

Exhibit FF: Red River Parish Port Site Wetlands Delineation Report







July 18, 2024

Mrs. Sheena Bryant North Louisiana Economic Partnership 333 Texas Street, Suite 401 Shreveport, Louisiana 71101

Red River Parish Port Site Wetland Delineation Report

RE: Red River Parish Port Site - Wetland Delineation Executive Summary CSRS Project No 216269

Dear Mrs. Bryant,

In part of the Louisiana Economic Development (LED) Certified Sites Program, a wetland delineation was completed for the Red River Parish Port Site in Red River Parish. In accordance with the United States Army Corps of Engineers (USACE) 1987 Wetland Delineation Manual and Regional Supplements, a wetland delineation was completed on 29 November 2023 and identified approximately 0.24 acres of potentially jurisdictional wetlands, 0.28 acres of potentially non-jurisdictional isolated wetlands, and 2,621 linear feet of waters of the U.S. within the site boundary. On 11 March 2024, a site visit was conducted with the USACE for the Approved Jurisdictional Determination (AJD) process. The USACE did concur with the findings from the wetland delineation report, but the findings have not been officially verified by the USACE. The AJD process was initiated on 2 February 2024, and the typical amount of time to obtain an AJD is 6 to 12 months. The wetland delineation is based on a previous, slightly larger site boundary. The current site boundary does not include the 0.24 acres of potentially jurisdictional wetlands, but it does include the 0.28 acres of potentially non-jurisdictional wetlands and 2,621 linear feet of potentially jurisdictional wetlands, but it does include the 0.28 acres of potentially non-jurisdictional wetlands and 2,621 linear feet of potentially jurisdictional wetlands, but it does include the 0.28 acres of potentially non-jurisdictional wetlands and 2,621 linear feet of potentially jurisdictional waters of the U.S.

Previous Site Boundary



Current Site Boundary



Thank you for the opportunity to assist you with this project. Should you have any questions or require additional information, feel free to contact me.

Respectfully,

Elliott Boudreaux Project Manager

WETLAND DELINEATION REPORT



RED RIVER PARISH PORT SITE

LOUISIANA HIGHWAY 1 AND RIVERPORT DRIVE HANNA, LOUISIANA 71019

ECS PROJECT NO. 49:21746

FOR: NORTH LOUISIANA ECONOMIC DEVELOPMENT

MARCH 14, 2024







Geotechnical • Construction Materials • Environmental • Facilities

March 14, 2024

Mrs. Liz Pierre North Louisiana Economic Development 333 Texas Street Shreveport, Louisiana, 71101

ECS Project No. 49:21746

Reference: Waters of the U.S. Delineation Report, Red River Parish Port Site, Louisiana Highway 1 and Riverport Drive, Hanna, Red River Parish Louisiana

Dear Mrs. Pierre:

ECS Southeast, LLC (ECS) is pleased submit this report of the Waters of the U.S. (WOUS) services for the above-referenced site. ECS services were provided in general accordance with ECS Proposal No. 49:39825P authorized on September 19, 2023 and generally meets the requirements of the 1987 U.S. Army Corps of Engineers (USACE) Wetlands Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region, Version 2.0 dated November 2010. *Based on our field reconnaissance, potentially jurisdictional WOUS are present onsite.*

If there are questions regarding this report, or a need for further information, please contact the undersigned.

ECS Southeast, LLC

Curt Schaeffer, CSE Environmental Project Manager cschaeffer@ecslimited.com 225-224-2583

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Paul M. Stephens IV, P.E., PWS Associate Principal pstephens@ecslimited.com 843-654-4448

EXECUTIVE SUMMARY

ECS Southeast, LLP was contracted by CSRS, Inc. to provide wetland delineation and United States Army Corps of Engineers (USACE) jurisdictional determination services for an approximate 74.4-acre site located at Louisiana Highway 1 and Riverport Drive, Hanna, Red River Parish, Louisiana. The findings of the potential Waters of the United States (WOTUS) delineation are based on ECS' professional judgment and application of the technical criteria presented in the 1987 USACE Wetlands Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region, Version 2.0 dated November 2010.

One potentially jurisdictional wetland area totaling approximately 0.24 acre, and two potential non-wetland WOTUS features totaling approximately 2,621 linear feet were identified and delineated within the PSA. The locations and boundaries of the potentially jurisdictional wetland and non-wetland WOTUS features are presented on the attached Wetland Delineation Map (Appendix I, Figure 7).



1.0 INTRODUCTION

This report presents the findings of a wetland delineation study conducted by ECS Southeast, LLC (ECS) for North Louisiana Economic Development at the Red River Parish Port Site located at Louisiana Highway 1 and Riverport Drive, Hanna, Red River Parish, Louisiana (31°57'28.60N, 93°20'25.99W). The site consists of one parcel totaling approximately 74 acres. According to the Red River Parish Geographic Information System (GIS) website, the Parcel Identification Number (PIN) is: 7500001800A 74.4 Acres. The site includes approximately 74.4 Acres acres, as shown on the Site Location Map (Appendix I, Figure 1). The site consists of agricultural fields and wooded land. Surrounding areas consist of the Red River, wooded land, and agricultural fields. The purpose of this study was to identify and delineate jurisdictional Waters of the U.S. (WOTUS) within the project study area (PSA). Based on the United States Geological Survey (USGS) Topographic Map, no wetlands or other surface waters are depicted on site.

Wetlands are defined by the United States Army Corps of Engineers (USACE) and the United States Environmental Protection Agency (EPA) as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances, do support a prevalence of vegetation typically adapted for life in saturated soil conditions." In order for an area to be classified as wetland, hydrophytic vegetation, hydric soils, and wetland hydrology indicators must be present described in the 1987 "Corps of Engineers Wetlands Delineation Manual" and the Appropriate Regional Supplement.

2.0 METHODOLOGY

The findings of the WOTUS delineation is based on ECS' professional judgment and application of the technical criteria presented in the 1987 USACE Wetlands Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region, Version 2.0 dated November 2010.

ECS completed the following tasks to identify and delineate potentially jurisdictional WOTUS boundaries onsite:

2.1 Literature Review

ECS reviewed supporting information from publicly-available databases to identify possible ecological effects the project may have on potential state- and/or federally-jurisdictional water resources. During the desktop review, ECS documented relevant, site-specific details (e.g., topographic characteristics, soil composition, recent precipitation, level of disturbance, plant community structure, etc.) and integrated the obtained information with the onsite delineation effort.

2.2 Methodology for Field Investigation

Wetland boundaries were delineated using the routine onsite determination method described in the USACE Manual and Regional Supplement, in conjunction with the Atlantic and Gulf Coastal Plain 2020 Regional Wetland Plant List and the USDA Soil Survey.



ECS performed onsite wetland delineations as described above. First, site hydrology was observed and the plant community within the data plot was characterized. The dominant plant species within each community were then identified, and it was determined whether or not hydrophytic (wetland) plants dominated the plant community. The USFWS has defined five wetland plant indicator categories including:

- Obligate wetland (OBL) has >99% probability of occurring in wetlands
- Facultative wetland (FACW) has 66% to 99% chance of occurring in wetlands
- Facultative (FAC) has 33% to 66% chance of occurring in wetlands
- Facultative upland (FACU) has 1 to 33% chance of occurring in wetlands
- Upland (UPL) has <1% chance of occurring in wetlands
- No Indicator (NI) no wetland indicator for the specified species, considered UPL

Plants identified as OBL, FACW, or FAC are considered wetland plants (or hydrophytes) by USACE.

In areas determined to be dominated by hydrophytic vegetation and potential wetland hydrology is observed, an approximately 16-inch soil pedon was excavated with a shovel to determine if hydric soils were present. The soil pit was also inspected to determine if indicators of wetland hydrology (inundation, soil saturation, oxidized rhizospheres on living roots, etc.) were present.

Once an area is determined to be a wetland, further testing was performed to locate the wetland/ non-wetland boundary. A second data point was established in an adjacent non-wet area to document non-wetland conditions. Wetland boundaries were documented with a handheld global positioning unit (Trimble Geo 7XTM).

Data forms specified in the Regional Supplement were completed for each wetland and non-wetland data point location. Information recorded on the USACE-approved wetland data sheets included vegetation data (species and percent cover in each stratum), soil matrix and redox conditions to a depth of 16 inches, and hydrological indicator observations utilized in making wetland determinations.

2.3 Methodology for Delineating Streams

During the field investigation for wetlands, ECS identified streams onsite that could be considered jurisdictional by state and federal regulatory agencies. ECS used field indicators such as flow, substrate composition, presence/absence of defined bed and banks, origin of hydrologic source, presence/absence of vegetation in the stream channel, and composition and relative abundance of resident benthic macroinvertebrates to classify onsite streams into three stream types: ephemeral, intermittent, and perennial.

RGL No. 05-05 provides guidance on identifying physical indicators of Ordinary High Water Mark (OHWM) as defined in 33 CFR Sections 328.3(e) and 329.11(a)(1) and discusses implementation of other appropriate means that consider the characteristics of the surrounding areas to establish the lateral limits of jurisdiction over tidal and non-tidal waters. Per RGL No. 05-05, "the lateral limits of jurisdiction over non-tidal water bodies extend to the [OHWM], in the absence of adjacent wetlands. When adjacent wetlands are present, CWA jurisdiction extends beyond the OHWM to the limits of the adjacent wetlands".



3.0 FINDINGS

3.1 Literature Review

ECS professionals reviewed the USGS Topographic Map, U.S. Department of Agriculture - Natural Resource Conservation Service (USDA-NRCS) Web Soil Survey, the USDA Hydric Soils List, the Federal Emergency Management Agency (FEMA) Floodplain Mapping Service, U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) Wetlands Mapper, and available aerial photographs to identify potentially jurisdictional Waters of the U.S. (i.e., streams, wetlands, natural ponds, lakes) and available watershed information.

3.1.1 Literature Review Summary

The following is a summary of the available desktop information that was reviewed as part of this study:

- According to the Hanna (Louisiana) USGS Topographic Map Quadrangle dated 1989 (Appendix I, Figure 2), two unnamed tributaries of Wright Creek are depicted along the eastern and western boundaries. The elevation of the PSA ranges from approximately 129 to 131 feet above mean sea level (MSL).
- According to the USDA-NRCS Web Soil Survey of Red River Parish (Appendix I, Figure 3), the PSA consists of the following soil map units: Coushatta silt loam, 0-1% slopes (Cs), Coushatta silty clay loam, 0-1% slopes (Ct), Latanier clay, 0-1% slopes, rarely flooded (La), and Moreland clay, 0-1% slopes, rarely flooded (MoA). None of the aforementioned soils are listed as Hydric for Red River Parish, Louisiana.
- The USFWS NWI map (Appendix I, Figure 4) depicts two wetland areas within the PSA depicted as Palustrine, Forested, Broad-Leaved Deciduous, Temporarily Flooded (PFO6F), and Palustrine, Forested, Broad-Leaved Deciduous, Semi-Permanently Flooded (PFO1C). The site is located within the Bayou Pierre Water Shed and is identified as Hydrologic Unit Code (HUC) 11140206.
- The FEMA Flood Insurance Rate Maps (FIRMs), Panel 22069C0200D (dated July 6, 2015), and 22031C0525C (dated December 16, 2003) (Appendix I, Figure 5) indicate that the PSA is located in unshaded Zone X. These areas are determined to be outside the 0.2% Annual Chance Floodplain.
- ECS reviewed the National Atmospheric and Oceanic Administration (NOAA) Light Detection and Ranging (LiDAR) Digital Elevation Model (DEM) within the PSA (Appendix I, Figure 6). The DEM's, utilizing dark red, yellow and light green shading to depict high to low elevations, respectively, to assist with identifying potential wetland areas and non-wetland waters.



3.2 Field Investigation Findings

ECS personnel conducted the field investigation on November 29, 2023. During the reconnaissance, the PSA was observed for evidence of potential ponds, streams, and wetlands. A total of two potentially jurisdictional non-wetland WOTUS features (streams), totaling approximately 2,621 linear feet (LF), and one potentially jurisdictional wetland area, totaling approximately 0.24 acre, were observed within the PSA. ECS also observed two isolated, potentially non-jurisdictional wetland areas, totaling approximately 0.28 acre within the PSA.

