



January 22, 2021

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Mr. K k h Southeast Engineers, 00#
) k o
O , Louisiana 70

Re: Wetland and Stream Delineation
Vermilion River Spoil Bank Restoration Project
St. Martin Parish, Louisiana
CK Project No. 18620

Dear Mr. k

The following report summarizes a wetland delineation conducted by CK Associates (CK) on an approximate 18.52-acre tract (survey area) in St. Martin Parish, Louisiana. The survey area is located south of the Vermilion River and centered at latitude 30° 12' 41.411" N, longitude 91° 58' 11.008" W within Section 33, Township 9 South, and Range 5 East and Section 4, Township 10 South, and Range 5 East (Figure 1). The purpose of this report is to identify areas that were delineated and may contain potentially jurisdictional wetlands and other "waters of the United States" (US) as defined in the 1987 Corps of Engineers Wetland Delineation Manual and associated Regional Supplements.

Waters of the US, regardless of navigability, can generally be categorized as either: 1) deepwater aquatic habitats, 2) special aquatic sites, or 3) other waters of the US. Wetlands are classified by the USACE as special aquatic sites and defined as "areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." Wetlands are referred to as "wetlands" within this report, whereas deepwater aquatic habitats, special aquatic sites (except for wetlands), and other waters of the US are referred to as "other waters." Three mandatory technical criteria for determining the presence of a wetland are, with exceptions, 1) hydrophytic vegetation, 2) wetland hydrology, and 3) hydric soils.

CK visited the survey area on January 14, 2021 to determine the extent of potential wetlands and other waters of the US. Prior to conducting the field investigation, CK reviewed available aerial photography, Natural Resource Conservation Service (NRCS) soil survey data, elevation data (Light Detection and Ranging [LiDAR] contours and Digital Elevation Models [DEM]), topographic maps, and National Wetland Inventory (NWI) data. Data points were established within all the plant communities in the survey area. Observations of soils, vegetation, and hydrology were

documented at each data point location (see attached). Potential wetlands, other waters of the US, and data point locations were mapped utilizing a Trimble Geo7X Differential Global Positioning System (DGPS) with real-time corrections. Acreage was obtained by exporting the data from the DGPS unit into ESRI ArcMap Version 10.8. Digital photographs were taken of the soil profile and surrounding vegetation at each data point (see attached).

The survey area contains spoil banks, bottomland hardwood forests, and pipeline rights-of-way. Forested wetland areas are dominated by laurel oak (*Quercus laurifolia*), water oak (*Quercus nigra*), and American elm (*Ulmus americana*) in the tree stratum; laurel oak and water oak in the sapling/shrub stratum; Cherokee sedge (*Carex cherokeensis*) and saw palmetto (*Sabal minor*) in the herb stratum; and fringed greenbrier (*Smilax bona-nox*) in the woody vine stratum. Herbaceous wetland areas were dominated by Cherokee sedge. Uplands in the survey area are dominated by water oak in the tree stratum; water oak, saw palmetto, and Chinese privet (*Ligustrum sinense*) in the sapling/shrub stratum; Cherokee sedge, fringed greenbrier, Indian wood-oats (*Chasmanthium latifolium*), long-leaf wood-oats (*Chasmanthium sessiliflorum*), cypress rosette grass (*Dichanthelium dichotomum*), and black cherry (*Prunus serotina*) in the herb stratum; and Japanese climbing fern (*Lygodium japonicum*), trumpet creeper (*Campsis radicans*), and southern dewberry (*Rubus trivialis*) in the woody vine stratum. Non-wetland waters of the U. S. (streams and ponds) within the survey area consists of two ponds and the Vermilion River.

CK collected six (6) data points within the survey area. Wetland data points contained primary hydrology indicators such as surface water, high water table, saturation, water marks, sediment deposits, drift deposits, and water-stained leaves and secondary hydrology indicators such as sparsely vegetated concave surface, geomorphic position, and FAC-neutral test. The non-wetland data point DP1 contained the FAC-neutral test indicator but did not meet the minimum secondary indicators required for wetland hydrology. DP2 and DP6 did not contain any hydrologic indicators.

According to the NRCS Web Soil Survey, the survey area is underlain by the soil mapping units Ga: Gallion silt loam and Sk: Sharkey clay, 0 to 1 percent slopes, frequently flooded. These soil mapping units are listed in the NRCS National Hydric Soil List. The depleted below dark surface, depleted matrix, and redox dark surface hydric soil indicators were observed at all data points except DP6.

Based on the field observations, the 18.52-acre survey area contains 2.78 acres of wetlands and 1.00 acre of non-wetland Waters of the US (Figure 2). All acreages are influenced by the accuracy of the DGPS unit utilizing real-time corrections and ESRI® ArcMap Version 10.8 drafting software.

The USACE under the authority of the Clean Water Act, Section 404 and the Rivers and Harbors Act, Section 10 has the responsibility to make the final determination of the location and extent of jurisdictional wetlands, other waters of the US and navigable waters on this property, respectively. This report represents the opinion of the investigators and should be considered preliminary until final concurrence is obtained from the New Orleans District Army Corps of Engineers office.

Please review the information presented within and attached with this report. If you or any members of your staff have any questions regarding the information presented in the report, please do not hesitate to contact me at (225) 755-1000 or olivia.barry@c-ka.com.

