APPENDIX C DELINEATION OF WATERS OF THE UNITED STATES

County Road R over Glenn-Colusa Canal Bridge Replacement Project

Delineation of Waters of the United States



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March 13, 2018

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Executive Summary

On behalf of the Glenn County Public Works Agency (County), North State Resources, Inc., now Stantec (Stantec) conducted a delineation of waters of the United States occurring in the 5.28acre County Road R over Glenn-Colusa Canal Bridge Replacement Project study area (study area) in Glenn County, California. The delineation was conducted in accordance with the Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (U.S. Army Corps of Engineers 2008). The field delineation was conducted on November 30, 2017. A total of 1.673 acres of potential waters of the United States were mapped within the study area and include rice field/managed wetland (0.634 acre), vegetated ditch (0.398 acre, 1,510 linear feet), and irrigation canal (0.641 acre, 260 linear feet).

The purpose of this delineation of waters of the United States is to document and describe waters of the United States to support a Preliminary Jurisdictional Determination from the United States Army Corps of Engineers (Corps). This delineation is subject to verification by the Corps, Sacramento District. Stantec advises all parties to treat the information contained herein as preliminary until the Corps provides written verification of the boundaries of its jurisdiction.

If the Corps wishes to conduct a field verification, the County requests that the Corps contact Matt Vader, Engineering Technician, Glenn County Public Works Agency by telephone at (530) 934-6530 or by email at engineer@countyofglenn.net to schedule a date and time to access the study area.



Abbreviations

County	Glenn County Public Works Agency
Corps	United States Army Corps of Engineers
GCID	Glenn-Colusa Irrigation District
GPS	Global Positioning System
Stantec	North State Resources, Inc., now Stantec
NWI	National Wetlands Inventory
ОНWM	Ordinary High Water Mark
USGS	United States Geological Survey



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1.0 PROJECT LOCATION

The study area is located in a rural area near the unincorporated community of Artois in Glenn County, California and it consists of a 1,200-foot alignment along County Road R. This location can be found on the *Glenn, California* 7.5-minute U.S. Geological Survey (USGS) quadrangle in Township 20N, Range 2W, Sections 17 and 18. The approximate center of the study area is located at latitude 39.586947°, longitude -122.116908° (North American Datum 83). The study area location is shown in Figure 1.

To access the study area from Interstate 5, travel 5 miles east on County Road 39 (Bayliss Blue Gum Road) to County Road R. Turn left and travel 0.2 mile to the study area where the County Road R Bridge crosses over the Glenn-Colusa Canal (Figure 1).

2.0 ENVIRONMENTAL SETTING

2.1 CURRENT/RECENT LAND USE

The study area is bounded by agricultural fields, with machine-harvested rice as the primary crop. There are two rural residences in the vicinity along County Road 39, located approximately 0.2 mile south of the study area.

2.2 SITE TOPOGRAPHY AND ELEVATION

The topography of the study area immediately adjacent to the Glenn-Colusa canal is nearly level. The study area generally runs perpendicular to the Glenn-Colusa canal and occurs at an elevation of approximately 130 feet.

2.3 CLIMATE

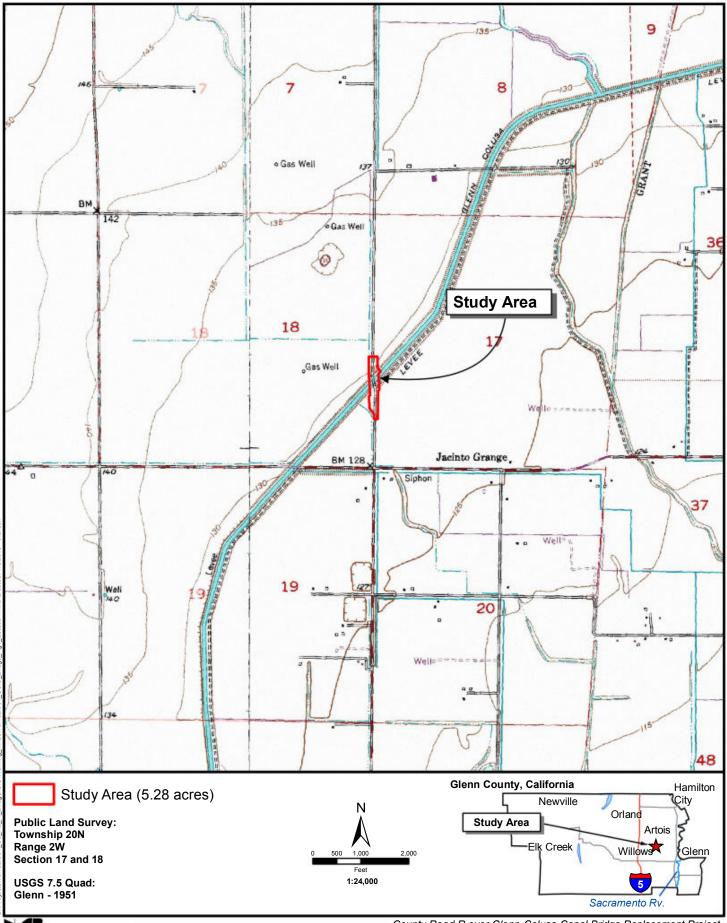
Historical data used to describe the climate are collected at Willows 6 W weather station approximately 15 miles southwest of the study area (Western Regional Climate Center 2016). The climate data are described below:

Type: The climate of the area is characterized as Mediterranean with moderate winters and hot, dry summers.

Precipitation: Precipitation in the study area primarily occurs as rain. The average annual rainfall is approximately 18 inches.

Air Temperature: Air temperatures in the study area range between an average January high of 55 degrees Fahrenheit (°F), and an average July high of 95°F. The annual average high is approximately 75°F.





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Figure 1 Study Area Location

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Growing Season: The growing season (i.e., 50% probability of air temperature 28 °F or higher) in the study area is approximately 320 days and occurs between February and November.

2.4 HYDROLOGY/HYDROLOGIC FEATURES

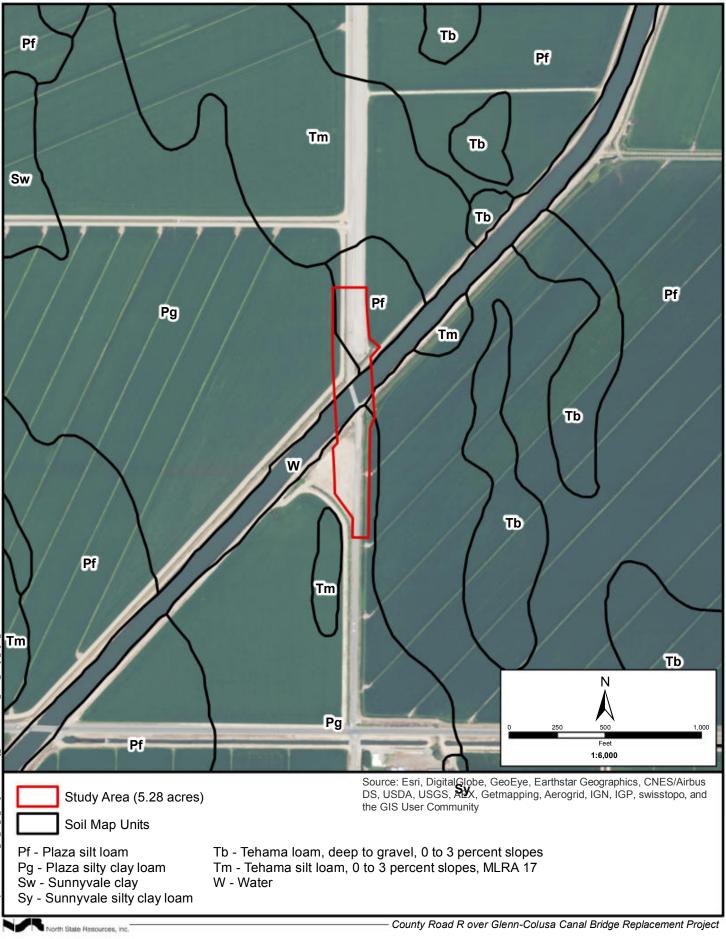
The hydrologic features in the study area include rice fields/managed wetlands, vegetated ditches, and irrigation canal. The water is sourced from the Sacramento River through the Glenn-Colusa Irrigation District's (GCID) main pump station located approximately three miles north of Hamilton City. The irrigation canal that flows through the study area is the GCID's main delivery canal for agricultural water in the region. Drainage in the region is generally to the south and east towards the river, serving agricultural crops and a complex of wildlife refuges in the area.