The potentially jurisdictional areas were field-located using a Trimble GeoXHTM hand-held GPS unit capable of sub-meter accuracy, and the data downloaded to produce a Potential Waters of the US Delineation Map (Appendix I, Figure7). The potential features identified by ECS during the wetland delineation study are summarized in the table below:

The findings have not been verified by the USACE are subject to change. Figure 7 should be used for preliminary planning purposes only.

Feature ID	GPS Coordinates (decimal degrees)	Approximate Acreage	Approximate Square Footage	Approximate Linear Feet (if applicable)
Wetland W1	31°57'36.48"N 93°20'40.05"W	0.24	10,454 SF	N/A
Wetland W2 (Isolated)	31°57'30.95"N 93°20'18.99"W	0.16	6,9696 SF	N/A
Wetland W3 (Isolated)	31°57'29.01"N 93°20'18.85"W	0.12	5,227 SF	N/A
Stream S1	31°57'39.88"N 93°20'40.39"W	N/A	N/A	2,389 LF
Stream S2	31°57'29.50"N 93°20'17.92"W	N/A	N/A	232 LF

Table 1: Potential WOTUS Summary Table

3.2.1 Wetland Summary

The potential wetland area W1 (DP 4) exhibited both primary and secondary wetland hydrology indicators, hydric soils, and hydrophytic vegetation during the site visit. Primary hydrology indicators included water marks (B1) and water-stained leaves (B9). while secondary indicators included a positive FAC-Neutral test (D5). Based on characteristics observed during the field visit, the aforementioned potential wetland area is classified as a Palustrine, Forested, Broad-Leaved Deciduous, Temporarily Flooded (PFO1A) wetland habitat totaling approximately 0.24 acre. The wetland areas and data point (DP) locations are depicted on the Potential Waters of the U.S. Delineation Map (Appendix I, Figure 7). Photographs of the potential wetlands and WOTUS features are presented in Appendix II.



3.2.2 Stream Summary

Two potentially jurisdictional non-wetland WOTUS features (streams), totaling approximately 2,621LF, were observed within the PSA. All potential stream features observed exhibited an ordinary high-water mark, bed and bank characteristics, and a silty substrate. The stream features varied from approximately two feet to eight feet in width and approximately one to three feet in depth, and are depicted on the Potential Waters of the U.S. Delineation Map (Appendix I, Figure 7). Photographs of the potential streams are presented in Appendix II.

Potential streams S1 and S2 were determined to be intermittent streams and likely serve to provide drainage within the PSA and the surrounding landscape.

4.0 VERIFICATION SERVICES & JURISDICTIONAL DETERMINATION (JD) FIELD VISIT

ECS conducted a JD site visit with USACE - Vicksburg District staff on March 11, 2024. During the field visit, the USACE reviewed wetland areas W2 and W3 and considered them to be potentially isolated wetlands; therefore, these features are not considered potentially jurisdictional wetlands. However, the determination of wetland areas W2 and W3 being considered formally isolated wetlands and non-jurisdictional features has not been officially verified by the USACE. ECS recommends waiting until the formal USACE JD has been issued prior to site construction and development activities.

The locations and boundaries of the potentially jurisdictional areas are depicted on the attached Waters of the U.S. Delineation Map (Appendix I, Figure 7).

5.0 REGULATORY DISCUSSION

After review of the findings in the report and at the client's request, ECS can coordinate with the USACE to acquire a jurisdictional determination and conduct a field visit, if necessary. The timeline of this process is dependent on the availability of the regulatory agency. ECS recommends receipt of the formal jurisdictional determination letter from the necessary agencies prior to conducting any land-disturbance activities.

Non-wetland WOTUS are regulated by Sections 401 and 404 of the Clean Water Act. State and Federal law dictates that any disturbance to WOTUS must be permitted through the appropriate agencies. If any potential impacts are proposed, we can assist you with permitting options and support to complete the process. As part of the permitting process, we will conduct a preliminary review of state and federal agency records pertaining to Section 7 (Federal Endangered Species Act) and Section 106 (National Historic Preservation Act). If deemed necessary, we can assist you with targeted species surveys and cultural investigations to satisfy the requirements of the Nationwide Permit (NWP), Individual Permit (IP), or General Permit conditions.

Section 404 of the Clean Water Act regulates the discharge of dredge and fill materials into waters of the United States (lakes, rivers, ponds, streams, etc.), including wetlands. Waters of the United States include territorial seas, navigable coastal and inland lakes, rivers, perennial streams, intermittent streams, and wetlands. The EPA and the U.S. Army Corps of Engineers jointly administer the Section 404 program. Section 401 of the Clean Water Act grants each state the authority to approve, condition, or deny any Federal permits that could result in a discharge to State waters. Mitigation and stormwater management plans will be a condition of permits issued for the Site. Buffers may



be required adjacent to streams and water bodies. In general, the mitigation requirements and thresholds for Louisiana are 0.5 acre or more of wetland/WOTUS impacts. The mitigation credits may be estimated by linear feet (LF) and acreage, state specific calculation worksheets, or other methods utilized in that state or USACE district.

For impacts to 0.5-acre or more of wetlands/WOTUS, an IP may be required. An IP may also be required to authorize impacts if wetlands and/or streams are located in a floodplain. An IP requires a habitat analysis, alternative site analysis, project justification, plans to avoid and minimize impacts, and a proposed mitigation plan. Depending on the habitat analysis and the extent of impacts, and Environmental Impact Statement may be required by the USACE. An IP allows for a public comment period and the timeline ranges from 4 to 18 months to obtain depending on the conditions that may arise during the USACE review and public comment period.



6.0 WATERSHED CLASSIFICATION/BUFFER REQUIREMENTS

6.1 State Riparian Buffer Requirements

According to the Louisiana Department of Environmental Quality (LDEQ), the PSA occurs in the East Central Louisiana Coast Watershed. To ECS' knowledge, there are no known state-mandated riparian buffer requirements to warrant the protection of adjacent wetlands and riparian areas beyond the limits of construction. However, it is recommended by LDEQ that best management practices outlined in LDEQ's Stormwater Construction General Permit guidelines be employed during construction activities to limit downstream translocation of sediment into adjacent wetlands and riparian areas.

6.2 Local Buffer Requirements

ECS contacted the Red River Parish Planning Department to determine if mandatory vegetative buffers and/or riparian buffers are required for streams, wetlands, or other waters in Red River Parish. According to the Red River Parish Planning Department, there are no additional riparian buffer requirements in addition to the state recommended practices for general construction and stormwater management.

ECS recommends consultation with a civil engineer to determine if mandatory vegetative buffers and/ or regulated development (impervious surfaces) setbacks are required for the site in addition to those mentioned above.

7.0 CONCLUSIONS

One potentially jurisdictional wetland area, totaling approximately 0.24 acre, and two potentially jurisdictional streams, totaling approximately 2,621 LF, were identified and delineated within the PSA. ECS also observed two isolated, potentially non-jurisdictional wetland areas (W2 and W3), totaling approximately 0.28 acre within the PSA. The locations and boundaries of the potentially jurisdictional areas are depicted on the attached Waters of the U.S. Delineation Map (Appendix I, Figure 7).

The findings summarized in this report represent our best professional judgment concerning the presence of potential jurisdictional aquatic resources in the PSA at the time of the study. These findings are only to be considered preliminary and are for planning purposes only. ECS cannot guarantee that field conditions and/or WOTUS boundaries will not change over time.

At the time of issuance of this report, ECS has submitted the findings to the USACE for review of an Approved Jurisdictional Determination and performed the subsequent field visit with the USACE to satisfy the requirements of Section 404 of The Clean Water Act (33 U.S.C. 1344). No earth-disturbing activities should be conducted within the PSA until a USACE Determination has been issued.



Appendix I: Figures















Appendix II: Photographic Log



1 - Soil profile at DP1.



2 - Overview at DP1, facing north.



3 - Overview at DP1, facing east.



4 - Overview at DP1, facing south.



5 - Overview at DP1, facing west.



6 - Soil profile at DP2.



7 - Overview of DP2, facing north.



8 - Overview of DP2, facing east.



9 - Overview of DP2, facing south.



10 - Overview of DP2, facing west.



11 - Soil profile at DP3.



12 - Overview of DP3, facing north.



13 - Overview of D3, facing east.



14 - Overview of DP3, facing south.



15 - Overview of DP3, facing west.



16 - Soil profile at DP4.



17 - Overview of DP4, facing north.



18 - Overview of DP4, facing east.



19 - Overview of DP4, facing south.



20 - Overview of DP4, facing west.



21 - Soil profile at DP5.



22 - Overview of DP5, facing north.



23 - Overview of DP5, facing east.



24 - Overview of DP5, facing south.



25 - Overview of DP5, facing west.



26 - Soil profile at DP6.



27 - Overview of DP6, facing north.



28 - Overview of DP6, facing east.



29 - Overview of DP6, facing south.



30 - Overview of DP6, facing west.



31 - Soil profile at DP7.



32 - Overview of DP7, facing north.



33 - Overview of DP7, facing east.



34 - Overview of DP7, facing south.



35 - Overview of DP7, facing west.



36 - Soil profile at DP8



37 - Overview of DP8, facing north.



38 - Overview of DP8, facing east.



39 - Overview of DP8, facing south.



40 - Overview of DP8, facing west.



41 - Wetland W3, facing southeast



42 - Wetland W3, facing northwest



43 - Overview of Stream S1 on eastern boundary, facing north.



44 - Overview of Stream S1 on eastern boundary, facing south.

Appendix III: USACE Wetland Data Forms and Stream Data Forms

Project/Site	Red River Parish Po	rt Ci	City/County: Hanna / Red River			Sampling Date: 11/29/2023					
Applicant/Owner:	Louisiana Econo	mic Development	Stat	e:	LA	Sampling Point:	DP1				
Investigator(s):	C. Schaeffer, E	3. Bosenberg	Sec	tion, Towns	hip, Range:	Sec12, T1	1-North, R10	C			
Landform (hillslope,	terrace, etc.): h	ardwoods	Local relie	ef (concave,	, convex, non	e): None	Slope (%):	<1%			
Subregion (LRR or I	/ILRA) LRR-P	Lat: 31°	57'30.41"N	Lo	ong: 9	3°20'19.32"W	Datum:	NAD83			
Soil Map Unit Nam	Cs-Cous	natta silt loam, 0-1	% slopes		NWI Classi	fication:	N/A				
Are climatic/hydrolog	gic conditions of the si	te typical for this ti	me of the ye	ear? No	-						
Are vegetation	, soil , o	r hydrology	significantl	y disturbed	?		present?	Yes			
Are vegetation	, soil , o	r hydrology	naturally p	roblematic?	e (If need	ded, explain any ar	nswers in ren	narks.)			
SUMMARY OF F	INDING Attach	site map showi	ng samplir	ng point lo	ocations, tra	insects, importa	nt features,	, etc.			
Hydrophytic veg	etation present?	Yes									
Hydric soil prese	ent?	Yes	le t	ha Samnla	od Aroa with	nin a Wetland?	Voc				
Indicators of we	land hydrology preser	it' Yes	15 (
Remarks:											
		Re	egional dro	ought.							
HYDROLOGY											
Wetland Hydrology	Indicators:										
Primary Indicators (I	<u>minimum of one is req</u>	uired; check all tha	<u>at :</u>		Secondary I	ndicators (minimur	n of two requ	uired)			
Surface Water (A	1)	Aquatic Faun	na (B13)		Sur	face Soil Cracks (B	6)				
High Water Table	e (A2)	Marl Deposits	s (B15) (LRR	ł U)	Spa	arsely Vegetated Co	oncave Surfac	ce (B8)			
Saturation (A3)	lfide Odor (C	31)	Dra	inage Patterns (B10	D)						
X Water Marks (B1)	Oxidized Rhiz	ospheres on Living Dry-Season Water Table (C2)								
Sediment Deposi	ts (B2)	Roots (C3)	Moss Trim Lines (B16)								
Drift Deposits (B3	3)	Presence of I	Reduced Iror								
Algal Mat or Crus	t (B4)	Recent Iron F	Reduction in	Tilled	uration Visible on A	on Aerial Imagery (C9)					
Iron Deposits (B5)	Soils (C6)			Geomorphic Position (D2)						
Inundation Visible	e on Aerial Imagery (B7) Thin Muck Su	urface (C7)		Sha	allow Aquitard (D3)	ow Aquitard (D3)				
Water-Stained Le	eaves (B9)	Other (Explai	n in Remark	s)	X FA	C-Neutral Test (D5)					
					Spl	nagnum moss (D8)	(LRR T, U)				
Field Observations	:										
Surface water prese	nt? Yes	No X Depth	(inches):			Wetland					
Water table present	? Yes	No X Depth	(inches):			Hydrology	Yes				
Saturation present?	Yes	No X Depth	(inches):			Present?					
(includes capillary fr	inge)										
Describe recorded c	ata (stream gauge, m	onitoring well, aeria	al photos, pr	revious insp	pections), if a	vailable:					
Remarks:											
Photos - Soil:36	42, N: 3643, E: 364	4, S:3645 W:36	46								
FAC-Neutral tes	t - 4:1										