Sincerely, CK Associates

Olivia Barry

Environmental Specialist

Autry Akins, PWS

Environmental Scientist

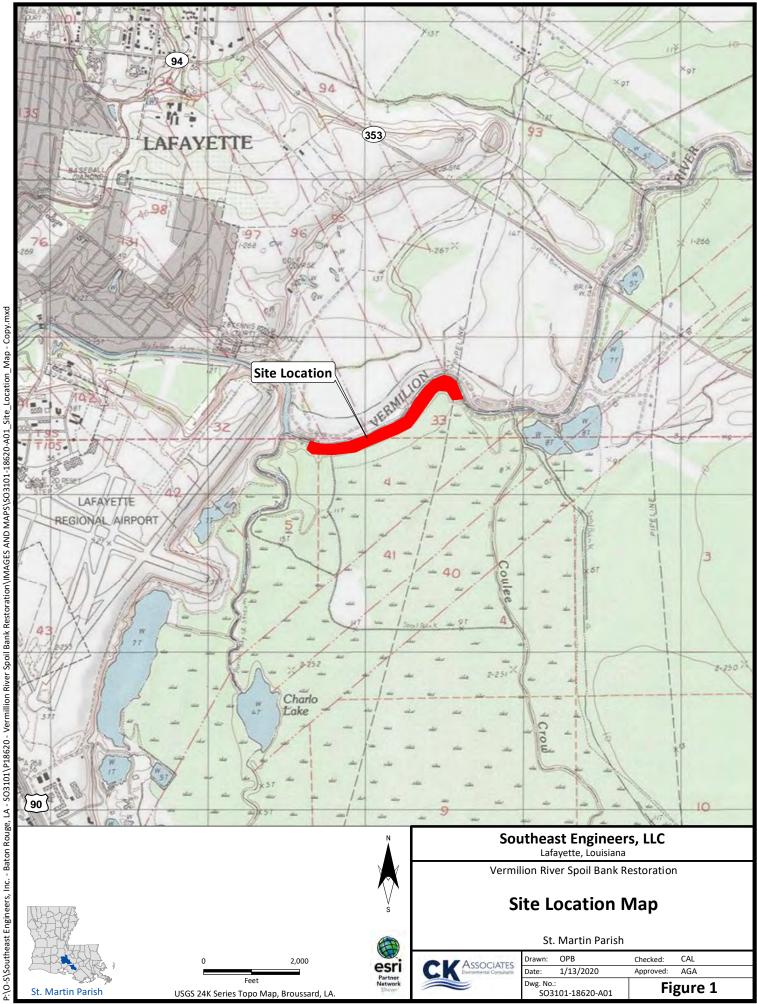
ATTACHMENTS: FIGURE 1 – SITE LOCATION MAP