2.5 SOIL MAP UNITS

Two soil map units occur in the study area. They are described in the Soil Survey of Glenn County, California (Natural Resources Conservation Service 1999). Soil map units in and around the study area are shown in Figure 2. The soil map units that occur within the study area are described below:

- Plaza silt loam (Pf). This is a non-hydric, moderately well to imperfectly drained soil formed in alluvium. These soils occur in rice producing areas and consequently water tables persist for longer periods than would be expected under natural conditions. The depth to a restrictive layer is 60 inches.
- Plaza silty clay loam (Pg). This is a non-hydric, moderately well to imperfectly drained soil formed in alluvium. These soils occur in rice producing areas and consequently water tables persist for longer periods than would be expected under natural conditions. The depth to a restrictive layer is 60 inches.





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2.6 VEGETATION COMMUNITIES

Vegetation communities are based on descriptions provided in A Guide to Wildlife Habitats of California (Mayer and Laudenslayer 1988). Three vegetation communities or other habitats occur in the study area: agriculture (rice), barren/ruderal, and riverine.

Agriculture/Rice. Agriculture, in the form of machine harvested rice, surrounds the study area on all sides. This habitat is generally flooded with water in the spring when rice is planted and continues to be inundated until fall when the rice is harvested. After harvest, some fields are left fallow for the winter with no water or crops growing. The two fields to the west and the one field to the north east of the study area were fallow during the November 30, 2017 site visit. Some rice fields are re-inundated after the rice harvest and provide habitat for migrating and overwintering water fowl during the winter months. The rice fields located south of the Glenn-Colusa canal and east of the study area were flooded for this purpose during the site visit.

Barren/Ruderal. Barren/ruderal habitat occurs as dirt and paved roads and their associated road shoulders. Vegetation is usually not present, although sparse opportunistic grasses and forbs or weedy species may occur.

Riverine. Riverine habitat consists of the Glenn-Colusa canal and associated irrigation ditches. The canal is characterized by rock and mud substrates with very little vegetation within the canal. The irrigation ditches are characterized by mud substrates; dominated by freshwater emergent vegetation which appears to be regularly maintained by farmers.

3.0 METHODS

Stantec conducted an on-site routine delineation of wetlands and "other waters" of the United States based on field observations of positive indicators for wetland vegetation, hydrology, and soils; and indicators of an ordinary high water mark (OHWM). This methodology is consistent with the approach outlined in the Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (U.S. Army Corps of Engineers 2008). Plant taxonomy follows The Jepson Manual: Vascular Plants of California (Baldwin et al. 2012). Wetland indicator status for plant species was confirmed using The National Wetland Plant List (Lichvar et al. 2016), and the "50/20 Rule" or "Prevalence Index" was applied to determine plant dominance (U.S. Army Corps of Engineers 2008). Presence of primary and secondary wetland hydrology indicators were documented for each wetland feature.

Soil pits were dug in representative wetland features to a depth sufficient to document the presence or confirm the absence of hydric soil or wetland hydrology indicators. Soils were examined to assess field indicators of hydric soils. Positive indicators of hydric soils were observed in the field following the criteria outlined in *Field Indicators of Hydric Soils in the United States* (Vasilas et al. 2017). Soil colors were determined using a Munsell® soil color chart. The



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hydric status of each soil map unit occurring in the study area was reviewed using the Web Soil Survey (Natural Resources Conservation Service 1999). At least one set of data points was selected to best represent the wetland feature type and the adjacent uplands. Data points were also placed in suspect areas to confirm wetland or upland status.

Other waters are defined as traditional navigable waters and their tributaries (33 CFR 329). Delineation of other waters was based on presence of an OHWM as defined in Corps regulations (33 CFR 328.3 and 33 CFR 328.4) and whether the feature qualified as tributary to waters of the United States. Physical characteristics of an OHWM include, but are not limited to the following conditions: a natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, presence of litter and debris, leaf litter disturbed or washed away, scour, deposition, presence of bed and bank, and water staining. At least one data point was selected to best represent the OHWM of other waters for each other waters type.

Prior to conducting the on-site routine delineation, the U.S. Fish and Wildlife Service's, National Wetlands Inventory (NWI) Wetlands Mapper (U.S. Fish and Wildlife Service 2017) was reviewed to determine if any wetlands or deepwater habitats as described by Cowardin et al. (1979) were previously mapped in the study area and general vicinity. Features delineated during the on-site routine delineation were classified using Cowardin (1979) based on existing NWI mapping, or assigned a Cowardin type if not previously mapped.

Four data points were used to characterize and document each wetland or other water feature type, and the adjacent upland. Field observations were conducted on November 30, 2017.

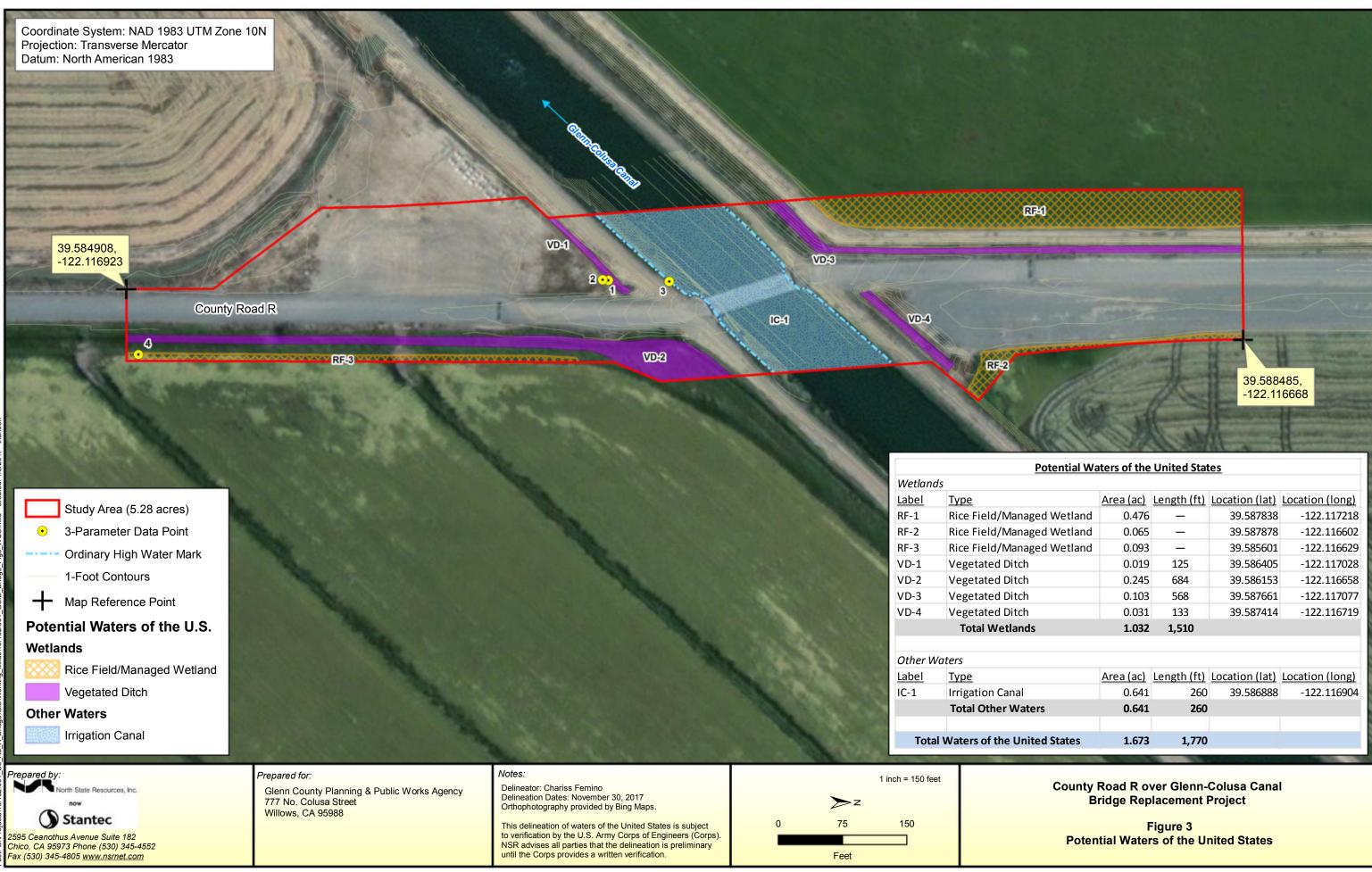
The boundaries of delineated features and the associated data points were mapped using a Trimble Mapping Grade Global Positioning System (GPS) capable of sub-foot accuracy. Where the use of the GPS was not practicable or satellites were not available, the features were delineated by hand onto ortho-rectified color aerial photographs. The GPS and hand-drawn location data were overlaid onto an aerial photograph of the study area to develop the delineation map.