VEGETATION Use scientific names of p	lants.			Sampling Point: DP1			
Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species	Indicator Staus	Dominance Test Worksheet Number of Dominant			
	40	v		Species that are OBL,	(A)		
	<u>40</u> 5	T		FACW, OF FAC: 8	(A)		
2 Carya giabra	5	N	FACU	Species Across all Strata: 9	(B)		
4				Percent of Dominant			
6				Species that are OBL, FACW, or FAC: 88.89%	(A/B)		
7							
8							
	45	= Iotal Cover		.			
50% of total cover: 22.5	20% of to	otal cover:	9	Prevalence index worksheet			
				I otal % Cover of:			
Sapling/Shrub Stratu (Plot size: 30)		54014	OBL species $0 \times 1 = 0$	_		
1 Cornus toemina	20	Y	FACW	FACW species $80 \times 2 = 160$			
2 Celtis laevigata	12	Y	FACW	FAC species $56 \times 3 = 168$	_		
	10	<u> </u>	FAG	FACU species $20 \times 4 = 80$	_		
4 Carya laciniosa	8	N	FACW	$\begin{array}{c c} \text{UPL species} & 0 & \text{x 5} = & 0 \\ \text{Column totals} & 150 & (1) & 100 \\ \end{array}$	(D)		
5				Column totals 156 (A) 408	(B)		
0 7				Brovoloppo Index P/A 2.62			
/				Prevalence index = D/A = 2.02			
°		Total Causer					
	50	= Total Cover					
50% of total cover: 25	20% of to	otal cover:	10	Hydrophytic Vegetation Indicators:			
				Rapid test for hydrophytic vegetation	n		
Herb stratum (Plot size: 30)			X Dominance test is >50%			
1 Symphyotrichum lateriflorum	25	Y	FAC	X Prevalence index is ≤3.0*			
2 Sanicula canadensis	15	Y	FACU	Problematic hydrophytic			
3 Elymus canadensis	10	N	FAC	vegetation* (explain)			
4 Symphyotrichum drummondii 5	3	<u>N</u>	FAC	*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic			
6				Definitions of Five Vegetation Strata			
7				Tree- Woody plants, excluding woody	/ines,		
8				approximately 20 ft (6m) or more in hei	ght and		
9 10				less than 3 in. (7.6 cm) DBH.			
11				Sapling/Shrub - Woody plants, exclud	ina		
12				vines, less than 3 in. DBH and greater	than 3.26		
	53	= Total Cover		ft (1m) tall			
50% of total cover: 26.5	20% of to	otal cover:	10.6	Herb - All herbaceous (non-woody) pla	nts.		
				including herbaceous vines, regardless	of size,		
Woody vine stratum (Plot size: 30)			and woody plants, except woody vines,	less		
1 Campsis radicans	8	Y	FAC	than approximately 3 ft (1 m) in height.	(
2 Toxicodendron radicans	5	Y	FAC	woody vine - All woody vines, regardle	ess of		
3 Brunnichia ovata	5	Y	FACW				
4 Smilax bona-nox	3	N	FAC				
5				Hydrophytic			
	21	= Total Cover		Vegetation Yes			
50% of total cover: 10.5	20% of to	otal cover:	4.2	Present?			
Bemarks: (If observed, list morphologic	al adaptati	ons		•			
	a uuupidii	0110]		

SOIL					Sampling Point: DP1					
Profile Desc	ription: (Describe	to the d	epth needed to	docume	nt the indica	ator or confirm th	ne absence of	indicators.)		
Depth	<u>Matrix</u>			Redo	x Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks		
0-2	7.5 YR 4/4	100					Silty Clay			
2-16	7.5 YR 4/4	90	7.5 YR 4/2	10	D	М	Clay			
*Type: C = C	Soncentration, $D = De$	epletion,	RM = Reduced	Matrix, M	S = Masked	Sand Grains.	**Location: P	L = Pore Lining, M = Matrix		
Hydric Soi	il Indicators:						Indicators fo	r Problematic Hydric Soils:		
Histi	sol (A1)		Poly	value Bel	ow Surface (S	58) (LRR S, T, U)	1 cm Muo	ck (A9) (LRR O)		
Histie	c Epipedon (A2)		Thir	Dark Sur	face (S9) (LF	RR S, T, U)	2 cm Muo	ck (A10) (LRR S)		
Black	k Histic (A3)		Loa	my Mucky	y Mineral (F1)	Reduced	Vertic(F18) (outside MLRA 150A,B)		
Hydr	ogen Sulfide (A4)	Loa	my Gleye	d Matrix (F2)	Piedmont	t Floodplain Soils (F19) (LRR P, S, T)			
Stratified Layers (A5) Depleted Matri					rix (F3)		Anomolo	us Bright Loamy Soils (F20) (MLRA		
Organic Bodies (A6) (LRR P, T, U)				lox Dark S	Surface (F6)		1536)			
5 cm Mucky Mineral (A7) (LRR P, T, U) Deple					k Surface (F	7)	X Red Pare	ent Material (TF2)		
Mucł	<pre>K Presence (A8) (LR</pre>	R U)		lox Depre	ssions (F8)		Very Shallow Dark Surface (TF12)			
1 cm	Muck (A9) (LRR P,	1) 	Mar	1 (F10) (L	KK U)	Other (explain in remarks)				
Depl	eted Below Dark Sur	rface (A1	1) Dep	Managan	ric (F11) (ML	KA 151)	T \			
	k Dark Surface (A12)			-wangane		(F 2) (LRR U, P,	1)	*Indicators of hydrophytic vegetation		
	St Prairie Redox (Alt		A 150A) Um	bric Surfa	ce (F13) (LF	(R P, T, U)		unless disturbed or problematic		
Sanc	dy Mucky Mineral (S	1) (LRR	O, S)	a Ochric	(F17) (MLR	A 151)		·		
Sanc	dy Gleyed Matrix (S4	.)		luced Ver	tic (F18) (ML	-RA 150A, 150B)				
Sanc	ly Redox (S5)				odplain Soils	s (F19) (MLRA 14 9	9A)			
Strip	ped Matrix (S6)	пот	Anc	molous B	right Loamy	Solis (F20) (MLR	A 149A, 153C	, 153D)		
	Sunace (S7) (LRR	Ρ, 5, 1, Ι	0)							
Restrictive I	Laver (if observed):									
Type:	,					Hvdric Soil				
Depth (inches):						Present?	Yes			
Remarks:										

Project/Site	Red River Parish Port	City/C	City/County: Hanna / R			Sampling Date	: 11/29/2023			
Applicant/Owner:	Louisiana Econom	ic Development	Stat	te:	LA	Sampling Point	Sampling Point: DP2			
Investigator(s):	C. Schaeffer, B.	Bosenberg	Sec	tion, Tow	nship, Range	: Sec12, ⁻	T11-North, R10			
Landform (hillslope,	terrace, etc.): har	dwoods Lo	cal relie	ef (concav	ve, convex, no	one): None	Slope (%): <1%			
Subregion (LRR or I	MLRA) LRR-P L	at: 31 °57'3	2.73"N		Long:	93°20'18.39"W	Datum: NAD83			
Soil Map Unit Nam	Cs-Cousha	tta silt loam, 0-1% sl	opes		NWI Clas	sification:	N/A			
Are climatic/hydrolo	gic conditions of the site	typical for this time c	of the ye	ear? No	1					
Are vegetation	, soil , or l	nydrology sig	nificantl	ly disturbe	ed? Are "no	ormal circumstance	es" present? Yes			
Are vegetation	, soil , or l	nydrology nat	urally p	roblemati	c? (If ne	eded, explain any	answers in remarks.)			
SUMMARY OF F	INDING: Attach s	ite map showing s	sampli	ng point	locations, t	ransects, import	tant features, etc.			
Hydrophytic veg	etation present?	Yes								
Hydric soil prese	ent?	No	ا ما	ha Camr	alad Araa wi	ithin a WatlandQ	No			
Indicators of we	tland hydrology present?	No	IS I	ne Samp	Died Area wi	ithin a wetiand?	INO			
	-									
Remarks:										
		Regio	nal dro	ought.						
HYDROLOGY										
Wetland Hydrology	/ Indicators:									
Primary Indicators (minimum of one is requir	ed; check all that a			Secondary	y Indicators (minim	um of two required)			
Surface Water (A	(1)	Aquatic Fauna (B		S	Surface Soil Cracks	(B6)				
High Water Table	e (A2)	Marl Deposits (B1	5) (LRF	R U)	s	Sparsely Vegetated Concave Surface (B8)				
Saturation (A3)	•	Hydrogen Sulfide	Odor (C	C1)	D	Drainage Patterns (B10)				
Water Marks (B1)		horon o	n Living	D	Dry-Season Water Table (C2)				
Sediment Depos	its (B2)	Roots (C3)	neres of		Moss Trim Lines (B16)					
Drift Deposits (B	3)	Presence of Redu	uced Iro	n (C4)	Crayfish Burrows (C8)					
Algal Mat or Crus	- st (B4)		duction in Tilled			Saturation Visible on Aerial Imagery (C9)				
Iron Deposits (B5	5)	Soils (C6)	ICTION IN	Tillea	G	Geomorphic Position (D2)				
Inundation Visible	é on Aerial Imagery (B7)	Thin Muck Surfac	e (C7)		s	nallow Aguitard (D3)				
Water-Stained L	eaves (B9)	Other (Explain in	Remark	s)		AC-Neutral Test (D	5)			
	-		lionan	,	<u> </u>	Sphagnum moss (D8	3) (LRR T. U)			
						P - 3 (-	-, (, -,			
Field Observations										
Surface water prese	ent? Yes I	Jo X Depth (inc	hes).							
Water table present	? Yes 1	lo X Depth (inc	hes)			Wetland	No			
Saturation present?	Ves 1	lo X Depth (inc	hos).		_	Hydrology Present?				
(includes capillarv fr	inge)		<u>–</u>			rresent:				
	lata (stream gauge mon	toring well aerial ph	intre ni	revious in	enections) if	available:				
	ata (Stream gauge, mon	toring weil, aenar pri	iotos, pi		эреспонз), п	available.				
Pomorko:										
Dhotos Soiliar	10 N.2640 F.2650	S-26E1 M-26E2								
FILULUS - SUII:30	140, 18.3049 , E:305U, 24 - 110	3.3031 W.3032								
	л. т .о									

VEGETATION -- Use scientific names of plants.