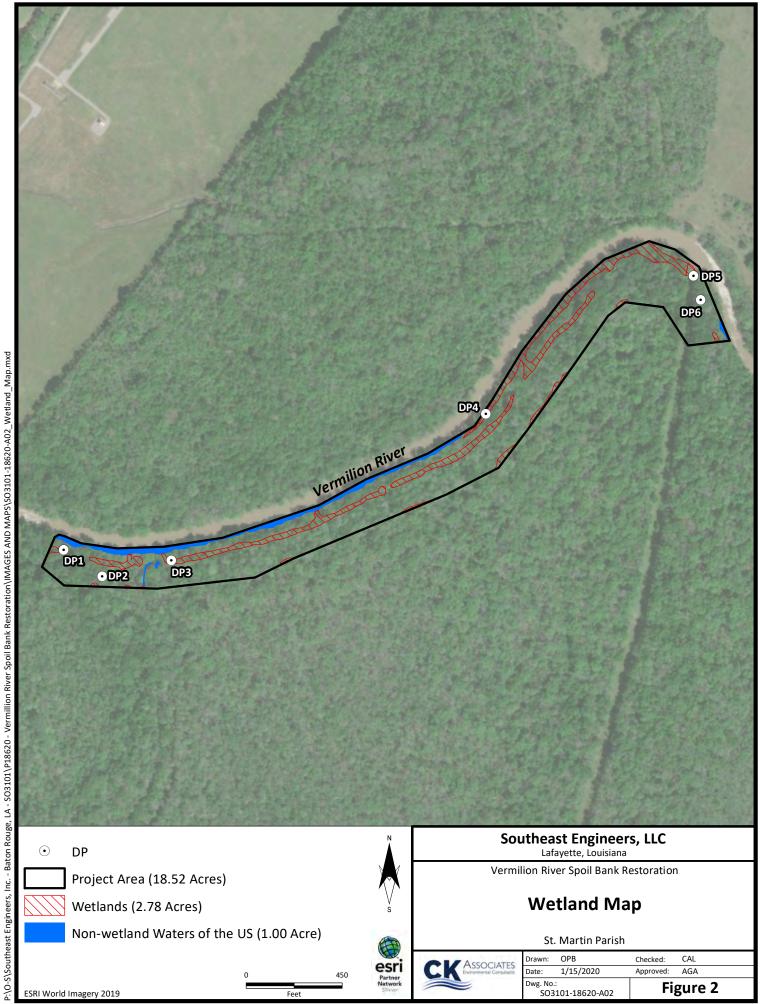
FIGURE 2 – WETLAND MAP

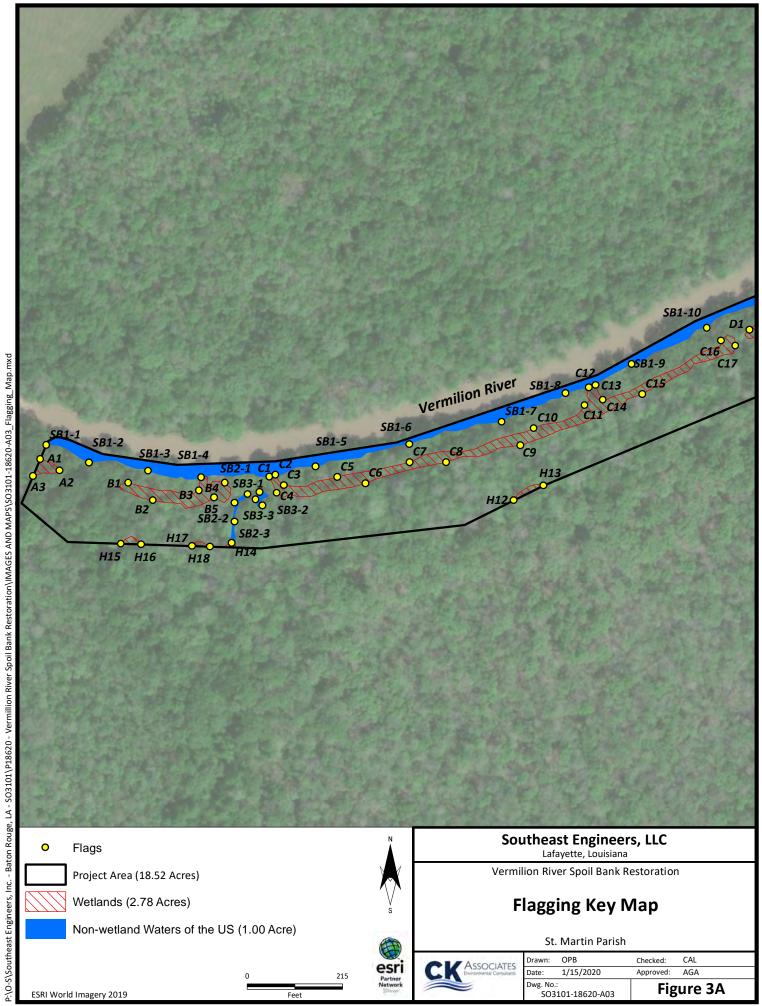
FIGURE 3 – FLAGGING KEY MAP FIGURE 4 – INFRARED IMAGERY

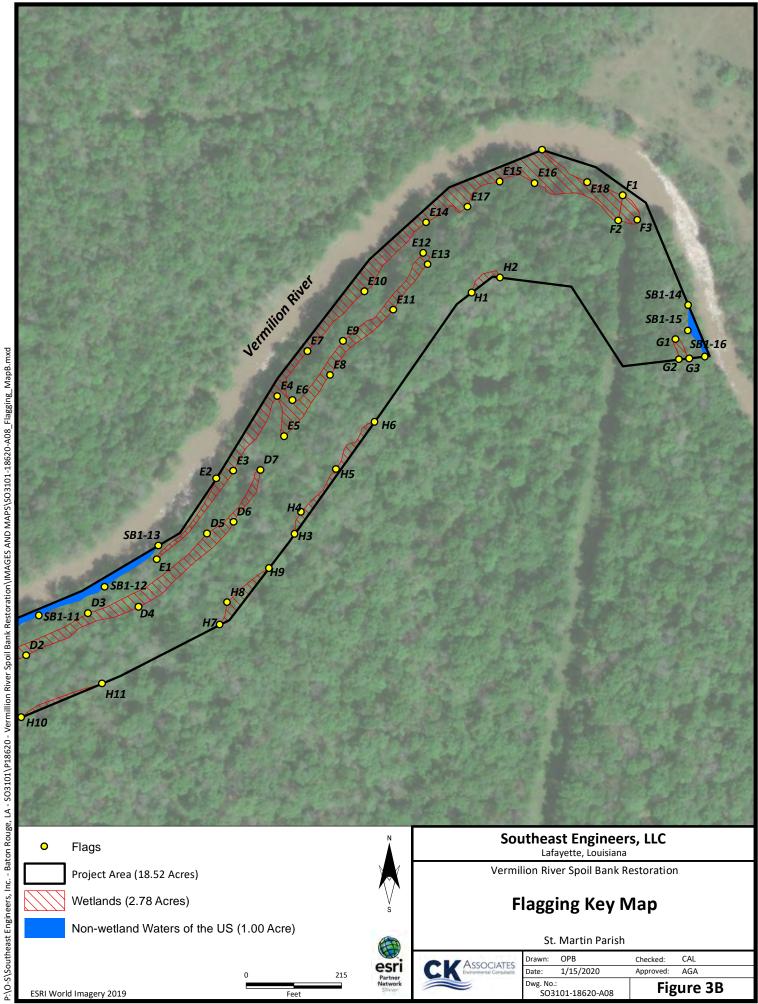