4.0 **RESULTS AND DISCUSSION**

Potential waters of the United States occur in the study area as wetlands and other waters. Wetlands include rice field/managed wetland and vegetated ditch and other waters include irrigation canal.

The boundaries and area of potential waters of the United States occurring in the study area are illustrated in Figure 3. A total of 1.673 acres of waters of the United States were delineated. A summary of the delineated features is presented in Table 1. Routine wetland determination data forms are presented in Appendix A. Representative photographs of the delineated features and data point locations are presented in Appendix B.





				-
	<u>Area (ac)</u>	Length (ft)	Location (lat)	Location (long)
ged Wetland	0.476	-	39.587838	-122.117218
ged Wetland	0.065	_	39.587878	-122.116602
ged Wetland	0.093	-	39.585601	-122.116629
	0.019	125	39.586405	-122.117028
	0.245	684	39.586153	-122.116658
	0.103	568	39.587661	-122.117077
	0.031	133	39.587414	-122.116719
S	1.032	1,510		

	Area (ac)	Length (ft)	Location (lat)	Location (long)
	0.641	260	39.586888	-122.116904
ers	0.641	260		
ited States	1.673	1,770		
the second second			And the second	

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	Total		
Waters of the United States	Acreage	Total Linear Feet	Cowardin Type ¹
Wetlands			
Rice Field/Managed Wetland	0.634	N/A	PUBMKf
Vegetated Ditch	0.398	1,510	PEM1Kx
Other Waters			
Irrigation Canal	0.641	260	R2UBHx
Total Waters of the United States	1.673	1,770	

Table 1.Waters of the United States Summary

4.1 CHARACTERIZATION OF DELINEATED FEATURES

4.1.1 Rice Field/Managed Wetland

The study area is bounded by rice fields/managed wetlands. Rice fields are generally flooded for the duration of the growing season, which may exceed five months. RF-1 and RF-2 are located in the northern portion of the study area and were both dry during the November 30, 2017 survey. However, inundation is visible on aerial imagery. RF-3 lies in the southeastern portion of the study area and was flooded during the November 30, 2017 survey. If irrigation ceased, RF-1, RF-2, and RF-3 might revert to uplands. Determining whether these wetlands would revert to upland in absence of irrigation would require additional investigation after cessation of irrigation for rice cultivation. For the purposes of this delineation (i.e., to support a Preliminary Jurisdictional Determination), RF-1, RF-2, and RF-3 are considered potential wetlands.

4.1.2 Vegetated Ditch

Vegetated ditches are located throughout the study area. They are excavated ditches that convey water from the irrigation canal to the adjacent rice fields. VD-1 is located to the west of County Road R, south of the Irrigation Canal. VD-1 is dominated by broad leaved cattail (*Typha latifolia*) which is an obligate wetland plant species. VD-2 is located to the south of the irrigation canal and runs parallel to the east side of County Road R. VD-2 is also dominated by cattails and water primrose (*Ludwigia* sp.) which are both obligate wetland species. During the November 30, 2017 survey, there was evidence that the vegetation in VD-3 and VD-4 had recently been excavated. Remnants of hydrophytic vegetation such as cattails and flat sedge (*Cyperus difformis*) seedlings were present in VD-3 and VD-4. Hydrology indicators include surface water and saturation. All vegetated ditches in the study area meet wetland criteria and also qualify as other waters of the United States due to the presence of an OHWM.



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4.1.3 Irrigation Canal (Glenn-Colusa Canal)

The Glenn-Colusa Canal is an irrigation canal (IC-1) that flows westerly through the study area. This feature is typically flooded year round to convey water to agricultural crops. IC-1 is characterized as a bed and bank feature that exhibits indicators of scour, deposition, and watermarks. Hydrology indicators include surface water and inundation visible on aerial imagery. IC-1 qualifies as other waters of the United States.

5.0 CONCLUSION

Waters of the United States delineated within the study area occupy a total of 1.673 acres (1,770 linear feet) and include rice field/managed wetland, vegetated ditch, and irrigation canal.

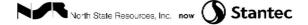
Determinations of waters of the United States, including wetlands, are based on current conditions (i.e., normal circumstances), and made in accordance with relevant U.S. Environmental Protection Agency and Corps guidance. Determinations are subject to verification by the Corps. Stantec advises all interested parties to treat the information contained herein as preliminary pending written verification of jurisdictional boundaries by the Corps.



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APPENDIX A ROUTINE WETLAND DETERMINATION DATA FORMS

North State Resources, Inc. now Stante	C			1
Wetland Determination Data Form Arid W	aat Daaid			Data Point
Wetland Determination Data Form-Arid W			11	Feature Type Vege fated Dif
Project/Site: (b, Road K 6CTD	a a du i	City/County:	<u>0101</u>	$\frac{\partial A}{\partial t} = \frac{\partial D}{\partial t} $ Date: $\frac{1}{20/17}$
Applicant/Owner: 6/00 County Plannin Investigator(s): Mariss Femino	J	-	•	<u>(KS</u> State: <u>U7</u> , Township, Range <u>S17+18</u> , <u>T20N</u> , <u>R2</u> W
Landform (hillslope, terrace, etc.) Valley	*e/	l ocal relie		, convex, none) <u>Concare</u> Slope % <u><5</u> %
Subregion (LRR): Lat:	1.5864	154	Long:	-122,116941 Datum: NAD 83
				VI Classification: <u>RZAB3Hx</u>
Are climatic/hydrologic conditions on the site typical for this				
Are vegetation Y / soil Y Nor hydrology Y N significa	intly disturbe	d? Are norm	al circums	tances present (Y) N
Are vegetation Y / N soil Y / N, or hydrology Y / Whaturally	y problematic	c? (If neede	d, explain i	in Remarks.)
Summary of Findings (Attach site map showing same		100		
Hydrophytic vegetation ('Y)/ N Hydric soil? (Y)/ N Wetland	d hydrology?	YN Iss	ampled are	ea a wetland (Y) N Other waters (Y) N
Evaluation of features designated "Other Wate	ers of the	United St	ates"	A. 18/1
Indicators: Defined bed and bank <u>A</u> Scour _ Feature Designation: Perennial Intermittent E	Ordina phemeral	ary High Wa Blue-line	ter Mark Ma an USGS	apped Stream Width / 8 //
Natural Drainage Artificial Drai	nage X	Navigable V	/ater	-
Remarks D& taken @ edge \$ 0th	wm si	h vege	tated	ditch used for irrigation
rice fields. Excavalled +	mond	geda	itch.	P O d a
ainfall has been much lower:	<u>Man a</u>	Rerag	2 50	tar in full winter 2018.
Vegetation (Use Scientific Names)	Absolute	<i>∉</i> Dominant	Indicator	Dominance Test Worksheet
Tree Stratum (Plot Size:)	<u>% Cover</u>	Species?	<u>Status</u>	Number of dominant species
1		<u></u>	<u> </u>	that are OBL, FACW, or FAC: (A)
2				Total number of dominant species (B)
4				
50%= 20%= Total Cover				Percent of dominant species that are OBL, FACW, or FAC:(AB)
Sapling/Shrub Stratum (Plot:)	<u>% Cover</u>	Species?	Status	
1			<u> </u>	Prevalence Index Worksheet Total % Cover of: Multiply by
2		<u> </u>		Total % Cover of: Multiply by OBL Species x 1 =
3				FACW Species x 2 =
4		<u> </u>		FAC Species x 3 =
50%= 20%= Total Cover	% Covor	Species?	Statue	FACU Species x 4 =
Herb Stratum (Plot Size:) 1pha labifalia	100		OBL	UPL Species x 5 =
2		,	<u> </u>	Column Totals (A) (B)
3				Prevalence Index = B/A =
4		<u> </u>		Hydrophytic Vegetation Indicators
5				Dominance Test is >50%
6				Prevalence Index is $\leq 3.0^{1}$ Morphological Adaptations ¹ (provide supporting
7				data in Remarks or on a separate sheet)
8 50%= Total Cover	. IDD			Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must
50%= 20%= Total Cover Woody/Vine Stratum (Plot:)		Species?	Statue	be present.
				Hydrophytic Vegetation? $\overrightarrow{(Y)}$ N
1				
50%= 20%= Total Cover				
% Bare Ground in Herb Stratum% Cover of Bi				

