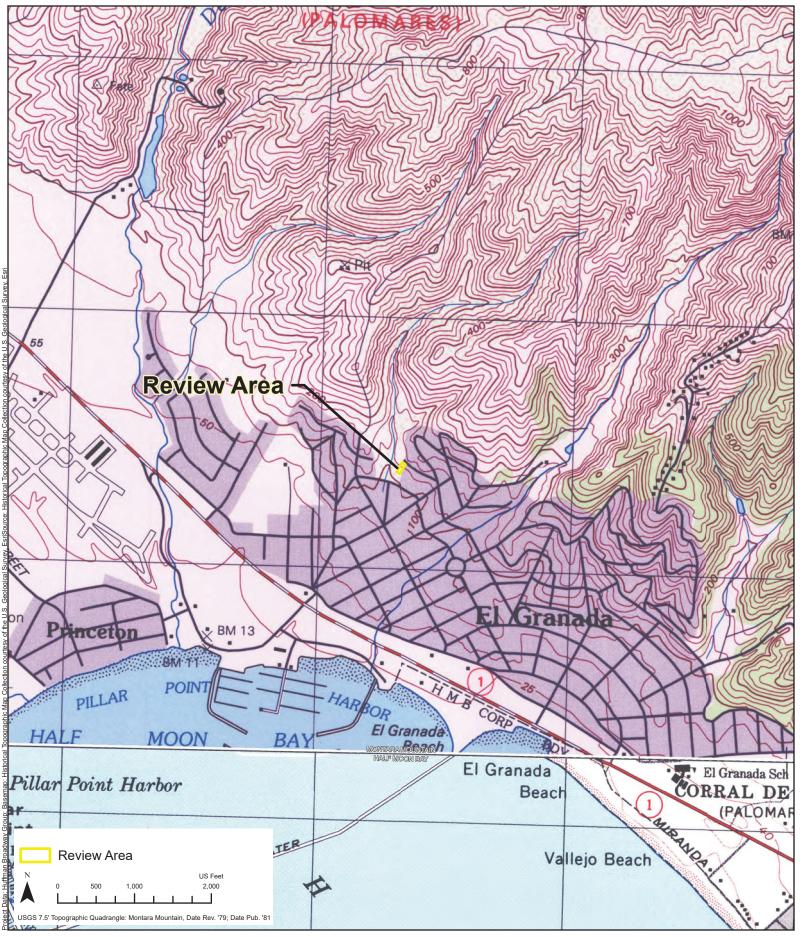


Figure 2. USGS Topographic Map of the Review Area Huffman-Broadway Group, Inc.

Proposed Single-Family Residence Project

ENVIRONMENTAL REGULATORY CONSULTANTS

Proposed Single-Family Residence Project 779 San Carlos Avenue, El Granada, San Mateo County

Spatial Reference: Name: NAD 1983 2011 StatePlane California III FIPS 0403 Ft US Scale: 1:15,000 Date Map Created: 10/16/2024 HBG GIS Analyst: Agie Gilmore & Deland Wing HBG PM: Robert F: Perrera



Figure 3. Aerial Image of the Review Area

Proposed Single-Family Residence Project 779 San Carlos Avenue, El Granada, San Mateo County

Huffman-Broadway Group, Inc. ENVIRONMENTAL REGULATORY CONSULTANTS

Spatial Reference:
Name: NAD 1983 2011 StatePlane California III FIPS 0403 Ft US
Scale: 11,000
Date Map Created: 1016/2024
HBG GIS Analyst: Agie Gillmore & Deland Wing
HBG PIM: Robert F: Perrera



Figure 4. FEMA Flood Zone Mapping

Proposed Single-Family Residence Project 779 San Carlos Avenue, El Granada, San Mateo County

Huffman-Broadway Group, Inc.

Spatial Reference: Name: NAD 1983 2011 StatePlane California III FIPS 0403 Ft US Scale: 18,000 Date Map Created: 10/16/2024 HBG GIS Analyst: Agle Gilmore & Deland Wing HBG PM: Robert F. Perrera



Figure 5. NRCS Soils Map

Proposed Single-Family Residence Project 779 San Carlos Avenue, El Granada, San Mateo County

Huffman-Broadway Group, Inc. ENVIRONMENTAL REGULATORY CONSULTANTS

Spatial Reference: Name: NAD 1983 2011 StatePlane California IV FIPS 0404 Ft US Scale: 11-100 Date Map Created: 1016/2024 HBG GIS Analyst: Agie Gilmore & Deland Wing HBG PM: Robert F. Perrera



Figure 6. USFWS National Wetlands Inventory Mapping Proposed Single-Family Residence Project

Proposed Single-Family Residence Project 779 San Carlos Avenue, El Granada, San Mateo County

Huffman-Broadway Group, Inc. ENVIRONMENTAL REGULATORY CONSULTANTS

Spatial Reference: Name: NAD 1983 2011 StatePlane California III FIPS 0403 Ft US Scale: 15,000 Date Map Created: 10/16/2024 HBG GIS Analyst: Agle Glimore & Deland Wing HBG PM: Robert F. Perera



Figure 7. Aquatic Resource Delineation

Proposed Single-Family Residence Project 779 San Carlos Avenue, El Granada, San Mateo County

Huffman-Broadway Group, Inc. ENVIRONMENTAL REGULATORY CONSULTANTS

Spatial Reference:
Name: NAD 1983 2011 StatePlane California III FIPS 0403 Ft US
Scale: 11,000
Date Map Created: 1016/2024
HBG GIS Analyst: Agle Gillmore & Deland Wing
HBG PM: Robert F: Perrera