FIGURE 5 – SOILS MAP FIGURE 6 – LIDAR MAP FIGURE 7 – NWI MAP ORM WORKSHEET

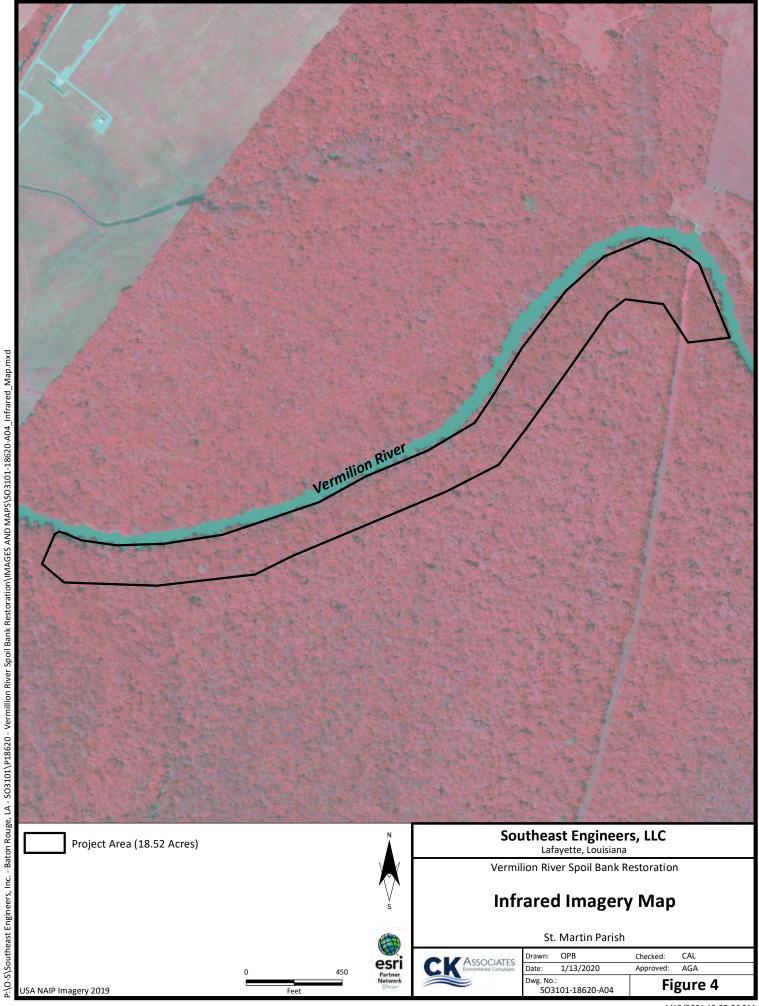
WETLAND DETERMINATION DATA FORMS AND PHOTOGRAPHS