Depth Matrix		Redox Features		e indicator o			
<u>nches) Color (møist)</u> - <u>(0</u> <u>2,5 (R 3/3</u> .	<u>%</u> 100	Color (moist)	<u>%</u>	<u>Type1</u>	<u>Loc²</u>	<u>Texture</u> <u>51C</u> L_	<u>Remarks</u>
Types: C = Concentration D = Do	•				= Pore Lin	ning M = Matrix	
ydric Soil Indicators: (Applic	able to all L			•			Problematic Hydric Soil
Histosol (A1)			Redox (S				uck (A9) (LRR C)
Histic Epipedon (A2)		Strippe					uck (A10) (LRR B)
Black Histic (A3)		Loamy	Mucky N	/lineral (F1)		Reduce	d Vetric (F18)
Hydrogen Sulfide (A4)		Loamy	Gleyed I	Matrix (F2)		Red Pa	rent Materials (TF21)
Stratified Layers (A5) (L	.RR C)	Deplete	ed Matrix	(F3)		Vegetat	ed Sand/Gravel Bars
1 cm Muck (A9) (LRR D	り	Redox	Dark Sur	face (F6)		Other (E	Explain in Remarks)
Depleted Below Dark Si	urface (A11)	Deplete	ed Dark S	Surface (F7)			
Thick Dark Surface (A12	2)	Redox	Depressi	ions (F8)	×.		ydrophytic vegetation an
Sandy Mucky Mineral (S	S1)	Vernal	Pools (F	9)		wetland hydrol	ogy must be present.
Sandy Gleyed Matrix (S	54)						
	Туре: ЭССГ		Depth (I	nches)		Hydric Soil?	N
Remarks SHONG C Hydrology			Depth (I	nches)		Hydric Soil?	N
	oder		Depth (I	nches)			
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Remarks SHONG C Hydrology Wetland Indicators Primary Indicators (Any one ind Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonri Sediment Deposits (B2) Drift Deposits (B3) (Non Surface Soil Cracks (B6)	dicator is suff dicator is suff (Nonriverine) riverine)	icient.) Salt Cri Biotic C Aquatic Hydrog Oxidize Presen Recent	ust (B11) Crust (B12) Inverteb Inverteb en Sulfid ed Rhizos ce of Rec Iron Rec	2) prates (B13) le Odor (C1) spheres (C3) duced Iron (luction in		Secondary Indic	ators (2 or more required larks (B1) (Riverine) nt Deposits (B2) (Riverine) posits (B3) (Riverine) e Patterns (B10) son Water Table (C2) Burrows (C3) on Visible on
Remarks Strong C Hydrology Wetland Indicators Primary Indicators (Any one indicators) Mater Mater (A1)	dicator is suff dicator is suff (Nonriverine) riverine)	icient.) Salt Cru Biotic C Aquatic Hydrog Oxidize Presen Recent Plowed	ust (B11) Crust (B12 c Inverteb en Sulfid ed Rhizos ce of Rec	2) prates (B13) le Odor (C1) spheres (C3) duced Iron (duction in 26)		Secondary Indic	ators (2 or more required larks (B1) (Riverine) nt Deposits (B2) (Riverine) posits (B3) (Riverine) e Patterns (B10) ison Water Table (C2) i Burrows (C8)
Remarks SHONG C Hydrology Wetland Indicators Primary Indicators (Any one ind Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonri Sediment Deposits (B2) Drift Deposits (B3) (Non Surface Soil Cracks (B6) Inundation Visible on	DCLEV dicator is suff iverine)) (Nonriverine) riverine)))	icient.) Salt Cri Biotic C Aquatic Hydrog Oxidize Presen Recent Plowed Thin Mi	ust (B11) Crust (B12) Inverteb en Sulfid ed Rhizos ce of Rec Iron Rec J Soils (C uck Surfa	2) prates (B13) le Odor (C1) spheres (C3) duced Iron (duction in 26)		Secondary Indic Secondary Indic Water M Sedimer Drift Dej Drift Dej Dry-Sea Crayfish Saturati Aerial Ir Shallow	ators (2 or more required larks (B1) (Riverine) nt Deposits (B2) (Riverine) osits (B3) (Riverine) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on magery (C9)
Remarks SHONG C Hydrology Wetland Indicators Primary Indicators (Any one ind Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonr Sediment Deposits (B2) Drift Deposits (B3) (Non Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7)	DCLEV dicator is suff iverine)) (Nonriverine) riverine)))	icient.) Salt Cri Biotic C Aquatic Hydrog Oxidize Presen Recent Plowed Thin Mi	ust (B11) Crust (B12) Inverteb en Sulfid ed Rhizos ce of Rec Iron Rec J Soils (C uck Surfa	2) prates (B13) le Odor (C1) spheres (C3) duced Iron (duction in 26) ace (C7)		Secondary Indic Secondary Indic Water M Sedimer Drift Dej Drift Dej Dry-Sea Crayfish Saturati Aerial Ir Shallow	ators (2 or more required larks (B1) (Riverine) nt Deposits (B2) (Riverine) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on nagery (C9) Aquitard (D3)
Remarks SHONG C Hydrology Wetland Indicators Primary Indicators (Any one indicators (Any one indicators (Any one indicators (Any one indicators) Mater Marks (Any one indicators) Mater Marks Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonring Sediment Deposits (B2) Drift Deposits (B3) (Nonring Surface Soil Cracks (B6) Mater Marks Surface Soil Cracks (B6) Mater Marks Mater Marks (B7) Water-Stained Leaves (Mater Stained Leaves (Mate	DCLEV dicator is suff iverine)) (Nonriverine) riverine)))	icient.) Salt Cri Biotic C Aquatic Hydrog Oxidize Presen Recent Plowed Thin Mi Other (ust (B11) Crust (B12) Inverteb en Sulfid ed Rhizos ce of Rec lron Rec d Soils (C uck Surfa Explain in	2) prates (B13) le Odor (C1) spheres (C3) duced Iron (duction in 26) ace (C7) n Remarks)	C4)	Secondary Indic	ators (2 or more required larks (B1) (Riverine) nt Deposits (B2) (Riverine) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on nagery (C9) Aquitard (D3)
Remarks SHONG C Hydrology Wetland Indicators Primary Indicators (Any one indicators) Marks Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (None Sediment Deposits (B2) Drift Deposits (B3) (None Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (A dicator is suff dicator is suff iverine) (Nonriverine) iverine) (B9) X	icient.) Salt Cri Biotic C Aquatic Hydrog Oxidize Presen Recent Plowed Thin Mi Other (ust (B11) Crust (B12) crust (B	2) prates (B13) le Odor (C1) spheres (C3) duced Iron (duction in 26) ace (C7) n Remarks)	C4)	Secondary Indic Secondary Indic Water M Sedimer Drift Dej Drift Dej Dry-Sea Crayfish Saturati Aerial Ir Shallow	ators (2 or more required larks (B1) (Riverine) nt Deposits (B2) (Riverine) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on nagery (C9) Aquitard (D3)
Remarks SHONG C Hydrology Wetland Indicators Primary Indicators (Any one indicators (Any one indicators (Any one indicators (Any one indicators)) Surface Water (A1)	A dicator is suff dicator is suff iverine) (Nonriverine) iverine) (B9) X	icient.) Salt Cri Biotic C Aquatic Hydrog Oxidize Presen Recent Plowed Thin Mi Other (Depth (inche	ust (B11) Crust (B12) Crust (B12) Inverteb en Sulfid ed Rhizos ce of Rec liron Rec d Soils (C uck Surfa Explain in Explain in es)	2) prates (B13) le Odor (C1) spheres (C3) duced Iron (duction in 26) ace (C7) n Remarks)	C4)	Secondary Indic	ators (2 or more required larks (B1) (Riverine) nt Deposits (B2) (Riverine) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on nagery (C9) Aquitard (D3)