Appendix 2

Wetland Determination Data Forms

WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-COR

Project/Site: 779 San Carlos AV& City/County: Fl Granada, San Water Sampling Date	10-4-200
Applicant/Owner: Elizabeth Lacasia State: CA Sampling Point	
Investigator(s): Robert F. Perrera HBG Section, Township, Range: 11, Toss, ROGW	91 1
Landform (hillside, terrace, etc.): Base of Slove (on versat Local relief (concave, convex, none):	one (%): 🔨
Subregion (LRR): LRZ A Lat: 37.51008 Long: -177.477069 Datum	
Soil Map Unit Name: Farallone Loam, gently Sloping (FaB) NWI classification: N	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrologysignificantly disturbed? Are "Normal Circumstances" present? Yes	No
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)	
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important fe	atures, etc.
Hydrophytic Vegetation Present? Yes X No Is the Sampled Area	
Hydric Soil Present? Yes No 🗶 within a Wetland? Yes No 🗶	
Wetland Hydrology Present? Yes No X	
Remarks:	
VEGETATION – Use scientific names of plants. Absolute Dominant Indicator	
Absolute Dominant Indicator Tree Stratum (Plot size: 5×5) % Cover Species? Status Dominance Test worksheet:	
1. Arroyo willow 100 Yes FACW Number of Dominant Species That	
2 Are OBL, FACW, or FAC:	<u>3</u> (A)
3 Total Number of Dominant Species	/1
4 Across All Strata:	(B)
Sapling/Shrub Stratum (Plot size:) =Total Cover Percent of Dominant Species That Are OBL, FACW, or FAC:	75% (400)
Sapling/Shrub Stratum (Plot size:) Are OBL, FACW, or FAC:	75% (A/B)
2. Prevalence Index worksheet:	
	ly by:
4 OBL species x 1 =	
5 FACW species x 2 =	
Herb Stratum (Plot size: 5 × 5) FACU species x 3 = FACU species x 4 =	
A STATE OF THE STA	
2	(P)
3 Column Totals: (A) Prevalence Index = B/A =	(B)
4.	
5. Hydrophytic Vegetation Indicators:	
61 - Rapid Test for Hydrophytic Vege	tation
7 2 - Dominance Test is >50%	
8 3 - Prevalence Index is ≤3.0 ¹	
94 - Morphological Adaptations ¹ (Provided in Remarks or on a separate	
	sneet)
11 5 - Wetland Non-Vascular Plants 1 5 - Wetland Non-Vascular Plants 1 Problematic Hydrophytic Vegetation	1 (Evolain)
Woody Vine Stratum (Diet size F x F	
1. Toxicoden dron diversilohum 10 405 FAC be present, unless disturbed or problem	
2. Rubus Ursinus 10 Yes FACU Hydrophytic	
=Total Cover Vegetation	
Table 2	