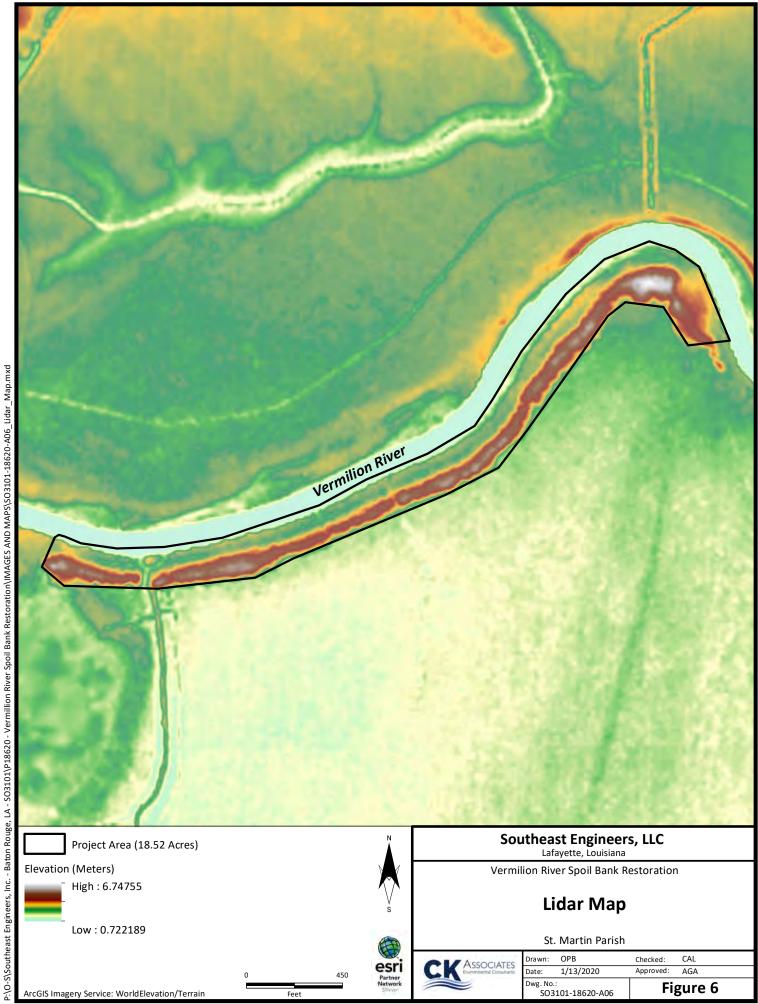


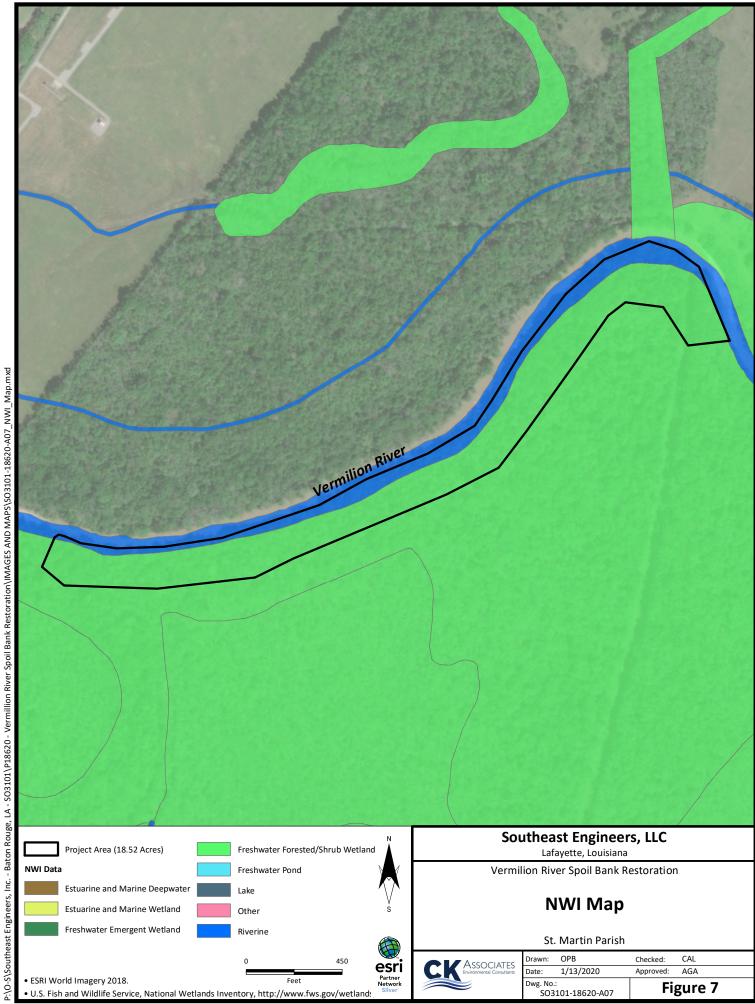












Project/Site Vermilion River Spoil Bank Rest	oration Cit	City/County: St. Martin Parish			Sampling Date:	01/14/2	2021		
Applicant/Owner: Southeast Eng	jineers, LLC	State:	Louisia	ana	Sampling Point:	DP	1		
Investigator(s): Olivia Barry & Cli	iff Johnson	Section	, Township,	, Range:	Section	4, T10S, R5E			
Landform (hillslope, terrace, etc.):	Ridge	Local relief (c	oncave, co	nvex, none	e): Convex	Slope (%):	0-5		
Subregion (LRR or MLRA): 131A	Lat: 30° 12	2' 36.4319" N	Long:	91° :	58' 30.2119" W	Datum:	NAD 83		
Soil Map Unit Name Ga:	Gallion silt loam	า	NV	NI Classifi	cation:	PFO1A			
Are climatic/hydrologic conditions of the site ty	pical for this time	e of the year?	Yes	(If no, exp	lain in remarks)				
Are vegetation, soil, or	hydrology	significantly d	isturbed?	Are "nor	mal circumstance	es" present?	Yes		
Are vegetation, soil, or	hydrology	naturally prob	lematic?	(If neede	ed, explain any ar	nswers in rem	narks.)		
SUMMARY OF FINDINGS Attach s	site map showi	ing sampling	point loca	ations, tra	nsects, import	ant features	s, etc.		
Hydrophytic vegetation present?	Yes								
Hydric soil present?	Yes	le the	Sampled	Area with	in a Wetland?	No			
Indicators of wetland hydrology present?	No	15 1116	Sampled	Alea With	iii a wetiana:	NO			
Remarks:									
Point located on a convex ridge along	the south bar	nk of the Veri	milion Riv	er. Hvdro	logv was not n	net at this lo	ocation.		
	,			,	37				
HYDROLOGY									
Wetland Hydrology Indicators:									
Primary Indicators (minimum of one is require	d: check all that	ap	Se	econdary I	ndicators (minim	ım of two rea	uired)		
Surface Water (A1)	Aquatic Faur		<u> </u>	-	ace Soil Cracks (E		<u>un ou</u>		
High Water Table (A2)		ts (B15) (LRR U)		sely Vegetated C	•	e (B8)		
		ulfide Odor (C1) Drainage Patterns (B10)							
Saturation (A3)	Hydrogen St	Dry Sosson Water Table (C2)							
Water Marks (B1)		izospheres on L	iving		, ,				
Sediment Deposits (B2)	Roots (C3)	D 1 11 11				oss Trim Lines (B16)			
Drift Deposits (B3)	Presence of	Reduced Iron (<i>J</i> 4)	fish Burrows (C8)					
Algal Mat or Crust (B4)		Reduction in Til	led		Saturation Visible on Aerial Imagery (C9)				
Iron Deposits (B5)	Soils (C6)				Geomorphic Position (D2)				
Inundation Visible on Aerial Imagery (B7)	Thin Muck S	` '			low Aquitard (D3)				
Water-Stained Leaves (B9)	Other (Expla	in in Remarks)			-Neutral Test (D5)				
				Spha	agnum moss (D8)	(LRR T, U)			
Field Observations:									
Surface water present? Yes		n (inches):			Wetland				
Water table present? Yes	No X Depth	n (inches):			Hydrology	No			
	No X Depth	n (inches):			Present?				
(includes capillary fringe)									
Describe recorded data (stream gauge, monitor	oring well, aerial	photos, previo	us inspectio	ons), if ava	ilable:				
Remarks:									
Saturated soils observed below 14 in	ches and no w	ater table al	ove or be	elow the	saturation was	s observed.			
FAC-Neutral Test: 2-0									