North State Resources, Inc. now Stante	с					1
Wetland Determination Data Form–Arid We	est Reaid	on			Data Point Feature Type	Upland
Project/Site: LD. Road RIGCIP	•		6	no Po		
Applicant/Owner: <u>(1200)</u> County Plana Investigator(s): <u>Mariss</u> Semino	ing +	Publ	<u>. 012</u>	DAVIES State	IA	Date: <u></u>
Investigator(s): Mariss S-emilan	J	1	Section	. Township, Range	17+187	2DN. RZW
Landform (hillslope, terrace, etc.) Valley	-	Local relie	 ef (concave	(convex. none $)$	me.	Slope %
Subregion (LRR): Lat: 39	.5864.	35	Long:	-122.116940	Datum	NAD83
Soil Map Unit Name: Plaza Silty Clay	Loan	2	N	VI Classification:	NIA	
Are climatic/hydrologic conditions on the site typical for this ti						
Are vegetation Y /N soil Y / N or hydrology Y / Significan	ntly disturbe	d? Are norn	nal circums	tances present?(Y)/N	OFI CEMP	
Are vegetation Y / N, soil Y / N, pr hydrology Y / N naturally						
Summary of Findings (Attach site map showing sampl						
Hydrophytic vegetation? Y // Hydric soil? Y // Wetland	hydrology?	' Y / 🕅 ls s	ampled are	a a wetland? Y / N)	Other waters? Y	D
Evaluation of features designated "Other Wate	rs of the	United St	ates"			• <i>••</i>
Indicators: Defined bed and bank Scour _	Ordin	ary High Wa	iter Mark M	apped Stream	Width	
Feature Designation: Perennial Intermittent Ep	hemeral	Blue-lin	e on USGS	Quad Substra	ite	
Natural Drainage Artificial Drain	age		valer		1 600	
Remarks Upland point to DP	-1 t	SV V	egetu	Ha arch	-I (VC)-D
,			U			
Vegetation (Use Scientific Names)	Absolute	Dominant		Dominance Test V		
Tree Stratum (Plot Size:) 1.	<u>% Cover</u>	<u>Species?</u>	Status	Number of dominar that are OBL, FACV		(A)
2						(/ /
3			<u> </u>	Total number of doi across all strata:		(B)
4.						(D)
50%= 20%= Total Cover:				Percent of dominan		(4.2)
Sapling/Shrub Stratum (Plot:)	<u>% Cover</u>	Species?	<u>Status</u>	are OBL, FACW, or		(AB)
1		. <u> </u>	<u> </u>	Prevalence Index		Multiply by
2				Total % Cover of: OBL Species	-	Multiply by
3				•	x 2 =	
4	<u> </u>	<u> </u>			x 2 =	
50%= 20%= Total Cover:			.	•	x3=	
Herb Stratum (Plot Size:)		<u>Species?</u>			×4= ×5=	
1			<u> </u>		X J =	
				Prevalence Index =		
3				Frevalence index ~	DIA	-
5.				Hydrophytic Vege		3
6.	·	·		Dominance		
7	<u> </u>	<u> </u>		Morphologic	al Adaptations ¹ (j	
8					arks or on a sepa Hydrophytic Veg	arate sheet) etation¹ (Explain)
50%= 20%= Total Cover:				¹ Indicators of hydric		
Woody/Vine Stratum (Rlot:)	<u>% Cover</u>	Species?	<u>Status</u>	be present.		
1				Hydrophytic Vege	tation? Y/N)
2	<u> </u>		. <u> </u>		C	r
	······					
% Bare Ground in Herb Stratum $_100\%$ Cover of Bio	tic Crust 🚞	\mathcal{O}^{-}]		
Remarks						