Profile Descr	ription: (Describe to	o the depth	needed to doc	ument th	e indica	tor or c	onfirm the	absence of ind	icators.)
Depth	Matrix		Redo	x Feature	es				
(inches)	Color (moist)	% (Color (moist)	%	Type ¹	Loc ²	Text	ture	Remarks
0-9.5	10412/1	100	_	-	_		Loa	w u	U/sand
915-28	104R 3/1	100	_	_	sum,	tons	Luam	y Sara	w/pebbles
28-30	104R3/1		10483/6	2	^	M	as 11 1	bam	The polities
30-40	10423/1	100	_	-	-	-	1	1	WIPEbbles
40-50	10423/2	100				_	1	1 sand	
40 20	10-116-12	100		_		_	Loam	sand san	d Wifepples
					_				
	ncentration, D=Deple					pated Sa	and Grains.	² Location:	PL=Pore Lining, M=Matrix.
	ndicators: (Applicat	ble to all LRI	Rs, unless oth	erwise no	oted.)			Indicators for	Problematic Hydric Soils ³ :
Histosol (A	and the second second		Sandy Gle	eyed Matr	ix (S4)			2 cm Muck	(A10) (LRR A, E)
	pedon (A2)		Sandy Re					Iron-Mang	anese Masses (F12) (LRR D)
Black Hist			Stripped N					Red Paren	t Material (F21)
	Sulfide (A4)		Loamy Mu			except	MLRA 1)		ow Dark Surface (F22)
	k (A9) (LRR D, G)	(0.44)	Loamy Gl					Other (Exp	lain in Remarks)
	Below Dark Surface k Surface (A12)	(A11)	Depleted					3.	and the second second second
	icky Mineral (S1)		Redox Da						ydrophytic vegetation and
	ucky Peat or Peat (S.	2) /I PP (3)	Pepleted Redox De						drology must be present,
		2) (LKK G)	Redox De	pressions	(FO)			uniess dist	urbed or problematic.
	ayer (if observed):								
Type: Depth (inc	NoneFound	3						W 200 - 120	1.50
Remarks:	Soil texture						Hydric Sc	il Present?	YesNo_X
HYDROLOG									
	ology Indicators:	o la comulcada	والمعالة والمعام	and the same of th					
Surface W	tors (minimum of on	e is required;			(DO)		7		cators (2 or more required)
	er Table (A2)		Water-Sta			except		_	ned Leaves (B9) (MLRA 1, 2
Saturation			Salt Crust	1, 2, 4A, a	and 4b)			4A, and	The state of the s
Water Mar			Aquatic In		s (B13)				atterns (B10) n Water Table (C2)
	Deposits (B2)		Hydrogen						Visible on Aerial Imagery (C9)
Drift Depos			Oxidized F			ivina Ro	nata (02)		c Position (D2)
							1015 (1.3)		or osition (DZ)
, ugai iviat (or Crust (B4)		Presence	of Reduce	d Iron (C	(4)	ools (C3)		uitard (D3)
Iron Depos	or Crust (B4) sits (B5)	5.6			ed Iron (0 on in Till			Shallow Aq	
Iron Depos			Recent Iro	n Reducti	on in Till	ed Soils	s (C6)	Shallow Aq	al Test (D5)
Iron Depos	sits (B5)	agery (B7)	Recent Iro Stunted or	n Reducti Stressed	on in Till Plants (ed Soils	s (C6)	Shallow Aq FAC-Neutra Raised Ant	al Test (D5) Mounds (D6) (LRR A)
Iron Depos Surface So Inundation	sits (B5) oil Cracks (B6)		Recent Iro	n Reducti Stressed	on in Till Plants (ed Soils	s (C6)	Shallow Aq FAC-Neutra Raised Ant	al Test (D5)
Iron Depos Surface So Inundation	sits (B5) oil Cracks (B6) Visible on Aerial Im /egetated Concave S		Recent Iro Stunted or	n Reducti Stressed	on in Till Plants (ed Soils	s (C6)	Shallow Aq FAC-Neutra Raised Ant	al Test (D5) Mounds (D6) (LRR A)
Iron Depos Surface So Inundation Sparsely V	sits (B5) bil Cracks (B6) Visible on Aerial Im egetated Concave S ations:	Surface (B8)	Recent Iro Stunted or Other (Exp	n Reducti Stressed	on in Till Plants (marks)	ed Soils	s (C6)	Shallow Aq FAC-Neutra Raised Ant	al Test (D5) Mounds (D6) (LRR A)
Iron Depos Surface So Inundation Sparsely V Field Observa	sits (B5) pil Cracks (B6) Visible on Aerial Im Vegetated Concave Stions: Present? Yes	Surface (B8)	Recent Iro Stunted or Other (Exp	n Reducti Stressed plain in Re	on in Till Plants (marks)	ed Soils	s (C6)	Shallow Aq FAC-Neutra Raised Ant	al Test (D5) Mounds (D6) (LRR A)
Iron Depos Surface So Inundation Sparsely V Field Observa Surface Water	sits (B5) bil Cracks (B6) Visible on Aerial Im /egetated Concave S ttions: Present? Yes resent? Yes	Surface (B8)	Recent Iro Stunted or Other (Exp	n Reducti Stressed blain in Re	on in Till Plants (marks) ches): ches):	ed Soils	s (C6)	Shallow Aq FAC-Neutra Raised Ant Frost-Heav	al Test (D5) Mounds (D6) (LRR A) e Hummocks (D7)
Iron Depose Surface Some Inundation Sparsely V Field Observation Surface Water Water Table President President Saturation President President President President President President President Presid	sits (B5) bil Cracks (B6) Visible on Aerial Im /egetated Concave S ations: Present? Yes resent? Yes sent? Yes ary fringe)	Surface (B8)	Recent Iro Stunted or Other (Exp No No No No	n Reducti Stressed plain in Re Depth (in Depth (in Depth (in	on in Till Plants (marks) ches): ches): ches):	ed Soils	(C6) RRA) Wetland	Shallow Aq FAC-Neutri Raised Ant Frost-Heav	al Test (D5) Mounds (D6) (LRR A)
Iron Depose Surface Some Inundation Sparsely V Field Observation Surface Water Water Table President President Saturation President President President President President President President Presid	sits (B5) bil Cracks (B6) l Visible on Aerial Im /egetated Concave S htions: Present? Yes resent? Yes sent? Yes	Surface (B8)	Recent Iro Stunted or Other (Exp No No No No	n Reducti Stressed plain in Re Depth (in Depth (in Depth (in	on in Till Plants (marks) ches): ches): ches):	ed Soils	(C6) RRA) Wetland	Shallow Aq FAC-Neutri Raised Ant Frost-Heav	al Test (D5) Mounds (D6) (LRR A) e Hummocks (D7)
Iron Depose Surface So Inundation Sparsely V Field Observa Surface Water Water Table Pr Saturation Pres (includes capill Describe Reco	sits (B5) bil Cracks (B6) Visible on Aerial Im /egetated Concave S ations: Present? Yes resent? Yes sent? Yes ary fringe)	Surface (B8)	Recent Iro Stunted or Other (Exp No No No No	n Reducti Stressed plain in Re Depth (in Depth (in Depth (in	on in Till Plants (marks) ches): ches): ches):	ed Soils	(C6) RRA) Wetland	Shallow Aq FAC-Neutri Raised Ant Frost-Heav	al Test (D5) Mounds (D6) (LRR A) e Hummocks (D7)
Iron Depose Surface So Inundation Sparsely V Field Observa Surface Water Water Table Pr Saturation Pres (includes capill	sits (B5) bil Cracks (B6) Visible on Aerial Im /egetated Concave S ations: Present? Yes resent? Yes sent? Yes ary fringe)	Surface (B8)	Recent Iro Stunted or Other (Exp No No No No	n Reducti Stressed plain in Re Depth (in Depth (in Depth (in	on in Till Plants (marks) ches): ches): ches):	ed Soils	(C6) RRA) Wetland	Shallow Aq FAC-Neutri Raised Ant Frost-Heav	al Test (D5) Mounds (D6) (LRR A) e Hummocks (D7)
Iron Depose Surface So Inundation Sparsely V Field Observa Surface Water Water Table Pr Saturation Pres (includes capill Describe Reco	sits (B5) bil Cracks (B6) Visible on Aerial Im /egetated Concave S ations: Present? Yes resent? Yes sent? Yes ary fringe)	Surface (B8)	Recent Iro Stunted or Other (Exp No No No No	n Reducti Stressed plain in Re Depth (in Depth (in Depth (in	on in Till Plants (marks) ches): ches): ches):	ed Soils	(C6) RRA) Wetland	Shallow Aq FAC-Neutri Raised Ant Frost-Heav	al Test (D5) Mounds (D6) (LRR A) e Hummocks (D7)

WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-COR

Project/Site: 779 San Carlos Ave		City/Coun	ty: El Oran	ala Son Matro	Sampling Date:	10-4-2024
	sia				Sampling Point:	-
Investigator(s): Robert F. Perrusa			wnship, Ra	inge: 11, T053,		
Landform (hillside, terrace, etc.):				vex, none): Convex		pe (%): 18
				122.476992		NA
Soil Map Unit Name: Tracca loam, steer			-	NWI classifica		10 12
Are climatic / hydrologic conditions on the site typical f				No (If no, expla		
Are Vegetation, Soil, or Hydrology						°
Are Vegetation, Soil, or Hydrology						
SUMMARY OF FINDINGS – Attach site m	ap showing	g sampling	point lo	cations, transects, ii	nportant fea	tures, etc.
	lo X	Is the	Sampled A	rea		
	lo_X	within	a Wetland	? Yes	No X	
	lo X					
Remarks: Although vegetation h	ad beer	- trimi	red @	this SPO NER	Was Uls	ilale
or ground or stump	sicf sh	rubs.		3		
VEGETATION – Use scientific names of						
	Absolute	Dominant	Indicator			
Tree Stratum (Plot size: 5×5)	% Cover	Species?	Status	Dominance Test works	sheet:	
1. Salex lasiolepis 2.	20	405	FACH	Number of Dominant Sp Are OBL, FACW, or FAC		(A)
3. 4.				Total Number of Domina Across All Strata:	ant Species	(B)
	20 =	Total Cover		Percent of Dominant Sp	ecies That	
Sapling/Shrub Stratum (Plot size: 5 x 5)		4.0	Are OBL, FACW, or FAC	D:	(A/B)
1. Genista monspessulara	40	405	-10-			
2. Backharis pilularis	10	409	NL	Prevalence Index work		, but
4.				Total % Cover of: OBL species	Multiply x 1 =	y by.
5.				FACW species	x2=	
•	10 =	Total Cover		FAC species	x3=	
Herb Stratum (Plot size:)	-10			FACU species	x 4 =	
1.				UPL species	x 5 =	
2.				Column Totals:	(A)	(B)
3.				Prevalence Index =	B/A =	
4 5				Hydrophytic Vegetatio	n Indicators:	
6.				1 - Rapid Test for H		ation
7.				2 - Dominance Test		
8.				3 - Prevalence Inde	x is ≤3.0 ¹	
9.				4 - Morphological Ad		
10				data in Remarks		sheet)
11	(<u></u>)			5 - Wetland Non-Va		
Monday Vine Charles (District of)	=	Total Cover		Problematic Hydrop		
Woody Vine Stratum (Plot size: 5×5' 1. Rubus ursinus	40	400	FACU	¹ Indicators of hydric soil be present, unless distu		
2. Toxicodendron diversilybun	10	400	FAC		ned of problettis	uo.
The water of the state of the s	50 =	Total Cover	1 /16	Hydrophytic Vegetation		
% Bare Ground in Herb Stratum /00		The state of the s		Present? Yes	No X	
				_		

epth	Mat	171	-	Redox Featu							
nches)	Color (mois	t) %	Color (mois	t) %	Type ¹	Loc ²	Tex	ture		Remarks	
-11	104123/2	100	_	-	-	-	Sandy	loam	ننا	Pebblos	
-29	1040 3/=	100			-	_	Sand	ylam	W	Pebbles	
dric Soil I Histosol Histic Ep Black His Hydrogel 1 cm Mu Depleted Thick Da Sandy M	ipedon (A2)	, G) urface (A11)	I LRRs, unless Sand Sand Stripp Loam Loam Deple Redo		noted.) trix (S4)) 6) eral (F1) trix (F2) f3) ce (F6) rface (F7)	(except		lndicators 2 cm Iron-N Red F Very Other	s for Proble Muck (A10) Manganese Parent Mate Shallow Dai (Explain in	rk Surface (F2	(LRR D) 2) and and sent,
-	ayer (if observ		Redo	x Depression	is (F8)			unles	s disturbed	or problematic	
Type:											
Type: _ Depth (in	None for	NA	=				Hydric S	oil Present	?	Yes	No≱
Type: _ Depth (in emarks:	None for	int	=				Hydric S	oil Present	?	Yes	No <u>*</u>
Type: _ Depth (in emarks:	None for	NA					Hydric S	oil Present	?	Yes	No <u>*</u>
Type:Depth (in emarks: /DROLO /etland Hydrimary Indice	GY drology Indicate eators (minimum	Ors:			(20)			Secondar	y Indicators	6 (2 or more re	quired)
Type:	GY drology Indicate cators (minimum Water (A1) ter Table (A2)	ors: of one is req	Wate M Salt (Aqua Hydro Oxidi Prese Rece Stunt B7) Wate	that apply) r-Stained Lecentric (B11) tic Invertebrated Rhizospen Sulfide zed Rhizospence of Redunt Iron Redued or Stresser (Explain in	ates (B13) Odor (C1 heres on aced Iron action in Ti)) Living R (C4) illed Soil (D1) (LI	oots (C3)	Secondar Wate 4A Drain Dry-S Satur Geon Shalle FAC- Raise	y Indicators r-Stained Le a, and 4B) age Pattern leason Wate ation Visible norphic Pos bow Aquitard Neutral Tes ad Ant Mour	e (2 or more receaves (B9) (MI) as (B10) er Table (C2) e on Aerial Imatition (D2) I (D3)	quired) _RA 1, 2
Type: Depth (in lemarks: Proper lemarks:	drology Indicate stators (minimum Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) sosits (B3) at or Crust (B4) sosits (B5) Soil Cracks (B6 on Visible on Ae Vegetated Corvations: er Present?	ors: of one is req	Wate M Salt (Aqua Hydro Oxidi Prese Rece Stunt B7) Wate	r-Stained Let LRA 1, 2, 4A Crust (B11) tic Invertebra ogen Sulfide zed Rhizosp ence of Redu nt Iron Redu ed or Stresse r (Explain in Depth Depth	ates (B13) Odor (C1 heres on aced Iron action in Ti)) Living R (C4) illed Soil (D1) (LI	oots (C3) s (C6) RR A)	Secondar Wate 4A Drain Dry-S Satur Geon Shalle FAC- Raise	y Indicators r-Stained Le a, and 4B) age Pattern eason Wate ation Visible norphic Pos bow Aquitard Neutral Tes ad Ant Mour Heave Hur	e (2 or more re- eaves (B9) (Miles (B10) er Table (C2) e on Aerial Ima ition (D2) I (D3) et (D5) nds (D6) (LRR nmocks (D7)	quired) _RA 1, 2
Type:	drology Indicate cators (minimum Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B3) at or Crust (B4) cosits (B5) Soil Cracks (B6 on Visible on Aer Vegetated Corvations: er Present? Present?	ors: of one is required limagery (icave Surface Yes Yes Yes Yes	Wate M Salt (Aqua Hydro Oxidi Prese Rece Stunt B7) Othe (B8)	r-Stained Lea LRA 1, 2, 4A Crust (B11) tic Invertebra ogen Sulfide zed Rhizosp ence of Redu nt Iron Redu ed or Stressor (Explain in Depth Depth	ates (B13) Odor (C1) heres on ced Iron ction in Ti ed Plants Remarks) (inches): (inches):)) Living R (C4) illed Soil (D1) (LI	oots (C3) s (C6) RR A) Wetlan	Secondar Wate 4A Drain Dry-S Satur Geon Shalk FAC- Raise Frost	y Indicators r-Stained Le a, and 4B) age Pattern eason Wate ation Visible norphic Pos bow Aquitard Neutral Tes ad Ant Mour Heave Hur	e (2 or more re- eaves (B9) (Miles (B10) er Table (C2) e on Aerial Ima ition (D2) I (D3) et (D5) nds (D6) (LRR nmocks (D7)	quired) _RA 1, 2 agery (C9

WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-COR

	pononi agoni	0, 10 0 0 0 0 1 1			
Project/Site: 779 San Carlos Av.	e.	City/County:	El Granada, San M	Sampling Date:	0-4-202
Applicant/Owner: Elizabeth Laca					
Investigator(s): Robert F. Perrera					
Landform (hillside, terrace, etc.): Bese of Slape					(%): 0
Subregion (LRR): LRRA Lat: 37.	510060		Long: = 177, 4791/	7 6 Datum:	NA
Soil Map Unit Name: Farallone Loam					
	1	490			
Are climatic / hydrologic conditions on the site typical f					
Are Vegetation , Soil , or Hydrology					
Are Vegetation, Soil, or Hydrology					over tele
SUMMARY OF FINDINGS – Attach site m	ap snowing s	sampling p	oint locations, trans	sects, important featu	res, etc.
Hydrophytic Vegetation Present? Yes N	lo		mpled Area	5.00	1
Hydric Soil Present? Yes N	0 💥	within a	Wetland? Yes	No_X	
Wetland Hydrology Present? Yes N	0				
Remarks:					
VEGETATION – Use scientific names of p	olants.				-
	Abaaluta D	ominant Ind	dicator		
Tree Stratum (Plot size: $5 \neq 5'$)	% Cover S		tatus Dominance Te	est worksheet:	
1. Arroyo Willow			Number of Dor Are OBL, FAC	minant Species That W, or FAC:	(A)
3 4			Total Number of Across All Stra	of Dominant Species ta:) (B)
Sapling/Shrub Stratum (Plot size:1.	=To	tal Cover	Percent of Don Are OBL, FAC	ninant Species That W, or FAC:	(A/B)
2.			Prevalence in	dex worksheet:	
3.			Total % C	over of: Multiply b	y:
4			OBL species	x 1 =	
5			FACW species		
Herb Stratum (Plot size: 5×5)	=To	tal Cover	FAC species	x 3 =	
Herb Stratum (Plot size: 5×5) 1. Sedse see.	<1	Yes F	FACU species UPL species	x 4 =	_
2. Equistum hyemale			Column Totals		— (B)
3.				Index = B/A =	
4.					
5.			Hydrophytic V	egetation Indicators:	
6				Test for Hydrophytic Vegetati	on
7.				ance Test is >50%	
8				ence Index is ≤3.0 ¹	34.5
9.				logical Adaptations ¹ (Provide Remarks or on a separate sh	
10 11.				d Non-Vascular Plants ¹	leet)
1115		tal Cover		ic Hydrophytic Vegetation ¹ (E	Evnlain)
Woody Vine Stratum (Plot size: 5 × 5)	tai 0010i	1 Table 1	ydric soil and wetland hydrol	
1. Toxicodendran diversilabum	10	40s F		ess disturbed or problematic	
2. Ruhus Urginus	10	Yes FA	Hydrophytic		
Lonicera involverate	5 -10	tal Cover F	AC Vegetation		
% Bare Ground in Herb Stratum	25 to fe	Thes .	Present?	Yes No No	
Remarks: Sadge SP 11 Kall C	perus ero	armstis.	* Just one h	erstail plant Foun	· d.

Remarks
n W/Rebbles
m w/ Pebbles
n wi Pobbles
d W/Pebbles
1 0/1004)
Location: PL=Pore Lining, M=Matrix.
ators for Problematic Hydric Soils ³ : cm Muck (A10) (LRR A, E) con-Manganese Masses (F12) (LRR D) ded Parent Material (F21) dery Shallow Dark Surface (F22) other (Explain in Remarks) ators of hydrophytic vegetation and detland hydrology must be present, nless disturbed or problematic.
sent? Yes No_X
ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rrainage Patterns (B10) rry-Season Water Table (C2)
aturation Visible on Aerial Imagery (C9) decomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) rost-Heave Hummocks (D7)
1

WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-COR

Project/Site: 779 San Carlos A	vz	City/Cou	nty: ElGran	ada, San Mateo	Sampling Date: 10-4-202
	sla			State: CA	Sampling Point: SP-4
Investigator(s): Robert F. Perrera	HBG	Section, T	ownship, Ra	nge: 11 T 05 5	, RO6W
Landform (hillside, terrace, etc.):		 Local relief (co	oncave, conv	vex, none): Conve	¥ Slope (%): <u>\</u> 8
Subregion (LRR): LRV-A Lat: 37.5	510294		Long:	122. 476979	Datum: NA
Soil Map Unit Name: Tiessa John Ster	p. erolu	ed-		NWI classific	cation: NA
Are climatic / hydrologic conditions on the site typical for			Yes X	No (If no, expl	ain in Remarks.)
Are Vegetation, Soil, or Hydrology					Yes X No
Are Vegetation , Soil , or Hydrology					
SUMMARY OF FINDINGS – Attach site ma					
Hydric Soil Present? Yes No	0 × 0 ×		Sampled A		No <u>×</u>
Remarks:					
VEGETATION – Use scientific names of p					
<u>Tree Stratum</u> (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test work	sheet:
1				Number of Dominant S Are OBL, FACW, or FA	pecies That
3. 4.				Total Number of Domir Across All Strata:	
-1,		=Total Cover		Percent of Dominant S	
Sapling/Shrub Stratum (Plot size: 5×5)		20.00	Are OBL, FACW, or FA	AC: <u>26</u> (A/B)
1. Genista monopossulana	80	95	_ NL		
2. Racchaus Pilularis	20	4.45	_NL_	Prevalence Index wor Total % Cover of:	395349545454545459
4.				OBL species	x 1 =
5.			-	FACW species	x 2 =
	100	=Total Cover		FAC species	x 3 =
Herb Stratum (Plot size:)	1.40	11	+0.1.	FACU species	x 4 =
1. Cortaderia selloana			FACU	UPL species Column Totals:	x 5 = (A) (B)
3.				Prevalence Index =	
4 5				Hydrophytic Vegetati	on Indicators:
6					Hydrophytic Vegetation
7.				2 - Dominance Tes	
9.				3 - Prevalence Inde	ex is ≤3.0° Adaptations¹(Provide supporting
10	5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7				or on a separate sheet)
11.				5 - Wetland Non-V	ascular Plants ¹
	10	=Total Cover		Problematic Hydro	phytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size: 5/5/ 1. Rubus urslavs	10	Yes	FACU	¹ Indicators of hydric so be present, unless dist	il and wetland hydrology must urbed or problematic.
2. Toxicodondran diversilubum	10	=Total Cover	FAC	Hydrophytic Vegetation	
% Bare Ground in Herb Stratum 90				Present? Yes_	No <u>X</u>
Remarks:					