Sampling Point: DP2

	Absolute	Dominant	Indicator	Dominance Test Worksheet
Tree Stratum (Plot size: 30)	% Cover	Species	Staus	Number of Dominant
1 Carva tomentosa	25	Y	FAC	Species that are OBL, EACW or EAC: 9 (A)
2 Platanus occidentalis	12	<u> </u>	FACW	Total Number of Dominant
3 Acer negundo	8	·	FAC	Species Across all Strata: 9 (B)
4			1710	
5				Species that are OBI
6				FACW, or FAC: 100.00% (A/B)
7				(, ,
8				
	45	= Total Cover		
50% of total cover: 22.5	20% of to	otal cover:	9	Prevalence Index Worksheet
	2070 01 1		<u> </u>	
Sapling/Shrub Stratu (Plot size: 30)	0	X		OBL species $0 \times 1 = 0$
1 Ligustrum sinense		Y	FAC	FACW species $30 \times 2 = 60$
2 Ilex cassine	<u> </u>	<u> </u>	FAGW	FAC species $59 \times 3 = 177$
A Acor pogundo		<u> </u>		$\begin{array}{c} \text{FACU Species} 0 x \neq = 0 \\ \text{LIPL species} 0 x \neq = 0 \\ \end{array}$
			FAG	$\begin{array}{c} \text{OFL species} & 0 & \text{x } \text{5} = & 0 \\ \text{Column totals} & \textbf{89} & (A) & -237 & (B) \end{array}$
S		<u> </u>		$\frac{1}{237} (B)$
7				Prevalence Index – $B/A = -2.66$
8				
·	05	Total Causer		
	20	= Total Cover	_	
50% of total cover: 12.5	20% of to	otal cover:	5	Hydrophytic Vegetation Indicators:
				Rapid test for hydrophytic vegetation
Herb stratum (Plot size: 30)				X Dominance test is >50%
1 Carex cherokeensis	5	Y	FACW	X Prevalence index is ≤3.0*
2 Dichanthelium commutatum	4	Y	FAC	Problematic hydrophytic
3				vegetation* (explain)
4				*Indicators of hydric soil and wetland hydrology must
5				be present, unless disturbed or problematic
6				Definitions of Five vegetation Strata
/				Tree- Woody plants, excluding woody vines,
8				approximately 20 ft (6m) or more in height and
9				less than 3 in. (7.6 cm) DBH.
10				
11				Sapling/Shrub - Woody plants, excluding
12		Total Cavar		vines, less than 3 in. DBH and greater than 3.26
50% of total anyor: 45	9 20% of tr		10	
50% of total cover. 4.5	20% 01 10		1.0	Herb - All herbaceous (non-woody) plants,
Woody vine stratum (Plot size: 30	1			and woody plants, except woody vipos, loss
1 Toxicodendron radicans	10	Y	FAC	than approximately 3 ft (1 m) in height.
2 Campsis radicans	10	<u> </u>	FAC	Woody vine - All woody vines, regardless of
3 Smilax bona-nox	5	·	FAC	height.
4 Smilax glauca	5		FAC	
5 Smilax rotundifolia	5		FAC	Undrankstia
	35	= Total Cover		Vegetation Veg
50% of total cover 17.5	20% of +	tal covor:	7	Present?
	20% UI (1	1
Remarks: (If observed, list morphologica	al adaptatio	ons below).		

Depth	Matrix				Redox	x Features					
(Inches)	Color (moist)	%	Color (I	moist)	%	Type*	Loc**	Texture	Remarks		
0-3	7.5 YR 2.5/2	100						Silty Clay	/		
3-16	7.5 YR 4/4	95	7.5 YF	R 4/2	5	D	М	Clay			
*Type: C = C	oncentration, D = D	epletion,	RM = Ree	duced M	atrix, M	S = Masked	Sand Grains.	**Location	: PL = Pore Lining, M = Matrix		
Hydric Soi	I Indicators:							Indicators	for Problematic Hydric Soils:		
Histis	sol (A1)			Polyva	lue Belo	ow Surface (S	8) (LRR S, T, U)	1 cm N	/luck (A9) (LRR O)		
Histic	c Epipedon (A2)			Thin D	ark Surf	ace (S9) (LR	R S, T, U)	2 cm N	/luck (A10) (LRR S)		
Black	Black Histic (A3)			Loamy	y Mucky	Mineral (F1))	Reduce	ed Vertic(F18) (outside MLRA 150A,B)		
Hydro	ogen Sulfide (A4)			Loamy Gleyed Matrix (F2)				Piedm	ont Floodplain Soils (F19) (LRR P, S, T)		
Strati	ified Layers (A5)			Deple	ted Mati	rix (F3)		Anomo	olous Bright Loamy Soils (F20) (MLRA		
Orga	nic Bodies (A6) (LR	R P, T, U)	Redox	Dark S	Surface (F6)		153B)			
5 cm	ype: C = Concentration, D = Depletion, RM = Hydric Soil Indicators: Histisol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T, L Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11)		, T, U)	Deple	ted Darl	k Surface (F7	7)	Red P	Red Parent Material (TF2)		
Muck	R Presence (A8) (LR	RU)		Redox	Depres	ssions (F8)		Very S	Very Shallow Dark Surface (TF12)		
1 cm	Muck (A9) (LRR P,	Т)		Marl (F10) (Ll	RR U)		Other	(explain in remarks)		
Deple	eted Below Dark Su	rface (A1	1)	Deplet	ed Ochr	ic (F11) (MLF	RA 151)				
Thick	Dark Surface (A12)		Iron-N	langane	ese Masses (F12) (LRR O, F	Ρ, Τ)	*Indicators of hydrophytic vegetation		
Coas	t Prairie Redox (A1	6) (MLRA	150A)	Umbri	c Surfac	ce (F13) (LR	R P, T, U)		and weltand hydrology must be present,		
Sand	y Mucky Mineral (S	1) (LRR (D, S)	Delta	Ochric ((F17) (MLRA	151)		unless disturbed or problematic		
Sand	y Gleyed Matrix (S4	+)		Reduc	ed Vert	tic (F18) (ML	RA 150A, 150B	5)			
Sand	y Redox (S5)			Piedm	ont Floo	odplain Soils	(F19) (MLRA 1	49A)			
Strip	oed Matrix (S6)			Anom	olous Bi	right Loamy	Soils (F20) (ML	RA 149A, 15	3C, 153D)		
Dark	Surface (S7) (LRR	P, S, T, L	J)								

Type: Depth (inches):	Hydric Soil Present?	Νο
Remarks:		

Project/Site	Red River Parish Port	City/Co	unty:	Hanna / F	Red River	Sampling Date:	11/29/2023			
Applicant/Owner:	Louisiana Economi	c Development	State:	:	LA	Sampling Point:	DP3			
Investigator(s):	C. Schaeffer, B. B	osenberg	Sectio	on, Towns	hip, Range:	Sec12, T	11-North, R10			
Landform (hillslope,	terrace, etc.): ter	race Loc	al relief	(concave,	, convex, non	ne): None	Slope (%): <1%			
Subregion (LRR or I	MLRA) LRR-P La	t: 31 °57'32	2.34"N	Lo	ong: 9	93°20'19.97"W	Datum: NAD83			
Soil Map Unit Nam	Cs-Coushatt	a silt loam, 0-1% slo	pes		NWI Classi	fication:	N/A			
Are climatic/hydrolo	gic conditions of the site ty	pical for this time of	f the year	r? No	-					
Are vegetation	, soil , or hy	rdrology sign	ificantly	disturbed	? Are "nor	mal circumstance	s" present? Yes			
Are vegetation	, soil , or hy	rdrology natu	Irally pro	blematic?	(If need	ded, explain any a	nswers in remarks.)			
SUMMARY OF F	INDING: Attach sit	e map showing s	ampling	g point lo	ocations, tra	ansects, importa	ant features, etc.			
Hydrophytic veg	etation present?	No								
Hydric soil prese	ent?	No		. Comul	ad Awaa	him a WatlandQ	Ne			
Indicators of we	tland hydrology present?	No	is the	e Sample	ed Area witi	nin a wetland?	NO			
		_								
Remarks:										
		Regior	nal drou	ight.						
		-		-						
HYDROLOGY										
Wetland Hydrology	/ Indicators:									
Primary Indicators (minimum of one is require	d; check all that a			Secondary I	Indicators (minimu	im of two required)			
Surface Water (A	(1)	Aquatic Fauna (B1	3)		Su	rface Soil Cracks (E	36)			
High Water Table		Marl Deposits (B1	5) (LRR L	J)	Spa	parsely Vegetated Concave Surface (B8)				
Saturation (A3)	_	Hvdrogen Sulfide	Odor (C1))	' Dra	ainage Patterns (B1	10)			
Water Marks (B1)			, 	Drv	Dry-Season Water Table (C2)				
Sediment Depos	, its (B2)	Oxidized Rhizosph Roots (C3)	ieres on L	Living		ss Trim Lines (B16	i)			
Drift Deposits (B		Presence of Bedu	ced Iron ((C4)	Cravfish Burrows (C8)					
Algal Mat or Crus						Saturation Visible on Aerial Imagery (CQ)				
Iron Deposits (B	5)	Recent Iron Reduc	tion in Ti	lled	0a	Geomorphic Resition (D2)				
Inundation Visible	, a on Aerial Imagery (B7)	Thin Muck Surface	(C7)		CC	allow Aquitard (D3)	(02)			
Water Steined L		Other (Eveloin in E	e (07)			C Noutral Tast (D5))			
			temarks)		FA	bachum moss (D8)				
						nagnum moss (Do)	(LNN 1, 0)			
Field Observations										
Surface water proce	nt? Voc N	- X Dopth (inch	NOC):							
Surface water prese	2 Yee N	Depth (incl	ies).		-	Wetland	No			
		Depth (incr	ies).		-	Hydrology	NO			
Saturation present?	ince)	Depth (Incr	ies):		-	Present?				
	lata (atua ana anana ara a't									
Describe recorded of	lata (stream gauge, monit	oring well, aerial pho	otos, prev	vious insp	ections), if a	vallable:				
Remarks:										
Photos - Soil:36	55, N:3656 , E:3657, S	:3658 W:3659								
FAC-Neutral tes	st - U:U									

VEGETATION Use scientific names of p	lants.			Sampling Point: DP3
<u>Tree Stratum</u> (Plot size: <u>30</u>) 1	Absolute % Cover	Dominant Species	Indicator Staus	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: 1
2 3				Total Number of Dominant Species Across all Strata: 1 (B)
4 5 6 7 8		<u> </u>		Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)
	0	= Total Cover		
50% of total cover: 0	20% of to	otal cover:	0	Prevalence Index Worksheet
Sapling/Shrub Stratu (Plot size: 30 1)			Total % Cover of:OBL species 0 $x 1 =$ 0 FACW species 0 $x 2 =$ 0 FAC species 75 $x 3 =$ 225 FACU species 2 $x 4 =$ 8 UPL species 0 $x 5 =$ 0 Column totals 77 (A) 233
7				Prevalence Index = $B/A = 3.03$
0	0	- Total Cover		
50% of total cover: 0	20% of to	otal cover:	0	Hydrophytic Vegetation Indicators:
				Rapid test for hydrophytic vegetation
Herb stratum (Plot size: 30)			X Dominance test is >50%
1 Lamium amplexicaule	75	<u> </u>	FAC	Prevalence index is ≤3.0*
2 Glycine max	2	IN	FACU	Problematic hydrophytic vegetation* (explain)
45				*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
6				Definitions of Five Vegetation Strata
7 8 9 10				Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and less than 3 in. (7.6 cm) DBH.
11				Sapling/Shrub - Woody plants, excluding
12				vines, less than 3 in. DBH and greater than 3.26
50% of total cover: 38.5	20% of to	= Total Cover	15.4	ft (Tm) tall
Woody vine stratum (Plot size: 30 1 2)		10.1	Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine - All woody vines, regardless of
3				neignt.
45				Hydrophytic
	0	= Total Cover		Vegetation Yes
50% of total cover: 0	20% of to	otal cover:	0	Present?
Remarks: (If observed, list morphologic	al adaptati	ons below).		