VEGETATION Use scientific names of plan	ıts.			Sampling Point: DP1
·	Absolute	Dominant	Indicator	Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size: 30 feet)	% Cover	Species	Staus	Number of Dominant
		·		Species that are OBL,
1 Quercus nigra	40	<u>Y</u>	FAC	FACW, or FAC: 7 (A)
2				Total Number of Dominant
3				Species Across all Strata: 7 (B)
4				Percent of Dominant Species
5				that are OBL, FACW, or
6				FAC: 100.00% (A/B)
7				
8				
	40 :	Total Cove	r	
50% of total cover: 20	20% of to	tal cover:	8	Prevalence Index Worksheet
		_		Total % Cover of:
Sapling/Shrub Stratum (Plot size: 30 feet	١			OBL species x 1 = 0
1 Sabal minor	, 20	Υ	FACW	FACW species x 2 = 0
2				FAC species x3 = 0
3				FACU species x 4 = 0
4				UPL species $x = 5 = 0$
5				Column totals (A) 0 (B)
6				(2)
7				Prevalence Index = B/A =
8				
	20 :	Total Cove		
500/ ft / l				
50% of total cover: 10	20% of to	tal cover:	4	Hydrophytic Vegetation Indicators:
				Rapid test for hydrophytic vegetation
Herb stratum (Plot size: 30 feet)			X Dominance test is >50%
1 Carex cherokeensis	15	Y	FACW	Prevalence index is ≤3.0*
2 Chasmanthium sessiliflorum	10	Y	FAC	Problematic hydrophytic
3 Chasmanthium latifolium	10	Υ	FAC	vegetation* (explain)
4 Dichanthelium dichotomum	10	Υ	FAC	*Indicators of hydric soil and wetland hydrology must
5 Rubus trivialis	5	N	FACU	be present, unless disturbed or problematic
6				Definitions of Four Vegetation Strata
7				Tree- Woody plants, excluding woody vines,
8				approximately 20 ft (6m) or more in height and
9				greater than 3 in. (7.6 cm) DBH.
10				
11				Sapling/Shrub - Woody plants, excluding vines,
12				less than 3 in. DBH and greater than 3.26 ft (1m)
	50 :	Total Cove	r	tall
50% of total cover: 25	20% of to	tal cover:	10	Herb - All herbaceous (non-woody) plants,
				including herbaceous vines, regardless of size,
Woody vine stratum (Plot size: 30 feet)			and woody plants, except woody vines, less than
1 Lygodium japonicum	20	Y	FAC	approximately 3 ft (1 m) in height.
2 Smilax bona-nox	5	N	FAC	Woody vine - All woody vines, regardless of
3 Campsis radicans	5	<u>N</u>	FAC	height.
4 Toxicodendron radicans	5	N	FAC	
5				Hydrophytic
	35 :	Total Cove	-	Vegetation Yes
50% of total cover: 17.5	20% of to		7	Present?
			-	1
Remarks: (If observed, list morphological	adaptation	s below).		

SOIL							Sampling Point:	DP1		
Profile Des	cription: (Describe	to the c	lenth needed to	docume	ent the indic	ator or confirm	the absence of	indicators.)		
	· · · · · · · · · · · · · · · · · · ·		1				1	I		
Depth	<u>Matrix</u>	1		T	x Features	1	4			
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks		
0-20	10YR 4/2	70	10YR 5/8	10	С	PL/M	Bilty Clay Loar			
			10YR 5/1	20	D	М				
*Type: C = (<u>I</u> Concentration, D = D	enletion	RM = Reduced N	Matrix M	l IS = Maskad	Sand Grains	**Location: P	L = Pore Lining, M = Matrix		
	oil Indicators:	epietion,	Trivi – rreduced i	viatrix, iv	io – Masked	Garia Granis.		r Problematic Hydric Soils:		
	isol (A1)		Polyv	alue Belo	ow Surface (S	88) (LRR S, T, U)		ck (A9) (LRR O)		
	ic Epipedon (A2)				face (S9) (LR			ck (A10) (LRR S)		
	Black Histic (A3) Loamy Mucky Mineral							Vertic(F18) (outside MLRA 150A,B)		
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (I						•	Piedmont	Floodplain Soils (F19) (LRR P, S, T)		
Stratified Layers (A5) X Depleted Matrix (F3)					trix (F3)		Anomolous Bright Loamy Soils (F20) (MLF			
Orga	Organic Bodies (A6) (LRR P, T, U) Redox Dark Surfa						153B)			
5 cn	n Mucky Mineral (A7)	(LRR I	P, T, U) Deple	eted Dar	k Surface (F	7)	Red Pare	nt Material (TF2)		
Muc	k Presence (A8) (LR	R U)	Redo	x Depre	ssions (F8)		Very Sha	llow Dark Surface (TF12)		
1 cn	n Muck (A9) (LRR P,	T)	Marl	(F10) (L	RR U)		Other (ex	plain in remarks)		
	leted Below Dark Su		, <u>—</u>		ric (F11) (ML I	-				
	k Dark Surface (A12			_		(F12) (LRR O, P ,	indicators of hydrophytic vege			
	st Prairie Redox (A10				ce (F13) (LR	-	and weltand hydrology must be present, unless disturbed or problematic			
	dy Mucky Mineral (S					(MLRA 151)				
	dy Gleyed Matrix (S4	!)				.RA 150A, 150B)				
	dy Redox (S5)				-	(F19) (MLRA 1 4 Soils (F20) (MLF	-	453D)		
	oped Matrix (S6) k Surface (S7) (LRR	PST		ioious b	ongni Loaniy	30118 (F20) (IVILA	KA 149A, 153C,	1930)		
	Counace (Or) (ERIX	., 0, .,	0,							
						Ι				
Restrictive Type:	Layer (if observed)	:				Hydric Soi	ı			
Туре.	Depth (inches):				-	Present?				
					-					
Remarks:						•				