epth Matrix		Redox Fe	1	. 2				And the same of th	
nches) Color (moist)	% Color (moist)	% Type ¹	Loc2	Tex	ture		Remarks	
1-13 104R 3/3 10	00 _	-	_	-	Lasson	w/ Sand	WIDE	266/23.	
						1.			
					-				
				_					
ype: C=Concentration, D=Depletion	on PM-Peduced	Matrix CS=0	Covered or C	Contad C	and Crains	2l poetis	n: PL=Pore	Lining M-N	Antely
ydric Soil Indicators: (Applicable				Juaieu 3	and Grains.		for Problem		
Histosol (A1)								The state of the s	Solls :
Histic Epipedon (A2)		Sandy Gleyed Sandy Redox (uck (A10) (L		
Black Histic (A3)							inganese Ma		LKK D
		Stripped Matrix	1.5	/	MIDAA		rent Material		
Hydrogen Sulfide (A4)		oamy Mucky		(except	MLRA 1)		nallow Dark S)
_ 1 cm Muck (A9) (LRR D, G)		oamy Gleyed				— Other (Explain in Re	emarks)	
_ Depleted Below Dark Surface (A		Depleted Matri				3, ,, ,		essectivites	
Thick Dark Surface (A12)		Redox Dark Su		,			of hydrophytic		
Sandy Mucky Mineral (S1)		Depleted Dark)			hydrology m		ent,
2.5 cm Mucky Peat or Peat (S2)	(LRR G)R	Redox Depres	sions (F8)			unless	disturbed or p	problematic.	
estrictive Layer (if observed):									
Type: None Found									
Type: None Found Depth (inches): NA					Hydric So	oil Present?		Yes	No 2
Type: None Found Depth (inches): NA emarks:					Hydric So	oil Present?		Yes	No <u>></u>
Type: None Found Depth (inches): NA emarks:					Hydric So	oil Present?		Yes	No 2
Type: None Found Depth (inches): NA emarks: POROLOGY Vetland Hydrology Indicators:	is required; check	call that apply	v)		Hydric So		Indicators (2		
Type: New Found Depth (inches): NA emarks: /DROLOGY //detland Hydrology Indicators:		k all that apply Vater-Stained) (except		Secondary		or more requ	uired)
Type: New a Found Depth (inches): NA emarks: /DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one		Vater-Stained				Secondary Water-S	Indicators (2	or more requ	uired)
Type: New Found Depth (inches): NA emarks: //DROLOGY //etland Hydrology Indicators: //imary Indicators (minimum of one Surface Water (A1)	V	Vater-Stained	Leaves (B9)			Secondary Water-8	Indicators (2 Stained Leav	or more requ	uired)
Type: New Found Depth (inches): NA emarks: POROLOGY Tetland Hydrology Indicators: Imary Indicators (minimum of one Surface Water (A1) High Water Table (A2)	v s	Vater-Stained MLRA 1, 2,	Leaves (B9) 4A, and 4B)		Secondary Water-S 4A, Drainag	Indicators (2 Stained Leav and 4B)	or more reques (B9) (MLI	uired)
Type: New Found Depth (inches): NA emarks: **TOROLOGY **Torology Indicators: imary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3)		Vater-Stained MLRA 1, 2, Salt Crust (B11	Leaves (B9) 4A, and 4B 1) brates (B13))		Secondary Water-S 4A, Drainag Dry-Se:	Indicators (2 Stained Leav and 4B) ge Patterns (l	or more requires (B9) (MLI) B10) Fable (C2)	uired) RA 1, 2
Type: New Found Depth (inches): NA emarks: POROLOGY Setland Hydrology Indicators: Finary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)		Vater-Stained MLRA 1, 2, Salt Crust (B11 Aquatic Inverte	Leaves (B9) 4A, and 4B 1) brates (B13) de Odor (C1))		Secondary Water-S 4A, Drainag Dry-Sea	Indicators (2 Stained Leav and 4B) ge Patterns (I ason Water T	or more requests (B9) (MLI B10) Table (C2) n Aerial Imag	uired) RA 1, 2
Type: New Found Depth (inches): NA emarks: PROLOGY etland Hydrology Indicators: imary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)		Vater-Stained MLRA 1, 2, Salt Crust (B11 Aquatic Inverte Hydrogen Sulfi	Leaves (B9) 4A, and 4B 1) brates (B13) de Odor (C1) ospheres on))) Living R		Secondary Water-S 4A, Drainag Dry-Ses Saturat Geomo	Indicators (2 Stained Leav and 4B) ge Patterns (I ason Water T ion Visible or	or more requires (B9) (MLI B10) Fable (C2) In Aerial Imag	uired) RA 1, 2
Type: New L Found Depth (inches): NA emarks: POROLOGY Petland Hydrology Indicators: rimary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)		Vater-Stained MLRA 1, 2, Salt Crust (B1* Aquatic Inverte Hydrogen Sulfi Oxidized Rhizo	Leaves (B9) 4A, and 4B 1) brates (B13) de Odor (C1) brates on educed Iron))) Living Re (C4)	pots (C3)	Secondary Water-8 4A, Drainag Dry-Se Saturat Geomo Shallow	Indicators (2 Stained Leav and 4B) ge Patterns (I gason Water T ion Visible or rphic Position	or more requires (B9) (MLI B10) Table (C2) In Aerial Imag In (D2)	uired) RA 1, 2
Type: None Found Depth (inches): NA emarks: POROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)		Vater-Stained MLRA 1, 2, Salt Crust (B1* Aquatic Inverte Hydrogen Sulfi Dxidized Rhizo Presence of Re	Leaves (B9) 4A, and 4B 1) brates (B13) de Odor (C1 branches on educed Iron eduction in T))) Living Re (C4) illed Soil	pots (C3)	Secondary Water-S 4A, Drainag Dry-Sea Saturat Geomo Shallow FAC-No	Indicators (2 Stained Leav and 4B) ge Patterns (B ason Water T ion Visible or rphic Position Aquitard (D	or more requires (B9) (MLI B10) Table (C2) In Aerial Imag In (D2) (3)	uired) RA 1, 2
Type: New Found Depth (inches): NA emarks: POROLOGY Tetland Hydrology Indicators: rimary Indicators (minimum of one 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)		Vater-Stained MLRA 1, 2, Salt Crust (B11 Aquatic Inverte Hydrogen Sulfi Dixidized Rhizo Presence of Re Recent Iron Re	Leaves (B9) 4A, and 4B 1) brates (B13) de Odor (C1) brates on educed Iron eduction in Tessed Plants)) Living Re (C4) illed Soil (D1) (LF	pots (C3)	Secondary Water-S 4A, Drainag Dry-Seg Saturat Geomo Shallow FAC-No	Indicators (2 Stained Leav and 4B) ge Patterns (B ason Water T ion Visible or rphic Position Aquitard (D eutral Test (D	or more requires (B9) (MLI B10) Table (C2) In Aerial Imag In (D2) 3) D5) (D6) (LRR A	uired) RA 1, 2