SOIL						Sampling Point: DP3						
Profile Desc	cription: (Describe	to the d	epth neede	ed to d	locume	nt the indica	ator or confirm tl	he absence of	f indicators.)			
Depth	<u>Matrix</u>				<u>Redo</u>	<u>x Features</u>						
(Inches)	Color (moist)	%	Color (m	oist)	%	Type*	Loc**	Texture	Remarks			
0-16	7.5 YR 4/4	100						Clay				
Type: C = C	Concentration, D = D	epletion,	RM = Redu	iced M	latrix, M	S = Masked	Sand Grains.	**Location: P	L = Pore Lining, M = Matrix			
Hydric So	il Indicators:							Indicators fo	or Problematic Hydric Soils:			
Histi	sol (A1)			Polyva	alue Belo	ow Surface (S	68) (LRR S, T, U)	1 cm Mu	ck (A9) (LRR O)			
Histi	Histic Epipedon (A2) Thin Dark Surface (S9)						R S, T, U)	2 cm Mu	ck (A10) (LRR S)			
Blac	Black Histic (A3) Loamy Mucky Mineral)	Reduced	Vertic(F18) (outside MLRA 150A,B)			
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F						d Matrix (F2))	Piedmont Floodplain Soils (F19) (LRR P, S,				
Stratified Layers (A5) Depleted Matrix (F3)						rix (F3)		Anomolo	us Bright Loamy Soils (F20) (MLRA			
Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6					Surface (F6)		153B)					
5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface					ted Dar	k Surface (F	7)	Red Pare	ent Material (TF2)			
Muc	k Presence (A8) (LR	RU)		Redo	x Depre	ssions (F8)		Very Sha	llow Dark Surface (TF12)			
1 cm	n Muck (A9) (LRR P,	T)		Marl (F10) (L	RR U)		Other (explain in remarks)				
Depl	leted Below Dark Su	rface (A1	1)	Deple	ted Och	ric (F11) (ML	RA 151)					
Thic	k Dark Surface (A12)		Iron-N	langane	ese Masses	s (F12) (LRR O, P, T) *Indicators of hydrophytic veg					
Coa	st Prairie Redox (A1	6) (MLR	A 150A)	Umbr	ic Surfa	ce (F13) (LR	R P, T, U)		and weltand hydrology must be preser			
Sand	dy Mucky Mineral (S	1) (LRR	O, S)	Delta	Ochric	(F17) (MLR	RA 151) unless disturbed or problema					
Sand	dy Gleyed Matrix (S4)		Redu	ced Ver	tic (F18) (ML) (MLRA 150A, 150B)					
Sand	dy Redox (S5)			Piedm	nont Flo	odplain Soils	(F19) (MLRA 14	9A)				
Strip	ped Matrix (S6)			Anom	olous B	right Loamy	Soils (F20) (MLR	A 149A, 153C	, 153D)			
Dark	s Surface (S7) (LRR	P, S, T,	U)	-								
Restrictive	Layer (if observed)	:										
Туре:						-	Hydric Soil	No				
	Depth (inches):					-	Present?					
Pomarka:												
nemaiks.												

Project/Site	Red River Parish Port	Cit	ty/County:	Hanna /	Red River	Sampling Date:	11/29/2023	}	
Applicant/Owner:	Louisiana Econo	nic Development	Stat	te:	LA	Sampling Point: DP4			
Investigator(s):	C. Schaeffer, B	Bosenberg	Sec	tion, Towns	ship, Range:	Sec12, T1	1-North, R10		
Landform (hillslope,	errace, etc.): ha	rdwoods	Local relie	ef (concave	, convex, no	ne): concave	Slope (%): <1	1%	
Subregion (LRR or M	ILRA) LRR-P	Lat: 31 %	57'36.31"N	Lo	ong:	93°20'39.81"W	Datum: NA	D83	
Soil Map Unit Nam	MoA-Moreland	ay, 0-1% slopes,	, rarely flood	ded	NWI Class	ification:	PFO1A		
Are climatic/hydrolog	ic conditions of the site	e typical for this tin	ne of the ye	ar? No					
Are vegetation	_, soil, or	hydrology	significant	y disturbed	l? Are "no	rmal circumstances	" present? Yes	6	
Are vegetation	, soil, or	hydrology	naturally p	roblematic	? (If nee	eded, explain any ar	nswers in remark	<s.)< td=""></s.)<>	
SUMMARY OF F	INDING: Attach	site map showir	ng sampli	ng point le	ocations, tr	ansects, importa	nt features, etc	с.	
Hydrophytic veg	etation present?	Yes							
Hydric soil prese	nt?	Yes	le t	he Samnl	od Aroa wit	thin a Wetland?	Voc		
Indicators of wet	and hydrology present	Yes	15 1	ine Sampi			165		
Remarks:									
		Re	gional dro	ought.					
HYDROLOGY									
Wetland Hydrology	Indicators:								
Primary Indicators (r	ninimum of one is requ	red; check all that	<u>t e</u>		Secondary	Indicators (minimu	<u>m of two required</u>	<u>d)</u>	
Surface Water (A	1)	Aquatic Fauna	a (B13)		Su	urface Soil Cracks (B	6)		
High Water Table	(A2)	s (B15) (LRF	R U)	Sp	parsely Vegetated Co	oncave Surface (E	38)		
Saturation (A3)		lfide Odor (C	21)	 Di	rainage Patterns (B1	0)			
X Water Marks (B1)		Oxidized Bhiz	rospheres o	Dry-Season Water Table (C2)					
Sediment Deposi	s (B2)	Roots (C3)	Moss Trim Lines (B16)						
Drift Deposits (B3)	Presence of F	Reduced Iron (C4) Crayfish Burrows (C8)						
Algal Mat or Crus	: (B4)	Becent Iron B	Reduction in	Tilled	erial Imagery (C9	9)			
Iron Deposits (B5		Soils (C6)		rilled	Geomorphic Position (D2)				
Inundation Visible	on Aerial Imagery (B7)	Thin Muck Su	Irface (C7)		Shallow Aguitard (D3)				
X Water-Stained Le	aves (B9)	Other (Explain	n in Remark	s)	X F/	X FAC-Neutral Test (D5)			
<u> </u>	· · ·	、 .		,	Sp	ohagnum moss (D8)	(LRR T, U)		
Field Observations									
Surface water prese	nt? Yes	No X Depth	(inches):						
Water table present	Yes	No X Depth	(inches):			Wetland Hydrology	Yes		
Saturation present?	Yes	No X Depth	(inches):			Present?			
(includes capillary fr	nge)		· · · -						
Describe recorded d	ata (stream gauge, mo	nitoring well, aeria	l photos, pi	revious insp	pections), if a	available:			
			<u> </u>		,,				
Bemarks:									
Photos - Soil·36	53. N:3664 F.3665	. S:3666 W.366	57						
FAC-Neutral tes	t - 3:1	, 2.3000 11.300							
	-								

VEGETATION -- Use scientific names of plants.

Sampling Point: DP4

	Absolute	Dominant	Indicator	Dominance Test Worksheet
Tree Stratum (Plot size: 30)	% Cover	Species	Staus	Number of Dominant
1 Celtis laevigata	50	· ·	FACW	Species that are OBL, EACW or EAC : 5 (A)
2 Carva illinoinensis	35		FACIL	FACW; OF FAC. <u>5</u> (A)
3	00	<u> </u>	17,00	Species Across all Strata: 6 (B)
4				
5				Percent of Dominant
6				FACW, or FAC: 83,33% (A/B)
7				((*))
8				
	85	- Total Cover		
50% of total covor: 42.5	20% of t	atal covor:	17	Provalance Index Workshoot
50 % Of total Cover. 42.5	2078 01 0		17	
				lotal % Cover of:
Sapling/Shrub Stratu (Plot size: 30)				OBL species $0 \times 1 = 0$
1 Cornus foemina	25	Y	FACW	FACW species $95 \times 2 = 190$
2 Celtis laevigata	15	Y	FACW	FAC species $6 \times 3 = 18$
	5	<u> </u>	FAGW	FACU species $35 \times 4 = 140$
5				$\begin{array}{c} \text{OFL Species} & 0 & \text{X} \text{ S} = & 0 \\ \text{Column totals} & 126 & (\text{A}) & -248 & (\text{P}) \end{array}$
5				$\frac{136}{(A)} = \frac{136}{(A)} = \frac{136}{(B)}$
7				Prevalence Index – $B/A = -2.56$
8				
5	45	Tatal Cavar		
	40		•	
50% of total cover: 22.5	20% of t	otal cover:	9	Hydrophytic Vegetation Indicators:
				Rapid test for hydrophytic vegetation
Herb stratum (Plot size: 30)				X Dominance test is >50%
1				X Prevalence index is $\leq 3.0^*$
2				Problematic hydrophytic
3				vegetation* (explain)
4				*Indicators of hydric soil and wetland hydrology must
5				Definitions of Five Vegetation Strate
7				Deminitions of Five vegetation Strata
/				Tree- Woody plants, excluding woody vines,
°				approximately 20 ft (6m) or more in height and
9				less than 5 m. (7.6 cm) DBH.
11				
12				Sapling/Shrub - Woody plants, excluding
	0	= Total Cover		ft (1m) tall
50% of total cover: 0	20% of t	otal cover:	0	
			-	including herbaceous vines regardless of size
Woody vine stratum (Plot size: 30				and woody plants. except woody vines. less
1 Smilax bona-nox	6	Y	FAC	than approximately 3 ft (1 m) in height.
2 Smilax glauca	4	Y	FAC	Woody vine - All woody vines, regardless of
3				height.
4				
5				Hydrophytic
	10	= Total Cover		Vegetation Yes
50% of total cover: 5	20% of t	otal cover:	2	Present?
Pomarka: (If abaan ad list marnhalasia		one holew)		<u>+</u>
	a avaptati	uns below).		

SOIL

Sampling Point: DP4 Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Matrix Redox Features Depth Color (moist) % Color (moist) Loc** (Inches) % Type* Texture Remarks 7.5 YR 2.5/1 Silty Loam 0-3 100 3-7 7.5 YR 4/2 80 5 YR 4/6 D Μ Clay 20 7-16 7.5 YR 3/4 75 5 YR 4/6 25 С Μ Clay Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix **Hydric Soil Indicators:** Indicators for Problematic Hydric Soils: Histisol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR S) Histic Epipedon (A2) Reduced Vertic(F18) (outside MLRA 150A,B) Black Histic (A3) Loamy Mucky Mineral (F1) Piedmont Floodplain Soils (F19) (LRR P, S, T) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) X Depleted Matrix (F3) Anomolous Bright Loamy Soils (F20) (MLRA 153B) Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Material (TF2) Muck Presence (A8) (LRR U) Redox Depressions (F8) Very Shallow Dark Surface (TF12) 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Other (explain in remarks) Depleted Ochric (F11) (MLRA 151) Depleted Below Dark Surface (A11) Iron-Manganese Masses (F12) (LRR O, P, T) Thick Dark Surface (A12) *Indicators of hydrophytic vegetation Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) and weltand hydrology must be present, unless disturbed or problematic Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Anomolous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Hydric Soil Type: Yes Present? Depth (inches): Remarks:

Project/Site	Red River Parish Port	City/0	County:	Hanna / Re	d River	Sampling Date:	11/29/2023		
Applicant/Owner:	Louisiana Economic	Development	State:	L	A	Sampling Point:	DP5		
Investigator(s):	C. Schaeffer, B. Bo	senberg	Sectio	n, Townshi	p, Range:	Sec12, T	11-North, R10		
Landform (hillslope,	terrace, etc.): hardv	voods L	ocal relief (concave, c	onvex, none): None	Slope (%): <1%		
Subregion (LRR or I	/ILRA) LRR-P Lat	: 31°57'3	37.98"N	Long	g: 93	3°20'39.41"W	Datum: NAD83		
Soil Map Unit Nam	La-Latanier clay,	0-1% slopes, rare	ely flooded	١	WI Classifi	cation:	N/A		
Are climatic/hydrolog	gic conditions of the site ty	pical for this time	of the year	? No					
Are vegetation	, soil , or hy	drology si	gnificantly o	disturbed?	Are "norm	al circumstances	s" present? Yes		
Are vegetation	, soil , or hy	drology na	aturally prol	olematic?	(If neede	ed, explain any a	nswers in remarks.)		
SUMMARY OF F	INDING: Attach site	e map showing	sampling	point loc	ations, trar	nsects, importa	int features, etc.		
Hydrophytic veg	etation present? Y	es							
Hydric soil prese	ent? N	lo	la tha	Compled		in a WatlandO	No		
Indicators of we	land hydrology present?	lo	is the	e Sampled	Area with	in a wetland?	NO		
		_							
Remarks:									
		Regio	onal droug	ght.					
		_		-					
HYDROLOGY									
Wetland Hydrology	Indicators:								
Primary Indicators (minimum of one is required	l; check all that a		<u>S</u>	Secondary In	dicators (minimu	m of two required)		
Surface Water (A	.1)	Aquatic Fauna (I	B13)		Surfa	ace Soil Cracks (E	36)		
High Water Table	High Water Table (A2) Marl Deposits				Spar	rsely Vegetated C	oncave Surface (B8)		
Saturation (A3)		 Hydrogen Sulfide 	e Odor (C1)		Drai	nage Patterns (B1	0)		
Water Marks (B1)		Dry-Season Water Table (C2)						
Sediment Deposi	ts (B2)	Roots (C3)	Moss Trim Lines (B16))		
Drift Deposits (B3	3)	Presence of Rec	educed Iron (C4) Crayfish Burrows (C8)						
Algal Mat or Crus	., t (B4)	- Descriptions Deal		Aerial Imagery (C9)					
Iron Deposits (B5	i)	Soils (C6)	iuction in Th	lea	Geo	Geomorphic Position (D2)			
Inundation Visible	on Aerial Imagery (B7)	Thin Muck Surfa	ace (C7)	(),					
Water-Stained Le	aves (B9)	Other (Explain in	nin Bemarks) EAC-Neutral Test (D5)						
			r normanito)		Spha	agnum moss (D8)	/ (LRR T, U)		
							() - /		
Field Observations	:								
Surface water prese	nt? Yes No	X Depth (in	ches):						
Water table present	? Yes No	X Depth (in	iches):			Wetland	Νο		
Saturation present?		X Depth (in	iches):			Hydrology Present?			
(includes capillary fr	inge)								
Describe recorded c	lata (stream gauge monito	ring well aerial p	hotos prev	vious inspec	ctions) if ava	ailable:			
	ala (olioani gaago, nonita	ing won, aona p	, prot		5110110), ii uvu				
Bemarke:									
Dhotos - Sail.26	68 N.3660 E.2670 C	3671 \\/.2672							
FAC-Neutral tee	t - 4·0	30/1 00.30/2							

VEGETATION -- Use scientific names of plants.

Sampling Point: DP5

	Absolute	Dominant	Indicator	Dominance Test Worksheet
Tree Stratum (Plot size: 30)	% Cover	Species	Staus	Number of Dominant
1 Illmus americana	35	V	FAC	Species that are OBL, EACW or EAC : 6 (A)
	35		FACW	FACW, OF FAC.
2 Cents laevigata		·	1700	I otal Number of Dominant Species Across all Strata: 6 (B)
3				
4 		<u> </u>		Percent of Dominant
<u></u>				Species that are OBL,
7		<u> </u>		FACW, 01 FAC. 100.00% (A/B)
/		·		
°		<u> </u>		
	70	= Total Cover		
50% of total cover: 35	20% of to	otal cover:	14	Prevalence Index Worksheet
				Total % Cover of:
Sapling/Shrub Stratu (Plot size: 30)				OBL species $0 \times 1 = 0$
1 Cornus foemina	20	Y	FACW	FACW species $92 \times 2 = 184$
2 Celtis laevigata	12	Y	FACW	FAC species $56 \times 3 = 168$
3 Acer negundo	8	N	FAC	FACU species $0 \times 4 = 0$
4 Ulmus americana	5	N	FAC	UPL species $0 \times 5 = 0$
5				Column totals 148 (A) 352 (B)
6				
7		·		Prevalence Index = $B/A = 2.38$
8		·		
	45	Total Covor		
500/ (1.1.1	40			
50% of total cover: 22.5	20% of to	otal cover:	9	Hydrophytic Vegetation Indicators:
				Rapid test for hydrophytic vegetation
Herb stratum (Plot size: 30)				X Dominance test is >50%
1 Chasmanthium laxum	25	Y	FACW	X Prevalence index is ≤3.0*
2 Symphyotrichum drummondii	8	Y	FAC	Problematic hydrophytic
3				vegetation* (explain)
4				*Indicators of hydric soil and wetland hydrology must
5				be present, unless disturbed or problematic
6				Definitions of Five Vegetation Strata
7				Tree- Woody plants, excluding woody vines.
8				approximately 20 ft (6m) or more in height and
9				less than 3 in. (7.6 cm) DBH.
10				
11				Sapling/Shrub - Woody plants, excluding
12				vines, less than 3 in. DBH and greater than 3.26
	33	= Total Cover		ft (1m) tall
50% of total cover: 16.5	20% of to	otal cover:	6.6	Herb - All herbaceous (non-woody) plants
				including herbaceous vines, regardless of size,
Woody vine stratum (Plot size: 30)				and woody plants, except woody vines, less
1				than approximately 3 ft (1 m) in height.
2				Woody vine - All woody vines, regardless of
3				neight.
4				
5				Hydrophytic
	0	= Total Cover		Vegetation Yes
50% of total cover: 0	20% of tr	otal cover:	0	Present?
	20/00110		v	L
Remarks: (If observed, list morphologica	al adaptatio	ons below).		

SOIL							Sa	ampling Point:	DP5	
Profile Desc	cription: (Describe	to the d	epth nee	ded to d	ocumer	nt the indica	tor or confirm th	e absence o	f indicators.)	
Denth	Matrix				Redox	Features				
(Inches)	Color (moist)	%	Sa Redox Features Color (moist) % Type* Loc** 5 YR 2.5/2 20 C M 5 YR 2.5/2 20 C M S YR 2.5/2 20 C M Image: S YR 2.5/2 S YR	Texture	Remarks					
0-2	7.5 YR 2.5/2	100						Silty Loam		
2-16	5 YR 5/6	80	5 YR	2.5/2	20	С	М	Clay		
*Type: C = C	Concentration, D = D	epletion,	RM = Re	duced M	atrix, MS	S = Masked S	Sand Grains.	**Location: P	L = Pore Lining, M = Matrix	
Hydric So	il Indicators:							Indicators fo	r Problematic Hydric Soils:	
Histi		Polyva	alue Belo	w Surface (S	B) (LRR S, T, U)	1 cm Muck (A9) (LRR O)				
Histic Epipedon (A2)				Thin D	ark Surfa	ace (S9) (LRI	R S, T, U)	2 cm Mu	ck (A10) (LRR S)	
Black	Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4)				y Mucky	Mineral (F1)	-	Reduced	Vertic(F18) (outside MLRA 150A,B)	
Hydr	ogen Sulfide (A4)			Loam	Loamy Gleyed Matrix (F2)				t Floodplain Soils (F19) (LRR P, S, T)	
Strat	ified Layers (A5)			Deple	ted Matr	rix (F3)	-	Anomolo	us Bright Loamy Soils (F20) (MLRA	
Orga	anic Bodies (A6) (LR	R P, T, U	ר) <u> </u>	Redo	k Dark S	urface (F6)		153B)		
5 cm	Mucky Mineral (A7)) (LRR P	P, T, U)	Deple	ted Dark	Surface (F7)	Red Parent Material (TF2)		
Mucl	k Presence (A8) (LR	IR U)		Redo	k Depres	ssions (F8)	-	Very Shallow Dark Surface (TF12)		
1 cm	n Muck (A9) (LRR P,	T)		Marl (F10) (LF	RRU)		Other (explain in remarks)		
Depl	eted Below Dark Su	rface (A1	1)	Deple	ted Ochri	ic (F11) (MLF	A 151)			
Thicl	k Dark Surface (A12			Iron-N	langane	se Masses (-12) (LRR O, P, 1)	*Indicators of hydrophytic vegetation	
Coas	st Prairie Redox (A1)	6) (MLRA	A 150A)	Umbr	ic Surfac	ce (F13) (LRI	τ Ρ, Τ, U)		and weltand hydrology must be present, unless disturbed or problematic	
Sanc	dy Mucky Mineral (S	1) (LRR (0, S)	Delta	Ochric (F17) (MLRA	151)			
Sanc	dy Gleyed Matrix (S4	1)		Redu	ced Verti	IC (F18) (ML I	RA 150A, 150B)			
Sanc	dy Redox (S5)			Piedr	iont Floc	odplain Soils	(F19) (MLRA 149	IA)	4500	
Strip	ped Matrix (S6)	поти		Anom	olous Br	right Loamy S	5011S (F20) (MLRA	A 149A, 153C	, 153D)	
Dark	Surface (57) (LKK	Ρ, 5, Ι, Ι	0)							
Pootrictive	lover (if cheened)					I				
Tunoi	Layer (II ODServed)	•								
i ype.							myuric Soll	No		

No

Present?

Depth (inches):

Remarks:

Project/Site	Red River Parish Port	City/County	: Hanna /	Red River	Sampling Date:	11/29/2023				
Applicant/Owner:	Louisiana Economic	Development Si	tate:	LA	Sampling Point:	DP6				
Investigator(s):	C. Schaeffer, B. Bo	senberg Se	ection, Town	ship, Range:	Sec12, T1	1-North, R10				
Landform (hillslope,	terrace, etc.): shallow d	epression Local re	elief (concave	e, convex, none	e): None	Slope (%): <1%				
Subregion (LRR or I	/ILRA) LRR-P Lat	: 93°20'39.41"\	N L	.ong: 90	3°20'20.89"W	Datum: NAD83				
Soil Map Unit Nam	La-Latanier clay,	0-1% slopes, rarely floo	ded	NWI Classifi	ication:	N/A				
Are climatic/hydrolo	gic conditions of the site ty	pical for this time of the	year? No	_						
Are vegetation	, soil , or hy	drology significa	ntly disturbe	d? Are "norn	nal circumstances	" present? Yes				
Are vegetation	, soil , or hy	drology naturally	problematic	? (If need	led, explain any an	swers in remarks.)				
SUMMARY OF F	INDING Attach site	e map showing samp	ling point l	locations, tra	nsects, importai	nt features, etc.				
Hydrophytic veg	etation present? N	lo								
Hydric soil prese	ent? N	lo	the Comp	lad Araa with	in a WatlandQ	No				
Indicators of we	land hydrology present? N	lo	is the Sampled Area within a Wetland? NO							
Remarks:										
		Regional d	lrought.							
HYDROLOGY										
Wetland Hydrology	Indicators:									
Primary Indicators (minimum of one is required	l; check all that a		Secondary Ir	ndicators (minimur	n of two required)				
Surface Water (A	.1)	Aquatic Fauna (B13)		Surf	face Soil Cracks (B	6)				
High Water Table	e (A2)	Marl Deposits (B15) (LI	RR U)	Spa	rsely Vegetated Co	ncave Surface (B8)				
Saturation (A3)		Hydrogen Sulfide Odor	(C1)	Drai	inage Patterns (B10))				
Water Marks (B1)	Oxidized Bhizospheres	Dry-Season Water Table (C2)							
Sediment Depos	ts (B2)	Roots (C3)	Moss Trim Lines (B16)							
Drift Deposits (B	3)	Presence of Reduced I	educed Iron (C4) Crayfish Burrows (C8)							
Algal Mat or Crus	t (B4)	- Becent Iron Beduction	Saturation Visible on Aerial Im-							
Iron Deposits (B	i)	Soils (C6)	in mica	Geo	morphic Position (I	02)				
Inundation Visible	e on Aerial Imagery (B7)		urface (C7) Shallow Aquitard (D3)							
Water-Stained Le	eaves (B9)	- Other (Explain in Rema	urks)	FAC	C-Neutral Test (D5)					
		_ 、 .	,	Sph	agnum moss (D8) ((LRR T, U)				
Field Observations	:									
Surface water prese	nt? Yes No	X Depth (inches):								
Water table present	? Yes No	X Depth (inches):			Wetland Hydrology	No				
Saturation present?	Yes No	X Depth (inches):			Present?					
(includes capillary fr	inge)	· 、 /								
Describe recorded of	lata (stream gauge, monito	ring well, aerial photos,	previous ins	pections), if av	ailable:					
				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,						
Remarks:						1				
Photos - Soil:36	73. N:3674 . E:3675 . S	:3676 W:3677								
FAC-Neutral tes	st - 0:1									

VEGETATION Use scientific names of p	lants.			Sampling Point: DP6
<u>Tree Stratum</u> (Plot size: <u>30</u>) 1	Absolute % Cover	Dominant Species	Indicator Staus	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: 1
23				Total Number of Dominant Species Across all Strata: 2 (B)
4 5 6 7 8				Percent of Dominant Species that are OBL, FACW, or FAC: 50.00% (A/B)
<u> </u>	0	= Total Cover		
50% of total cover: 0	20% of to	otal cover:	0	Prevalence Index Worksheet
Sapling/Shrub Stratu (Plot size: 30 1)			Total % Cover of: OBL species 0 $x = 0$ FACW species 0 $x = 0$ FAC species 25 $x = 75$ FACU species 10 $x = 40$ UPL species 0 $x = 0$ Column totals 35 (A) 115 (B)
7 8				Prevalence Index = $B/A = 3.29$
	0	= Total Cover		
50% of total cover: 0	20% of to	otal cover:	0	Hydrophytic Vegetation Indicators:
				Rapid test for hydrophytic vegetation
Herb stratum (Plot size: 30) 25	Y	FAC	Dominance test is >50%
2 Glycine max	10	Y	FACU	Problematic hydrophytic
3				vegetation* (explain)
4				*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
6				Definitions of Five Vegetation Strata
7 8 9 10				Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and less than 3 in. (7.6 cm) DBH.
11				Sapling/Shrub - Woody plants, excluding
12		Tatal Osuar		vines, less than 3 in. DBH and greater than 3.26
50% of total cover: 17.5	20% of to	= Total Cover otal cover:	7	Herb All berbaccous (non woody) plants
Woody vine stratum (Plot size:)			including herbaceous (incl-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine - All woody vines, regardless of height.
4				
5	0	= Total Cover	0	Hydrophytic Vegetation No Present?
Bemarke: (If observed list morphologic	al adaptati		U	
		0113 DCIUW).		