Ground is barren of regetudior. Othis location

Data Point _____

	edox Features	o/ T.m1	1 2	Tautura	Demerica
<u>ches) Color (moist) % (</u> -3 5 R 4 3 100		<u>% Type1</u>	Loc ²	<u>Texture</u>	<u>Remarks</u>
<u> </u>					
				<u> </u>	
				<u> </u>	
Des: C = Concentration D = Depletion RM =	Reduced Matrix	² Location: PL :	= Pore Linin	n M = Matrix	
dric Soil Indicators: (Applicable to all LRI			T OIO LININ		r Problematic Hydric Soil
Histosol (A1)	Sandy Rec	•			/luck (A9) (LRR C)
Histic Epipedon (A2)	Stripped M			2 cm M	/uck (A10) (LRR B)
Black Histic (A3)		cky Mineral (F1)		Reduc	ed Vetric (F18)
Hydrogen Sulfide (A4)	•	eyed Matrix (F2)		Red P	arent Materials (TF21)
Stratified Layers (A5) (LRR C)	Depleted N	Matrix (F3)		Veget	ated Sand/Gravel Bars
1 cm Muck (A9) (LRR D)	Redox Dar	k Surface (F6)		Other	(Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted D	Dark Surface (F7)			
Thick Dark Surface (A12)	•	pressions (F8)			hydrophytic vegetation an
Sandy Mucky Mineral (S1)	Vernal Poo	ols (F9)		wetland hydro	blogy must be present.
Sandy Gleyed Matrix (S4)					
					1
estrictive Layer (if present): Type:	De	pth (Inches)	⊦	lydric Soil? Y	(N)
son'l is highly com ydrology	pacted	@ this ,	locat	ion.	
581'l is highly com lydrology /etland Indicators		@ this	locat		icators (2 or more required
Son'l is highly com ydrology /etland Indicators rimary Indicators (Any one indicator is suffici	ient.)		locat	Secondary Inc	
581'l is highly com lydrology /etland Indicators		(B11)	locat	Secondary Inc	Marks (B1) (Riverine)
Son'l IS Lighly Com ydrology /etland Indicators rimary Indicators (Any one indicator is suffici	ient.) Salt Crust Biotic Crus	(B11)	locat	Secondary Inc Water Sedim	Marks (B1) (Riverine)
Son'/ IS Mighly Com lydrology Vetland Indicators rimary Indicators (Any one indicator is sufficing	ient.) Salt Crust Biotic Crus Aquatic Inv	(B11) st (B12)	locat	Secondary Inc Water Sedim Drift D	Marks (B1) (Riverine) ent Deposits (B2) (Riverine
Son'l IS Wighly Com Iydrology Indicators Indicators rimary Indicators (Any one indicator is sufficing Surface Water (A1) High Water Table (A2) Saturation (A3)	ient.) Salt Crust Biotic Crus Aquatic Inv Hydrogen 3	(B11) st (B12) vertebrates (B13)	locat	Secondary Inc Water Sedim Drift D Draina	Marks (B1) (Riverine) ent Deposits (B2) (Riverine eposits (B3) (Riverine)
Son'l IS Wighly Com Iydrology /etland Indicators rimary Indicators (Any one indicator is suffici	ient.) Salt Crust Biotic Crus Aquatic Inv Hydrogen a Oxidized R	(B11) st (B12) vertebrates (B13) Sulfide Odor (C1)		Secondary Inc Water Sedim Drift D Draina Dry-Se	Marks (B1) (Riverine) ent Deposits (B2) (Riverine eposits (B3) (Riverine) ge Patterns (B10)
Son'/ Is Mighly Com Iydrology Indicators rimary Indicators (Any one indicator is sufficing	ient.) Salt Crust Biotic Crus Aquatic Inv Hydrogen S Oxidized R Presence c Recent Iro	(B11) st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres (C3) of Reduced Iron (C n Reduction in		Secondary Inc Water Sedim Drift D Draina Dry-Se Crayfis	Marks (B1) (Riverine) ent Deposits (B2) (Riverine eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2)
Son'/ IS Wighly Com Iydrology Vetland Indicators trimary Indicators (Any one indicator is sufficing	ient.) Salt Crust Biotic Crus Aquatic Inv Hydrogen a Oxidized R Presence o Recent Iron Plowed So	(B11) st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres (C3) of Reduced Iron (C n Reduction in bils (C6)		Secondary Inc Water Sedim Drift D Draina Draina Crayfie Satura Aerial	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2) sh Burrows (C3) tion Visible on Imagery (C9)
Son'/ IS Mighly Com ydrology /etland Indicators rimary Indicators (Any one indicator is sufficing	ient.) Salt Crust Biotic Crus Aquatic Inv Hydrogen Oxidized R Presence of Recent Iro Plowed So Thin Muck	(B11) st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres (C3) of Reduced Iron (C n Reduction in pils (C6) Surface (C7)		Secondary Inc Water Sedim Drift D Draina Dry-Se Crayfis Satura Aerial Shallo	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2) sh Burrows (C3) tion Visible on Imagery (C9) w Aquitard (D3)
Son'l IS Mighly Com Indicators Indicators Indicator is sufficient Surface Water (A1) Indicator (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on	ient.) Salt Crust Biotic Crust Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iron Plowed So Thin Muck	(B11) st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres (C3) of Reduced Iron (C n Reduction in bils (C6)		Secondary Inc Water Sedim Drift D Draina Dry-Se Crayfis Satura Aerial Shallo	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2) sh Burrows (C3) tion Visible on Imagery (C9)
Son'l IS Mighly Com Iydrology //etland Indicators rimary Indicators (Any one indicator is sufficient of the sufficient o	ient.) Salt Crust Biotic Crust Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iron Plowed So Thin Muck	(B11) st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres (C3) of Reduced Iron (C n Reduction in pils (C6) Surface (C7)		Secondary Inc Water Sedim Drift D Draina Dry-Se Crayfis Satura Aerial Shallo	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2) sh Burrows (C3) tion Visible on Imagery (C9) w Aquitard (D3)
Sot '/ IS Wighly Com Iydrology Vetland Indicators trimary Indicators (Any one indicator is sufficient of the suff	ient.) Salt Crust Biotic Crust Aquatic Inv Aquatic Inv Oxidized R Presence o Recent Iron Plowed So Thin Muck Other (Exp	(B11) st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres (C3) of Reduced Iron (C n Reduction in bils (C6) Surface (C7) blain in Remarks)	24)	Secondary Inc Water Sedim Drift D Draina Dry-Se Crayfis Satura Aerial Shallo FAC-N	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2) sh Burrows (C3) tion Visible on Imagery (C9) w Aquitard (D3)
Sot '/ IS Wighly Com Iydrology Vetland Indicators rimary Indicators (Any one indicator is sufficient of the suffi	ient.) Salt Crust Biotic Crust Aquatic Inv Hydrogen Cxidized R Recent Iror Plowed Sc Thin Muck Cother (Exp Depth (inches)	(B11) st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres (C3) of Reduced Iron (C n Reduction in bils (C6) Surface (C7) olain in Remarks)	24)	Secondary Inc Water Sedim Drift D Draina Dry-Se Crayfis Satura Aerial Shallo	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2) sh Burrows (C3) tion Visible on Imagery (C9) w Aquitard (D3)
Son'/ Is Mighly Com Indicators Indicators rimary Indicators (Any one indicator is sufficing Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water Stained Leaves (B9) Water Present? Yes No	ient.) Salt Crust Biotic Crust Aquatic Inv Aquatic Inv Oxidized R Presence o Recent Iron Plowed So Thin Muck Other (Exp Depth (inches) Depth (inches)	(B11) st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres (C3) of Reduced Iron (C n Reduction in bils (C6) Surface (C7) blain in Remarks)	24)	Secondary Inc Water Sedim Drift D Draina Dry-Se Crayfis Satura Aerial Shallo FAC-N	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2) sh Burrows (C3) tion Visible on Imagery (C9) w Aquitard (D3)
Son'/ Is Mighly Com ydrology /etland Indicators rimary Indicators (Any one indicator is sufficing	ient.) Salt Crust Biotic Crust Aquatic Inv Aquatic Inv Aduatic Inv Oxidized R Presence of Recent Iron Plowed So Thin Muck Other (Exp Depth (inches) Depth (inches)	(B11) st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres (C3) of Reduced Iron (C n Reduction in bils (C6) Surface (C7) blain in Remarks)	C4) Wetland H	Secondary Inc Water Sedim Drift D Draina Dry-Se Crayfis Satura Aerial Shallo FAC-N	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2) sh Burrows (C3) tion Visible on Imagery (C9) w Aquitard (D3) leutral Test (D5)
Sot '/ IS Wighly Com Iydrology Vetland Indicators rimary Indicators (Any one indicator is sufficing Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water Stained Leaves (B9) ield Observations urface Water Present? Yes No aturation Present? Yes No iele Recorded Data (stream gauge, m	ient.) Salt Crust Biotic Crust Aquatic Inv Aquatic Inv Aduatic Inv Oxidized R Presence of Recent Iron Plowed So Thin Muck Other (Exp Depth (inches) Depth (inches)	(B11) st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres (C3) of Reduced Iron (C n Reduction in bils (C6) Surface (C7) blain in Remarks)	C4) Wetland H	Secondary Inc Water Sedim Drift D Draina Dry-Se Crayfis Satura Aerial Shallo FAC-N	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2) sh Burrows (C3) tion Visible on Imagery (C9) w Aquitard (D3) leutral Test (D5)
Iydrology Vetland Indicators trimary Indicators (Any one indicator is sufficing)	ient.) Salt Crust Biotic Crust Aquatic Inv Aquatic Inv Hydrogen Oxidized R Presence o Recent Iron Plowed So Thin Muck Other (Exp Depth (inches) Depth (inches) onitoring well, aeri	(B11) st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres (C3) of Reduced Iron (C n Reduction in bils (C6) Surface (C7) blain in Remarks) 	04) Wetland H des capillary revious ins	Secondary Inc Water Sedim Drift D Draina Dry-Se Crayfis Satura Aerial Shallo FAC-N lydrology? Y fringe)	ent Deposits (B2) (Riverine eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2) sh Burrows (C3) tion Visible on Imagery (C9) w Aquitard (D3) leutral Test (D5)

ec			2
Vest Regic	on		Data Point Feature Type(Caatient)
a time of year? cantly disturbed inpling point loc nd hydrology?(ters of the Ephemeral	City/County: <u>Public</u> Local relief <u>48</u> Y / (X) (If no d? Are norm (If needed (If needed (X) N Is sa United Sta ary High Wate Blue-line	Section, (concave, Long: NV , explain ir al circumst d, explain i ects, impor ampled are ttes" er Mark Mark Mark Mark Mark Mark Mark Mar	DATLES State: <u>CA</u> , Township, Range <u>SI7418</u> , <u>T2DN</u> , <u>R2U</u> , convex, none) <u>CONCAVE</u> Slope % <u>5</u> –122, 116933 Datum: <u>NAD 83</u> VI Classification: <u>K2UBHX</u> n Remarks.) <u>See</u> OPL data sheet tances present () N in Remarks.)
			igation Conal.
	<u>Species?</u>	Status Status Z Status Z Status Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC:(A)Total number of dominant species across all strata:(B)Percent of dominant species that are OBL, FACW, or FAC:(AB)Prevalence Index Worksheet Total % Cover of:(AB)Prevalence Index Worksheet Total % Cover of:
	Vest Regio	Vest Region	Vest Region

Remarks Unknown seedlings present at OPlocation.