Type: New Found Depth (inches): NA emarks: Paramarks: Paramarks		Vater-Stained MLRA 1, 2, Salt Crust (B1* Aquatic Inverte Hydrogen Sulfi Dxidized Rhizo Presence of Re Recent Iron Re Stunted or Stre	Leaves (B9) 4A, and 4B 1) brates (B13) de Odor (C1) brates on educed Iron eduction in Tessed Plants)) Living Re (C4) illed Soil (D1) (LF	pots (C3)	Secondary Water-S 4A, Drainag Dry-Seg Saturat Geomo Shallow FAC-No	Indicators (2 Stained Leav and 4B) ge Patterns (I ason Water T ion Visible or rphic Position Aquitard (Di eutral Test (D Ant Mounds	or more requires (B9) (MLI B10) Table (C2) In Aerial Imag In (D2) 3) D5) (D6) (LRR A	uired) RA 1, 2
Type: None Found Depth (inches): NA emarks: YDROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one 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 Image Sparsely Vegetated Concave Su		Vater-Stained MLRA 1, 2, Salt Crust (B1* Aquatic Inverte Hydrogen Sulfi Dxidized Rhizo Presence of Re Recent Iron Re Stunted or Stre	Leaves (B9) 4A, and 4B 1) brates (B13) de Odor (C1) brates on educed Iron eduction in Tessed Plants)) Living Re (C4) illed Soil (D1) (LF	pots (C3)	Secondary Water-S 4A, Drainag Dry-Seg Saturat Geomo Shallow FAC-No	Indicators (2 Stained Leav and 4B) ge Patterns (I ason Water T ion Visible or rphic Position Aquitard (Di eutral Test (D Ant Mounds	or more requires (B9) (MLI B10) Table (C2) In Aerial Imag In (D2) 3) D5) (D6) (LRR A	uired) RA 1, 2
Type:		Vater-Stained MLRA 1, 2, Salt Crust (B11 Aquatic Inverte Hydrogen Sulfi Dividized Rhizo Presence of Re Recent Iron Re Stunted or Stre Other (Explain	Leaves (B9) 4A, and 4B 1) brates (B13) de Odor (C1) branes on educed Iron eduction in Tessed Plants)) Living Re (C4) illed Soil (D1) (LF	pots (C3)	Secondary Water-S 4A, Drainag Dry-Seg Saturat Geomo Shallow FAC-No	Indicators (2 Stained Leav and 4B) ge Patterns (I ason Water T ion Visible or rphic Position Aquitard (Di eutral Test (D Ant Mounds	or more requires (B9) (MLI B10) Table (C2) In Aerial Imag In (D2) 3) D5) (D6) (LRR A	uired) RA 1, 2
Type:		Vater-Stained MLRA 1, 2, Salt Crust (B1* Aquatic Inverte Hydrogen Sulfi Dividized Rhizo Presence of Re Recent Iron Re Stunted or Stre Other (Explain	Leaves (B9) 4A, and 4B 1) brates (B13 de Odor (C1 ospheres on educed Iron eduction in T essed Plants in Remarks)) Living Re (C4) illed Soil (D1) (LF	pots (C3)	Secondary Water-S 4A, Drainag Dry-Seg Saturat Geomo Shallow FAC-No	Indicators (2 Stained Leav and 4B) ge Patterns (I ason Water T ion Visible or rphic Position Aquitard (Di eutral Test (D Ant Mounds	or more requires (B9) (MLI B10) Table (C2) In Aerial Imag In (D2) 3) D5) (D6) (LRR A	uired) RA 1, 2
Type:	VSPRS gery (B7)C urface (B8)	Vater-Stained MLRA 1, 2, Salt Crust (B1* Aquatic Inverte Hydrogen Sulfi Didized Rhizo Presence of Re Recent Iron Re Stunted or Stre Other (Explain Dep Dep	Leaves (B9) 4A, and 4B 1) brates (B13) de Odor (C1) brates on educed Iron eduction in T essed Plants in Remarks oth (inches):)) Living Re (C4) illed Soil (D1) (LF	pots (C3) s (C6) RR A)	Secondary Water-S 4A, Drainag Dry-Se: Saturat Geomo Shallow FAC-Ne Raised Frost-H	Indicators (2 Stained Leav and 4B) ge Patterns (E ason Water T ion Visible or rphic Position Aquitard (Di eutral Test (D Ant Mounds eave Hummo	or more requires (B9) (MLI B10) Table (C2) In Aerial Imag In (D2) 3) D5) (D6) (LRR A	uired) RA 1, 2
Type: Depth (inches): Depth (i	VS	Vater-Stained MLRA 1, 2, Salt Crust (B1* Aquatic Inverte Hydrogen Sulfi Didized Rhizo Presence of Re Recent Iron Re Stunted or Stre Other (Explain Dep Dep	Leaves (B9) 4A, and 4B 1) brates (B13) de Odor (C1) behaves on educed Iron eduction in Tessed Plants in Remarks oth (inches):)) Living Re (C4) illed Soil (D1) (LF	pots (C3) s (C6) RR A)	Secondary Water-S 4A, Drainag Dry-Seg Saturat Geomo Shallow FAC-No	Indicators (2 Stained Leav and 4B) ge Patterns (E ason Water T ion Visible or rphic Position Aquitard (Di eutral Test (D Ant Mounds eave Hummo	or more requires (B9) (MLI B10) Fable (C2) In Aerial Imag In (D2) In (D5) In (D6) (LRR A	uired) RA 1, 2
Type: Depth (inches): Depth (i	VS	Vater-Stained MLRA 1, 2, Salt Crust (B11 Aquatic Inverte dydrogen Sulfi Dxidized Rhizo Presence of Re Recent Iron Re Stunted or Stre Other (Explain Dep Dep Dep	Leaves (B9) 4A, and 4B 1) brates (B13) de Odor (C1) brates on educed Iron eduction in Tessed Plants in Remarks bth (inches): th (inches):)) Living Re (C4) illed Soil (D1) (LF	pots (C3) s (C6) RR A) Wetland	Secondary Water-S 4A, Drainag Dry-Se: Saturat Geomo Shallow FAC-No: Raised Frost-H	Indicators (2 Stained Leav and 4B) ge Patterns (E ason Water T ion Visible or rphic Position Aquitard (Di eutral Test (D Ant Mounds eave Hummo	or more requires (B9) (MLI B10) Fable (C2) In Aerial Imag In (D2) In (D5) In (D6) (LRR A	uired) RA 1, 2
Type: None Found Depth (inches): NA emarks: YDROLOGY //etland Hydrology Indicators: rimary Indicators (minimum of one 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 Image Sparsely Vegetated Concave Surface Water Present? //ater Table Present? Yes aturation Present? Yes Includes capillary fringe)	VS	Vater-Stained MLRA 1, 2, Salt Crust (B11 Aquatic Inverte dydrogen Sulfi Dxidized Rhizo Presence of Re Recent Iron Re Stunted or Stre Other (Explain Dep Dep Dep	Leaves (B9) 4A, and 4B 1) brates (B13) de Odor (C1) brates on educed Iron eduction in Tessed Plants in Remarks bth (inches): th (inches):)) Living Re (C4) illed Soil (D1) (LF	pots (C3) s (C6) RR A) Wetland	Secondary Water-S 4A, Drainag Dry-Se: Saturat Geomo Shallow FAC-No: Raised Frost-H	Indicators (2 Stained Leav and 4B) ge Patterns (E ason Water T ion Visible or rphic Position Aquitard (Di eutral Test (D Ant Mounds eave Hummo	or more requires (B9) (MLI B10) Fable (C2) In Aerial Imag In (D2) In (D5) In (D6) (LRR A	uired) RA 1, 2

Appendix 3

Representative Review Area Photographs



SP-1: From 30"-40", loamy sand with pebbles, 10YR3/1.



SP-2: From 11"-29", Sandy Loam with pebbles, 10YR3/3.



Appendix 4

Turnrose Land Surveying Topographic Map