SOIL							S	Sampling Point:	DP6		
Profile Desc	cription: (Describe	to the d	epth neede	d to do	cume	nt the indica	ator or confirm t	he absence o	f indicators.)		
Depth	Matrix				Redo	x Features					
(Inches)	Color (moist)	%	Color (mo	oist)	%	Type*	Loc**	Texture	Remarks		
0-16	7.5 YR 4/4	100						Clay			
Type: C = C	Concentration, D = D	epletion,	RM = Redu	ced Ma	trix, M	S = Masked	Sand Grains.	**Location: P	PL = Pore Lining, M = Matrix		
Hydric So	il Indicators:							Indicators for	or Problematic Hydric Soils:		
Histi	sol (A1)			Polyval	ue Belo	ow Surface (S	88) (LRR S, T, U)	1 cm Mu	ck (A9) (LRR O)		
Histi	Histic Epipedon (A2) Thin Dark Surface (S9) (L					R S, T, U)	2 cm Mu	ck (A10) (LRR S)			
Blac	k Histic (A3)			Loamy	Mucky	y Mineral (F1)	Reduced	Vertic(F18) (outside MLRA 150A,B)		
Hydr	Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2)					1	Piedmont Floodplain Soils (F19) (LRR P, S,				
Strat	tified Layers (A5)			Deplete	ed Mat	rix (F3)		Anomolo	us Bright Loamy Soils (F20) (MLRA		
Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6)						153B)					
5 cm	5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F					7)	Red Pare	ent Material (TF2)			
Muc	k Presence (A8) (LF	RR U)		Redox	Depre	ssions (F8)		Very Sha	llow Dark Surface (TF12)		
1 cm	n Muck (A9) (LRR P ,	, T)		Marl (F	10) (L	RR U)		Other (ex	plain in remarks)		
Depl	leted Below Dark Su	Irface (A1	1)	Deplete	ed Ochi	ric (F11) (ML	RA 151)				
Thic	k Dark Surface (A12	2)		Iron-Ma	angane	ese Masses	(F12) (LRR O, P,	Т)	*Indicators of hydrophytic vegetation and weltand hydrology must be prese		
Coa	st Prairie Redox (A1	6) (MLR	A 150A)	Umbric	Surfa	ce (F13) (LF	R P, T, U)				
Sand	dy Mucky Mineral (S	1) (LRR	0, S)	Delta C	Ochric	(F17) (MLR A	151)	unless disturbed or problematic			
Sand	dy Gleyed Matrix (S4	4)		Reduce	ed Ver	tic (F18) (ML	.RA 150A, 150B)				
Sand	dy Redox (S5)			Piedmo	ont Flo	odplain Soils	Soils (F19) (MLRA 149A)				
Strip	pped Matrix (S6)			Anomo	lous B	right Loamy	Soils (F20) (MLR	A 149A, 153C	, 153D)		
Dark	CSurface (S7) (LRR	P, S, T, I	U)								
							1				
Restrictive	Layer (if observed)	:									
Туре:						-	Hydric Soil	No			
	Depth (inches)	:				-	Present?				
Remarks:											

Project/Site	Red River Parish Port	City/Co	unty: Ha	nna / Red River	Sampling Date:	11/29/2023			
Applicant/Owner:	Louisiana Econom	c Development	State:	LA	Sampling Point:	DP7			
Investigator(s):	C. Schaeffer, B. E	Bosenberg	Section,	Township, Range:	Sec12, T1	1-North, R10			
Landform (hillslope,	terrace, etc.): hard	dwoods Loc	al relief (co	ncave, convex, noi	ne): None	Slope (%): <1%			
Subregion (LRR or I	MLRA) LRR-P L	at: 31 °57'13	8.65"N	Long:	93°20'17.33"W	Datum: NAD83			
Soil Map Unit Nam	MoA-Moreland cla	ay, 0-1% slopes, rare	ly flooded	NWI Class	ification:	N/A			
Are climatic/hydrolo	gic conditions of the site t	ypical for this time of	the year?	No					
Are vegetation	, soil , or h	ydrology sign	ificantly dis	turbed? Are "no	rmal circumstances	s" present? Yes			
Are vegetation	, soil , or h	ydrology natu	rally proble	matic? (If nee	eded, explain any a	nswers in remarks.)			
SUMMARY OF F	INDING Attach si	te map showing sa	ampling p	oint locations, tr	ansects, importa	nt features, etc.			
Hydrophytic veg	etation present?	Yes							
Hydric soil prese	ent?	No	la tha C	ompled Aree wit	hin a WatlandQ	No			
Indicators of we	۔ ۱and hydrology present؟	No	Is the Sampled Area within a Wetland? NO						
	-								
Remarks:									
		Region	al drough	t.					
HYDROLOGY									
Wetland Hydrology	Indicators:								
Primary Indicators (minimum of one is require	ed; check all that a		Secondary	Indicators (minimu	m of two required)			
Surface Water (A	.1)	Aguatic Fauna (B1	3)	Su	urface Soil Cracks (E	36)			
High Water Table	- e (A2)	Marl Deposits (B15	5) (LRR U)	Sp	parsely Vegetated C	oncave Surface (B8)			
Saturation (A3)		Hvdrogen Sulfide (Odor (C1)	 Dr	ainage Patterns (B1	0)			
Water Marks (B1)		Dry-Season Water Table (C2)						
Sediment Depos	, ts (B2)	Roots (C3)	eres on Livi	ng Mo	Moss Trim Lines (B16)				
Drift Deposits (B)		Presence of Bedu	ced Iron (C4)Cr	Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)				
Algal Mat or Crus				, <u> </u>					
Iron Deposits (B5	i)	Soils (C6)	tion in Tillec	1 <u> </u>					
Inundation Visible	- on Aerial Imagery (B7)		rface (C7) Shallow Aquitard (D3)						
Water-Stained L	aves (B9)	Other (Explain in E	nace (C7) Shahow Aquital (D5)						
Water-Stained Et			iemarks)	<u></u> Sr	bhagnum moss (D8)	(I BB T. U)			
				0		(, 0)			
Field Observations									
Surface water prese	nt? Vac N	lo X Depth (inch	AC).						
Water table present	2 Voc N	lo X Depth (inch	(es).		Wetland	No			
Seturation present	Yee N	lo X Depth (inch	(CS).		Hydrology Brocont2				
(includes capillary fr	inge)		les).		Flesent?				
	lata (atroom acuso, mani		too provio	in increations) if a	voilable.				
Describe recorded o	lata (stream gauge, moni	toring well, aerial pho	itos, previol	us inspections), if a					
Remarks:									
Photos - Soil:36	78, N:3679 , E:3680, 1	5:3681 W:3682							
FAC-Neutral tes	st - 3:1								

VEGETATION -- Use scientific names of plants.

Sampling Point: DP7

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species	Indicator Staus	Dominance Test Worksheet Number of Dominant
1 Celtis laevigata	40	Y	FACW	FACW, or FAC: 6 (A)
2 Carya illinoinensis	35	Y	FACU	Total Number of Dominant
3 Acer negundo	15	N	FAC	Species Across all Strata: 7 (B)
4				Percent of Dominant
5		·		Species that are OBL, EACW or EAC: 85.71% (A/B)
7		·		(A/B)
8				
	90	= Total Cover		
50% of total cover: 45	20% of to	otal cover:	18	Prevalence Index Worksheet
				Total % Cover of:
Sapling/Shrub Stratu (Plot size: 30)			OBL species 0 x 1 = 0
1 Celtis laevigata	25	Y	FACW	FACW species 87 x 2 = 174
2 Cornus foemina	12	Y	FACW	FAC species 75 x 3 = 225
3 Ilex cassine	10	<u>N</u>	FACW	FACU species $40 \times 4 = 160$
4 Ligustrum sinense	5	<u> </u>	FAC	$\begin{array}{c} \text{UPL species} 0 \text{x 5} = 0 \\ \text{Column tately} \hline \end{array} $
5 Carya minomensis	5	<u> </u>	FACU	Column totals 202 (A) 539 (B)
7		·		Prevalence Index = $B/A = 2.77$
8		·		
	57	= Total Cover		
50% of total cover: 28.5	20% of to	otal cover:	11.4	Hydrophytic Vegetation Indicators:
		_		Rapid test for hydrophytic vegetation
Herb stratum (Plot size: 30)			X Dominance test is >50%
1 Elymus virginicus	35	Y	FAC	X Prevalence index is ≤3.0*
2				Problematic hydrophytic
3				vegetation* (explain)
4		·		*Indicators of hydric soil and wetland hydrology must
5				Definitions of Five Vegetation Strata
7		<u> </u>		
8				approximately 20 ft (6m) or more in height and
9		·		less than 3 in. (7.6 cm) DBH.
10				
11				Sapling/Shrub - Woody plants, excluding
12		Table		vines, less than 3 in. DBH and greater than 3.26
50% of total cover: 175	35 20% of t	= Total Cover	7	
			/	Herb - All herbaceous (non-woody) plants,
Woody vine stratum (Plot size: 30)			and woody plants, except woody vines, less
1 Smilax bona-nox	20	Y	FAC	than approximately 3 ft (1 m) in height.
2 Lonicera japonica	8	Y	FAC	Woody vine - All woody vines, regardless of
3 Smilax rotundifolia	5	<u>N</u>	FAC	neight.
4 Hubus trivialis	5	<u>N</u>	FACU	
o		Tatal O		Hydrophytic
	38	= Total Cover	7.0	vegetation Yes Present?
50% OT TOTAL COVER: 19	20% of to	bial cover:	7.6	
Remarks: (If observed, list morphologic	al adaptati	ons below).		
L				