DP1 facing north taken 1/14/2021



DP1 facing east taken 1/14/2021



DP1 facing south taken 1/14/2021



DP1 facing west taken 1/14/2021



Soil profile at DP1 taken 1/14/2021

Project/Site Vermilion River Spoil Ba	ank Restoration	City/County:	St. Martin Parish	Sampling Date:	01/14/2021		
· -	east Engineers, LLC	State:	Louisiana	Sampling Point:	DP2		
	arry & Cliff Johnson	Section,	Township, Range:	_	, T10S, R5E		
Landform (hillslope, terrace, etc.):	Ridge	Local relief (co	oncave, convex, non	e): Convex	Slope (%): 0-5		
Subregion (LRR or MLRA): 131	A Lat: 30°	° 12' 35.1649" N		58' 28.1745" W	Datum: NAD 83		
Soil Map Unit Name	Ga: Gallion silt lo	am	NWI Classif	ication:	PFO1A		
Are climatic/hydrologic conditions of t	the site typical for this	time of the year?	Yes (If no, ex	plain in remarks)			
Are vegetation, soil	, or hydrology	significantly di	sturbed? Are "no	rmal circumstances	s" present? Yes		
Are vegetation , soil	, or hydrology	naturally prob	ematic? (If need	led, explain any ans	swers in remarks.)		
SUMMARY OF FINDINGS	Attach site map sho	owing sampling	point locations, tr	ansects, importa	nt features, etc.		
Hydrophytic vegetation present?	Yes						
Hydric soil present?	Yes	Is the	Sampled Area wit	hin a Wetland?	No		
Indicators of wetland hydrology p	resent? No	10 11.10	oampioa / ii oa ii ii	····· a rromana :	110		
Remarks:							
D.:	(da la dada a sa				
Point ic	ocated on a manma	ade spoil bank. i	no nyarology was	observed.			
HYDROLOGY							
Wetland Hydrology Indicators:							
Primary Indicators (minimum of one is	s required; check all th	nat ap	Secondary	Indicators (minimu	m of two required)		
Surface Water (A1)		auna (B13)	-	face Soil Cracks (B6			
High Water Table (A2)		osits (B15) (LRR U)		arsely Vegetated Co			
Saturation (A3)		Sulfide Odor (C1)	·	inage Patterns (B10			
Water Marks (B1)	<u> </u>	,		Dry-Season Water Table (C2)			
Sediment Deposits (B2)	Roots (C3	Rhizospheres on Li 3)	virig	ss Trim Lines (B16)	,		
Drift Deposits (B3)	Presence	of Reduced Iron (0		Crayfish Burrows (C8)			
Algal Mat or Crust (B4)		on Reduction in Till	Sat	Saturation Visible on Aerial Imagery (C9)			
Iron Deposits (B5)	Soils (C6)			Geomorphic Position (D2)			
Inundation Visible on Aerial Imager	ry (B7) Thin Muc	k Surface (C7)	Sha	Shallow Aquitard (D3)			
Water-Stained Leaves (B9)	Other (Ex	plain in Remarks)	FAC	FAC-Neutral Test (D5)			
			Sph	nagnum moss (D8) (LRR T, U)		
Field Observations:							
Surface water present? Yes		epth (inches):		Wetland			
Water table present? Yes		epth (inches):		Hydrology	No		
Saturation present? Yes (includes capillary fringe)	No X De	epth (inches):		Present?			
Describe recorded data (stream gaug	je, monitoring well, aer	rial photos, previou	us inspections), if av	ailable:			
Remarks:							