Data Point <u>3</u>

epth <u>ches</u>)	Matrix <u>Color (moist)</u>	%		ox Features or (moist)	%	<u>Type¹</u>	Loc ²	Texture	<u>Remarks</u>
	<u></u>				<u>بند.</u>				
		·						·	
	= Concentration $D = D$			-		Location: PL	= Pore Lin		ar Drahlamatia Undria Saila3
	I Indicators: (Appli stosol (A1)	cable to a		Sandy					or Problematic Hydric Soils³ Muck (A9) (LRR C)
	stic Epipedon (A2)			Sandy	•	-			Muck (A10) (LRR B)
	ack Histic (A3)			Campbe Loamy					ced Vetric (F18)
	/drogen Sulfide (A4)			Loamy					Parent Materials (TF21)
	ratified Layers (A5) (Loanny	•				tated Sand/Gravel Bars
		•		Deplete Redox		• •			(Explain in Remarks)
	cm Muck (A9) (LRR I epleted Below Dark S			Redox		. ,			(Evhian ni iveniarive)
	nick Dark Surface (A1		- ('''	Depiete Redox				³ Indicators of	of hydrophytic vegetation and
	andy Mucky Mineral (,	-	Reuox					rology must be present.
	andy Mucky Mineral (andy Gleyed Matrix (_	vendi		~/			
0	andy Cloyed MainA ((۲							6
Restrictiv	e Layer (if present):	Type:			Depth (li	nches)		Hydric Soil? Y	(n)
	sole to dig	3071	pit a	the to	5te	epress	Ъ	canal	slope,
lydrolo Vetland	ole to dig 19y Indicators				Ste	epress	Ъ		Slope, dicators (2 or more required)
Hydrolo Vetland Primary I	ole to dig py Indicators ndicators (Any one ir		sufficient	t.)			в	Secondary In	dicators (2 or more required)
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Hydrolo Wetland Primary II St Hit Se Dr St St M Hit Se Field Ob	ole to dig <u>noisedors</u> <u>ndicators</u> <u>ndicators (Any one ir</u> <u>inface Water (A1)</u> gh Water Table (A2) aturation (A3) 'ater Marks (B1) (Non ediment Deposits (B2) (ift Deposits (B3) (Noi urface Soil Cracks (B undation Visible on erial Imagery (B7) 'ater-Stained Leaves <u>servations</u>	ndicator is riverine) 2) (Nonriver nriverine) 6) (B9)	sufficient rine) 	t.) Salt Cr Biotic C Aquatic Hydrog Oxidize Presen Recent Plowed Thin M Other (ust (B11) Crust (B12 e Inverteb en Sulfid ed Rhizos ce of Rec loois (C uck Surfa Explain in	2) rates (B13) e Odor (C1) pheres (C3) duced Iron (luction in 16) nce (C7) n Remarks)	C4)	Secondary In Wate Sedir Drift I Drain Dry-S Crayf Satur Aeria Shalla FAC-	dicators (2 or more required) r Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) age Patterns (B10) Season Water Table (C2) ish Burrows (C8) ation Visible on al Imagery (C9) ow Aquitard (D3) Neutral Test (D5)
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Hydrolo Wetland Primary II Sa Sa W Se Dr Suf Suf Suf Suf Suf Saturation Describe	Ole 40 dig Indicators Indicators (Any one in Indicators (Any one in urface Water (A1) gh Water Table (A2) aturation (A3) aturation (A3) ater Marks (B1) (Non ediment Deposits (B2) cift Deposits (B3) (Non ediment Deposits (B3) undation Visible on erial Imagery (B7) ater-Stained Leaves servations /ater Present? Yes ole Present? Yes Present? Yes a Recorded Data (st	ndicator is riverine) ?) (Nonriver nriverine) 6) (B9) N N N ream gau	rine)	t.) Salt Cr Biotic C Aquatic Hydrog Oxidize Presen Recent Plowed Thin M Other (Depth (inch Depth (inch itoring well,	ust (B11) Crust (B12) Inverteb en Sulfid ed Rhizos ce of Rec Iron Rec J Soils (C uck Surfa Explain ir es) es) aerial ph	2) rates (B13) e Odor (C1) pheres (C3) duced Iron (C luction in :6) n Remarks) n Remarks) (inclu otos, and p	C4) Wetland des capilla revious i	Secondary In Secondary In Wate Sedir Drift I Drain Dry-S Crayf Satur Aeria Shalle FAC- Hydrology?	dicators (2 or more required) r Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) age Patterns (B10) Season Water Table (C2) ish Burrows (C8) ation Visible on al Imagery (C9) ow Aquitard (D3) Neutral Test (D5) // N available:
Hydrolo Wetland Primary II Sa Sa W Se Dr Suf Suf Suf Suf Suf Suf Saturation Describe	Ole 40 dig Indicators Indicators (Any one in Indicators (Any one in urface Water (A1) gh Water Table (A2) aturation (A3) aturation (A3) ater Marks (B1) (Non ediment Deposits (B2) cift Deposits (B3) (Non ediment Deposits (B3) undation Visible on erial Imagery (B7) ater-Stained Leaves servations /ater Present? Yes ole Present? Yes Present? Yes a Recorded Data (st	ndicator is riverine) ?) (Nonriver nriverine) 6) (B9) N N N ream gau	rine)	t.) Salt Cr Biotic C Aquatic Hydrog Oxidize Presen Recent Plowed Thin M Other (Depth (inch Depth (inch itoring well,	ust (B11) Crust (B12) Inverteb en Sulfid ed Rhizos ce of Rec Iron Rec J Soils (C uck Surfa Explain ir es) es) aerial ph	2) rates (B13) e Odor (C1) pheres (C3) duced Iron (C luction in :6) n Remarks) n Remarks) (inclu otos, and p	C4) Wetland des capilla revious i	Secondary In Secondary In Wate Sedir Drift I Drain Dry-S Crayf Satur Aeria Shalle FAC- Hydrology?	dicators (2 or more required) r Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) age Patterns (B10) Season Water Table (C2) ish Burrows (C8) ation Visible on al Imagery (C9) Dw Aquitard (D3) Neutral Test (D5)