SOIL							ç	Sampling Point:	DP7	
Profile Desc	ription: (Describe	to the de	epth need	ded to d	ocumei	nt the indica	tor or confirm t	he absence of	f indicators.)	
Denth	Matrix				Redo	x Features				
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks	
0-4	7.5 YR 2.5/2	100								
4-16	7.5 YR 4/4	90	7.5 YF	R 4/2	10	D	М	Clay		
*Type: C = C	concentration, D = D	epletion,	RM = Re	duced M	atrix, M	S = Masked S	Sand Grains.	**Location: P	L = Pore Lining, M = Matrix	
Hydric So	il Indicators:							Indicators fo	r Problematic Hydric Soils:	
Histisol (A1)				Polyva	alue Belo	ow Surface (S8	B) (LRR S, T, U)	1 cm Muo	ck (A9) (LRR O)	
Histic Epipedon (A2)			Thin D	ark Surf	ace (S9) (LRF	R S, T, U)	2 cm Muo	ck (A10) (LRR S)		
Black	Black Histic (A3)			Loam	y Mucky	Mineral (F1)		Reduced	Vertic(F18) (outside MLRA 150A,B)	
Hydr	ogen Sulfide (A4)			Loamy Gleyed Matrix (F2)				Piedmon	t Floodplain Soils (F19) (LRR P, S, T)	
Strat	ified Layers (A5)			Depleted Matrix (F3)				Anomolous Bright Loamy Soils (F20) (MLRA		
Orga	inic Bodies (A6) (LR	R P, T, U	J)	Redox Dark Surface (F6)				153B)		
5 cm	Mucky Mineral (A7)) (LRR P	, T, U)	Depleted Dark Surface (F7)				Red Parent Material (TF2)		
Mucl	k Presence (A8) (LR	RU)		Redox Depressions (F8)				Very Shallow Dark Surface (TF12)		
1 cm	Muck (A9) (LRR P,	T)		Marl (F10) (L l	RR U)		Other (ex	(plain in remarks)	
Depl	eted Below Dark Su	rface (A1	1)	Deplet	ted Ochr	ic (F11) (MLR	A 151)			
Thick	k Dark Surface (A12)		Iron-N	langane	ese Masses (I	F12) (LRR O, P ,	T)	*Indicators of hydrophytic vegetation	
Coas	st Prairie Redox (A1)	6) (MLRA	(150A)	Umbri	ic Surfac	ce (F13) (LRF	R P, T, U)		and weltand hydrology must be present	
Sanc	ly Mucky Mineral (S	1) (LRR (O, S)	Delta	Ochric ((F17) (MLRA	151)		unless disturbed of problematic	
Sanc	ly Gleyed Matrix (S4	l)		Reduc	ced Vert	ic (F18) (MLI	RA 150A, 150B)			
Sanc	ly Redox (S5)			Piedm	nont Floo	odplain Soils	(F19) (MLRA 1 4	9A)		
Strip	ped Matrix (S6)			Anom	olous B	right Loamy S	Soils (F20) (MLR	A 149A, 153C	, 153D)	
Dark	Surface (S7) (LRR	P, S, T, l	J)							

Restrictive Layer (if observed): Type:	Hydric Soil	
Depth (inches):	Present? NO	
Remarks:		

Project/Site	Red River Parish Po	rt C	City/County:	Hanna /	Red River	Sampling Date:	3/12/2	3/12/2024	
Applicant/Owner:	Louisiana Econo	omic Developmen	it Sta	te:	LA	Sampling Point:	DP	8	
Investigator(s):	C. Schaeffer, E	3. Bosenberg	Sec	tion, Town	ship, Range:	Sec12, T1	1-North, R10	W	
Landform (hillslope,	terrace, etc.):	Terrace	Local relie	ef (concave	e, convex, non	ie): None	Slope (%):	<1%	
Subregion (LRR or M	ILRA) LRR-P	Lat: 3	1.958537°	L	ong:	-93.338758°	Datum:	NAD83	
Soil Map Unit Nam					NWI Classi	fication:	N/A		
Are climatic/hydrolog	ic conditions of the si	te typical for this	time of the ye	ear? No	_				
Are vegetation	, soil , o	r hydrology	significant	ly disturbed	1?		present?	Yes	
Are vegetation	, soil , o	r hydrology	naturally p	roblematic	? (If need	ded, explain any a	nswers in rei	marks.)	
SUMMARY OF F	INDING Attach	site map show	ving sampli	ng point l	ocations, tra	ansects, importa	ant features	, etc.	
Hydrophytic veg	etation present?	Yes							
Hydric soil prese	nt?	No		ha Camal	ad Area with	hin a WatlandQ	No		
Indicators of wet	IST								
Remarks:									
		R	legional dro	ought.					
HYDROLOGY									
Wetland Hydrology	Indicators:								
Primary Indicators (r	ninimum of one is req	uired; check all th	iat a		Secondary I	Indicators (minimu	m of two req	uired)	
Surface Water (A	1)	Aquatic Fau	na (B13)		Sur	rface Soil Cracks (E	36)		
High Water Table (A2) Marl Deposits				R U)	Spa	arsely Vegetated C	oncave Surfa	ce (B8)	
Saturation (A3)	ulfide Odor (C	C1)	Dra	ainage Patterns (B1	0)				
Water Marks (B1		Ovidized Bh	izospheres o	n Livina	ble (C2)				
Sediment Deposi	is (B2)	Roots (C3)		II Living	Mo	ss Trim Lines (B16)		
Drift Deposits (B3)	Presence of	Reduced Iro	n (C4)	Cra	ayfish Burrows (C8)			
Algal Mat or Crus	t (B4)	Becent Iron	Reduction in	Saduction in Tilled Sat			Saturation Visible on Aerial Imagery (C9)		
Iron Deposits (B5)	Soils (C6)		rilled	Ge	eomorphic Position (D2)			
Inundation Visible	on Aerial Imagery (B7) Thin Muck S	Surface (C7)		allow Aquitard (D3)				
Water-Stained Le	aves (B9)	Other (Expla	ain in Remark	.s)	FA	C-Neutral Test (D5)		
—		、 !		,	Spł	, hagnum moss (D8)	(LRR T, U)		
Field Observations	:								
Surface water prese	nt? Yes	No X Depti	h (inches):						
Water table present	Yes	No X Depti	h (inches):		1	Wetland	No		
Saturation present?	Yes	No X Dept	h (inches):		1	Present?			
(includes capillary fr	nge)		-		-				
Describe recorded d	ata (stream gauge, m	onitoring well. aer	rial photos, p	revious ins	pections), if a	vailable:			
					p				
Remarks:									
Photos - Soile N	· F· S· \//·								
FAC-Neutral tee	.,∟.,J. VV. †_								

VEGETATION Use scientific names of p	lants.			Sampling Point: DP8						
	Absolute	Dominant	Indicator	Dominance Test Worksheet						
Tree Stratum (Plot size: 30)	% Cover	Species	Staus	Number of Dominant						
1 Caltia las visata	20			Species that are OBL,						
	30	ř		FACW, or FAC: 10 (A)						
2 Populus deitoides	20	¥	FAC	Total Number of Dominant						
3 Acer negundo	18	Y	FAG	Species Across all Strata. 12 (B)						
4				Percent of Dominant						
5				Species that are OBL,						
6				FACW, of FAC: 83.33% (A/B)						
/										
8										
50% of total cover: 34	20% of total cover: 13.6			Prevalence Index Worksheet						
		_		Total % Cover of:						
Sapling/Shrub Stratu (Plot size: 30)			OBL species $0 \times 1 = 0$						
1 Acer negundo	, 10	Y	FAC	EACW species 110 $x^2 = 220$						
2 Celtis laevigata	10	· · · · · · · · · · · · · · · · · · ·	FACW	FAC species $83 \times 3 = 249$						
3 cornus amomum	5	·	FACW	EACU species $58 \times 4 = 232$						
A		·	17.011	111111111111111111111111111111111111						
т Б				Column totals 251 (A) 701 (B)						
5		·								
7		·		Provalance Index = P/A = -2.79						
7				$\frac{1}{2.75}$						
8										
	25	= Iotal Cover								
50% of total cover: 12.5	20% of t	otal cover:	5	Hydrophytic Vegetation Indicators:						
				Rapid test for hydrophytic vegetation						
Herb stratum (Plot size: 30)			X Dominance test is >50%						
1 Sanicula canadensis	30	Y	FACU	X Prevalence index is ≤3.0*						
2 Sambucus nigra	25	Y	FACW	Problematic hydrophytic						
3 Chaerophyllum tainturieri	25	Y	FAC	vegetation* (explain)						
4 Chasmanthium laxum	20	N	FACW	*Indicators of hydric soil and watland hydrology must						
5 Carex cherokeensis	15	N	FACW	be present, unless disturbed or problematic						
6 Ambrosia trifida	10	N	FAC	Definitions of Five Vegetation Strata						
7 Taraxacum officinale	8	N	FACU							
8 aalium tinctorium	5	N	FACW	Tree - Woody plants, excluding woody vines,						
			17.011	less than 3 in (7.6 cm) DBH						
9		·								
11										
10				Sapling/Shrub - Woody plants, excluding						
12		Table		vines, less than 3 in. DBH and greater than 3.26						
	138	= lotal Cover	07.0	n (nn) tai						
50% of total cover: 69	20% of t	otal cover:	27.6	Herb - All herbaceous (non-woody) plants,						
	, ,			including herbaceous vines, regardless of size,						
Woody vine stratum (Plot size: 30)			and woody plants, except woody vines, less						
1 Vicia sativa	20	Y	FACU	than approximately 3 ft (1 m) in height.						
2 Smilax rotundifolia	8	Y	FAC	beight						
3 Toxicodendron radicans	8	Y	FAC	neight.						
4										
5				Hydrophytic						
	36	36 = Total Cover		Vegetation Yes						
50% of total cover: 18	20% of total cover:		7.2	Present?						
Remarks: (If observed, list morphologic	al adaptati	ions		1						
			-							

SOIL Sampling Point: DP8												
Profile Desc	cription: (Describe	to the d	epth need	led to d	locume	nt the indica	ator or confirm th	ne absence of	indicators.)			
Depth	Matrix			Redox Features								
(Inches)	Color (moist)	%	Color (r	noist)	%	Type*	Loc**	Texture	Remarks			
0-4	5YR 3/4	100						Silty loam				
4-16	5YR 4/4	100						Silty clay				
*Type: C = C	Concentration, D = De	pletion,	RM = Rec	duced M	latrix, M	S = Masked	Sand Grains.	**Location: P	L = Pore Lining, M = Matrix			
Hydric So	il Indicators:							Indicators fo	r Problematic Hydric Soils:			
Histi	sol (A1)			Polyva	alue Bel	ow Surface (S	68) (LRR S, T, U)	5, T, U) 1 cm Muck (A9) (LRR O)				
Histi	c Epipedon (A2)			Thin E	Dark Sur	face (S9) (LR	R S, T, U)	2 cm Muck (A10) (LRR S)				
Blac	k Histic (A3)			_Loam	y Mucky	y Mineral (F1)	Reduced Vertic(F18) (outside MLRA 150A,B)				
Hydr	rogen Sulfide (A4)			_Loam	y Gleye	d Matrix (F2))	Piedmont Floodplain Soils (F19) (LRR P, S, T)				
Stratified Layers (A5) Depleted Matrix (F3) Organic Bodies (A6) (I BB P. T. II) Bedox Dark Surface (rix (F3) Surface (F6)		Anomolous Bright Loamy Soils (F20) (MLRA 153B)				
5 cm	n Mucky Mineral (A7)	(LRR F	, , T, U)	 Deple	eted Dar	k Surface (F	7)	Red Parent Material (TF2)				
Muck Presence (A8) (LRR U) Bedox Deprese					x Depre	ssions (F8)	F8) Very Shallow Dark Surface (TF12)					
1 cm Muck (A9) (LRR P, T) Marl (F10) (L				(F10) (LRR U)			Other (ex	Other (explain in remarks)				
Depleted Below Dark Surface (A11) Depleted Ochric (ted Och	ric (F11) (ML I	RA 151)					
Thick Dark Surface (A12)					Mangane	ese Masses	(F12) (LRR O, P,	T)	*Indicators of hydrophytic vegetation			
Coast Prairie Redox (A16) (MLRA 150A) Umbrid					ic Surfa	ce (F13) (LR	R P, T, U)		and weltand hydrology must be present,			
San	dy Mucky Mineral (S1) (LRR	O, S)	Delta	Ochric	(F17) (MLRA	A 151)	unless disturbed or problematic				
Sandy Gleyed Matrix (S4) Reduced Vertic (F18)						tic (F18) (ML	MLRA 150A, 150B)					
Sand	dy Redox (S5)			Piedn	nont Flo	odplain Soils	; (F19) (MLRA 14	9A)				
Strip	pped Matrix (S6)			Anom	nolous B	right Loamy	Soils (F20) (MLR	A 149A, 153C	, 153D)			
Dark	s Surface (S7) (LRR I	P, S, T,	U)	_								
Restrictive	Layer (if observed):											
Туре:				Hydric S		Hydric Soil	l No					
Depth (inches):					Present?							
Remarks:												
l												