North State Resources, Inc. now 🕥 Stante	9C		
Vetland Determination Data Form–Arid W	est Regio	on	Data Point <u>4</u> Feature Type <u><i>Lice field</i></u>
	-		
roject/Site: <u>Co, Road R] (5C10</u> pplicant/Owner: <u>(21enn Covn-ty Planning</u>	1 + Pre	blic Works	State: (1-)
ivestigator(s): Chariss Penino		Section	, Township, Range $5174/8$, $720N$, $R2W$, convex, none) $CONCAVC$ Slope % $<57s$
andform (hillslope, terrace, etc.) <u>/alley</u>	69110	_ Local relief (concave	, convex, none) $CO(CAVC)$ Slope % $< 37s$
ubregion (LRR): <u>C</u> Lat: <u>37</u> oil Map Unit Name: <u>Plaza 5/14 Clau</u>	, 2097	<u>70</u> Long:	-126,116652 Datum: /////065
re climatic/hydrologic conditions on the site typical for this			
re vegetation Y (N, soil Y (N, or hydrology Y (N signification)	antiv disturbe	d? Are normal circums	tances present YIN
re vegetation () N, soil Y / N, or hydrology Y / N) aturall			
Summary of Findings (Attach site map showing samp			
ydrophytic vegetation ()/ N Hydric soil () N Wetlan			
valuation of features designated "Other Wate	ers of the	United States"	<u> </u>
dicators: Defined bed and bank Scour	Ordin	ary High Water Mark M	apped Stream Width
eature Designation: Perennial Intermittent E Natural Drainage Artificial Drai	phemeral nage	Blue-line on USGS Navigable Water	Quad Substrate
lemarks Artificial feature cons			
of growing rice.	//••••••••		for the peripuse
of growing rice.			
egetation (Use Scientific Names)	Absolute	Dominant Indicator	Dominance Test Worksheet
ree Stratum (Plot Size:)	<u>% Cover</u>	<u>Species?</u> Status	Number of dominant species
	<u> </u>		that are OBL, FACW, or FAC: (A)
		······································	Total number of dominant species across all strata: (B)
50%= 20%= Total Cover			Percent of dominant species that are OBL, FACW, or FAC: (AB)
apling/Shrub Stratum (Plot:)	<u>% Cover</u>	<u>Species?</u> Status	
		<u> </u>	Prevalence Index Worksheet Total % Cover of:Multiply by
		<u> </u>	OBL Species x 1 =
		<u> </u>	FACW Species x 2 =
50%= 20%= Total Cover	·		FAC Species x 3 =
erb Stratum (Plot Size:)	<u>% Cover</u>	Species? Status	FACU Species x 4 =
	·		UPL Species x 5 =
			Column Totals (A) (B)
			Prevalence Index = B/A =
			Hydrophytic Vegetation Indicators
			Dominance Test is >50% Prevalence Index is ≤ 3.01
		·	Morphological Adaptations ¹ (provide supporting _/data in Remarks or on a separate sheet)
			Problematic Hydrophytic Vegetation ¹ (Explain)
50%= 20%= Total Cover:			¹ Indicators of hydric soil and wetland hydrology must be present.
loody/Vine Stratum (Plot:)		<u>Species?</u> <u>Status</u>	
			Hydrophytic Vegetation? Y/N
50%= 20%= Total Cover:		<u> </u>	_
Bare Ground in Herb Stratum % Cover of Big	otic Crust _		

Remarks No vegetation was present at the time of the surve Hydrophytic vegetation (rice) would be present during the growing season.

Depth	Matrix	e to the dep	oth needed to docun Redox Features	ient the indi	icator or d	contirn	i the absenc	e of indicators.
<u>ches</u>)	Color (moist)	<u>%</u>	<u>Color (moist)</u>	<u>%</u> Ty	/pe ¹	Loc ²	<u>Texture</u>	<u>Remarks</u>
							·	
		•	M = Reduced Matrix		tion: PL = F	Pore Lin	-	1.11.00.000
		cable to all	LRRs, unless other	-				s for Problematic Hydric Soils
	osol (A1) - Eninadan (A2)		•	Redox (S5)				m Muck (A9) (LRR C)
	c Epipedon (A2)			Matrix (S6)				m Muck (A10) (LRR B)
	k Histic (A3)		•	Aucky Minera	• •			duced Vetric (F18)
•	ogen Sulfide (A4)		-	Gleyed Matrix				d Parent Materials (TF21)
	ified Layers (A5) (-	•	d Matrix (F3)				getated Sand/Gravel Bars
	Muck (A9) (LRR	•		ark Surface	• •		Oth	ner (Explain in Remarks)
	eted Below Dark S	•		d Dark Surfac	• •		3Indianta-	a of hydrophytic yaratation and
	k Dark Surface (A	•		Depressions ((rð)			s of hydrophytic vegetation and ydrology must be present.
	dy Mucky Mineral		Vernal F	Pools (F9)			notana nj	arology matrix processi
Sano	ly Gleyed Matrix (54)						
Postriotivo	over (if present):	Type:	·····	Donth (Inchor	<u>e)</u>		Hydric Soil?	
	Layer (if present): Sout pit i C gont is Tated - W	ins n	ot dug at ly preser	Depth (Inches Huis Huis Hy Cs	locat	4'or	Hydric Soil? - dne ng ler ng 507	The access is igh of fime is are high
Remarks	Soil pit 1 2 goil is lated - W	ins n	ot dua at	this ,	locat	4'or	due ig ler	to access is
Remarks	Soil pit 1 2 goil is lated - W	vas no 1. ke Vable	ot dug at ly preser to ver	this ,	locat	4'or	due ng <i>lei</i> ng 501	to access is
Remarks	Soul pit i c. 301/13 <u>Jated - W</u> J dicators icators (Any one in	vas no 1. ke Vable	ot dug at ly preser to veri	this , the contract of the second s	locat	4'or	due lag 1er son Secondary	to access is igh if time Is are hyd Indicators (2 or more required)
Remarks	Soul pit i c. gon / i data - w dicators icators (Any one in ace Water (A1)	vas no 1. ke Vable	ot dug at ly preser to veri ufficient.)	Huis Huis Hy Hy St (B11)	locat	4'or	dre 1g ler 1g 507 Secondary Wa	to access is if if ine 15 are hyd Indicators (2 or more required) ter Marks (B1) (Riverine)
Remarks	Soul pit $_{1}$ $_{2}$ $_{3}$ $_{2}$ $_{3}$ $_{1}$ $_{1}$ $_{2}$ $_{2}$ $_{3}$ $_{4}$ $_{1}$ $_{4}$ $_{4}$ $_{4}$ $_{1}$ dicators icators (Any one in icators (Any one in ace Water (A1) Water Table (A2)	vas no 1. ke Vable	ot dug at ly preser ufficient.) Salt Cru Biotic Cru	Huis 1 Huis 1 Huis 1 Huis (B12)	locat Изіо <u>Аззи</u>	4'or	dne 19 10 39 501 Secondary Wa	to access is if if are hyd Is are hyd Indicators (2 or more required) ter Marks (B1) (Riverine) diment Deposits (B2) (Riverine)
Remarks	Soul pit $_{1}$ 501 pit $_{1}$ 1 1 1 1 1 1 1 1	vas no b like Vable	ot dug at ly preser ufficient.) Salt Cru Biotic Cu Aquatic	Huis Huis Hy St (B11) rust (B12) Invertebrates	locat ИЗГО <u>Д</u> <u>с</u> зи s (B13)	4'or	Secondary Mag Secondary Wa Sec Drift	to access is with if fine Is are hyd Indicators (2 or more required) ter Marks (B1) (Riverine) diment Deposits (B2) (Riverine) ft Deposits (B3) (Riverine)
Remarks	Soul pit a <u>Soul pit a</u> <u>Constant of the source</u> <u>Jated - Water</u> <u>Jated - Water</u> <u>Jate</u>	vas m b /ike Dable ndicator is s	ot dug at ly preser 40 ver ufficient.) Salt Cru Salt Cru Aquatic Hydroge	Hwis Hwis Hy Hy Hy St (B11) rust (B12) Invertebrates on Sulfide Od	10cat 11510 1 <u>45510</u> (B13) Ior (C1)	4'or	Secondary Wa Wa Va Va	to access is aff of fine 15 are hyd Indicators (2 or more required) ter Marks (B1) (Riverine) diment Deposits (B2) (Riverine) it Deposits (B3) (Riverine) inage Patterns (B10)
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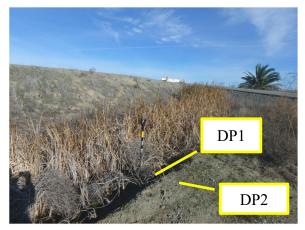
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APPENDIX B REPRESENTATIVE PHOTOGRAPHS

County Road R over Glenn-Colusa Canal Bridge Replacement Project Delineation of Waters of the United States

Photographs Taken November 30, 2017



Photograph 1. Vegetated Ditch (VD-1). Data points (DP) 1 and 2 document the feature and the uplands, respectively. Orientation: northeast.



Photograph 2. Irrigation Canal (IC-1). DP3 documents the OHWM of the feature. Orientation: southwest.



Photograph 3. Rice Field (RF-3). DP4 documents the feature. Orientation: northeast.