SOIL							Sampling Point:	DP2			
Profile Des	cription: (Describe	to the c	lepth needed	to docume	nt the indic	ator or confirm	the absence of	indicators.)			
Depth	<u>Matrix</u>			Redo	x Features						
(Inches)	Color (moist)	%	Color (mois	st) %	Type*	Loc**	Texture	Remarks			
0-10	10YR 3/1	95	10YR 4/4	5	С	М	Silty Clay Loar				
10-20	10YR 4/1	95	10YR 4/6	5	С	М	Silty Clay				
	Concentration, D = D	epletion,	RM = Reduce	ed Matrix, M	IS = Masked	Sand Grains.		L = Pore Lining, M = Matrix			
-	oil Indicators:							r Problematic Hydric Soils:			
	isol (A1)			-		88) (LRR S, T, U)		ck (A9) (LRR O)			
	ic Epipedon (A2)				face (S9) (LR	-		ck (A10) (LRR S)			
	Black Histic (A3) Loamy Mucky Mineral							Vertic(F18) (outside MLRA 150A,B)			
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Stratified Loyers (A5) V. Depleted Matrix (F2)						1	Piedmont Floodplain Soils (F19) (LRR P, Anomolous Bright Loamy Soils (F20) (MLI				
	Stratified Layers (A5) X Depleted Matrix (F3) Organic Bodies (A6) (LRR P, T, U) X Redox Dark Surface (F6						153B)	ds Bright Loamy Solls (1 20) (MENA			
	Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F6)					7)	Red Pare	ent Material (TF2)			
	ck Presence (A8) (LR			edox Depre		.,		llow Dark Surface (TF12)			
	n Muck (A9) (LRR P,	-		larl (F10) (L				plain in remarks)			
	leted Below Dark Su		11) — D	epleted Och	ric (F11) (ML	RA 151)					
Thic	k Dark Surface (A12))	Iro	on-Mangane	ese Masses	(F12) (LRR O, P	, T)	*Indicators of hydrophytic vegetation			
Coa	st Prairie Redox (A16	6) (MLR	A 150A) ∪	mbric Surfa	ce (F13) (LR	(LRR P, T, U) and weltand hydrology must be					
San	dy Mucky Mineral (S	1) (LRR	O, S) D	elta Ochric	(F17) (MLR	MLRA 151) unless disturbed or problematic					
San	dy Gleyed Matrix (S4	.)	R	educed Ver	tic (F18) (ML	3) (MLRA 150A, 150B)					
San	dy Redox (S5)				•	Soils (F19) (MLRA 149A)					
	oped Matrix (S6)			nomolous B	right Loamy	Soils (F20) (MLF	RA 149A, 153C,	153D)			
Dark	k Surface (S7) (LRR	P, S, T,	U)								
						1					
	Layer (if observed):	:									
Type:					-	Hydric Sol Present?					
	Depth (inches):				-	riesenti					
Remarks:						•					



DP2 facing north taken 1/14/2021



DP2 facing east taken 1/14/2021



DP2 facing south taken 1/14/2021



DP2 facing west taken 1/14/2021



Soil profile at DP2 taken 1/14/2021

Project/Site Vermilion River Spoil Bank Re	estoration Cit	ty/County:	St. Martin P	arish	Sampling Date:	01/14/2	2021		
Applicant/Owner: Southeast E	ngineers, LLC	State:	Louisia	ana	Sampling Point:	DP	3		
Investigator(s): Olivia Barry &	Cliff Johnson	Section,	Township,	Range:	Section	4, T10S, R5E			
Landform (hillslope, terrace, etc.):	Depression	Local relief (co	oncave, co	nvex, none	e): Concave	Slope (%):	0-5		
Subregion (LRR or MLRA): 131A	Lat: 30° 12	2' 35.9019" N	Long:	91°	58' 24.4653" W	Datum:	NAD 83		
Soil Map Unit Name G	a: Gallion silt loam		N/	VI Classifi	cation:	PFO1A			
Are climatic/hydrologic conditions of the site	typical for this time	e of the year?	Yes	(If no, exp	lain in remarks)				
Are vegetation, soil,	or hydrology	significantly di	sturbed?	Are "nor	mal circumstance	es" present?	Yes		
Are vegetation, soil,	or hydrology	naturally probl	ematic?	(If neede	ed, explain any a	nswers in rem	narks.)		
SUMMARY OF FINDINGS Attacl	h site map showi	ng sampling	point loca	ations, tra	ansects, import	tant features	s, etc.		
Hydrophytic vegetation present?	Yes								
Hydric soil present?	Yes	Is the	Sampled .	Area with	nin a Wetland?	Yes			
Indicators of wetland hydrology present	? Yes					. 00			
Domorko									
Remarks:									
HYDROLOGY									
Wetland Hydrology Indicators:									
Primary Indicators (minimum of one is requi			<u>Se</u>		ndicators (minim		<u>uired)</u>		
X Surface Water (A1)	Aquatic Faun	• •			ace Soil Cracks (E				
X High Water Table (A2)	Marl Deposits	s (B15) (LRR U))	X Spa	rsely Vegetated C	oncave Surfac	e (B8)		
X Saturation (A3)	Hydrogen Su	ılfide Odor (C1)							
X Water Marks (B1)	Oxidized Rhi:	nizospheres on Living Dry-Season Water Table (C2)							
Sediment Deposits (B2)	Roots (C3)			s Trim Lines (B16					
X Drift Deposits (B3)	Presence of	Reduced Iron (C	24)	Cray	Crayfish Burrows (C8)				
Algal Mat or Crust (B4)	Recent Iron F	Reduction in Tille	ed	Satu	ration Visible on	Aerial Imagery	(C9)		
Iron Deposits (B5)	Soils (C6)			X Geo	X Geomorphic Position (D2)				
Inundation Visible on Aerial Imagery (B7)	Thin Muck Su	urface (C7)		Sha	llow Aquitard (D3)				
X Water-Stained Leaves (B9)	Other (Explai	in in Remarks)			-Neutral Test (D5	•			
				Sph	agnum moss (D8)	(LRR T, U)			
Field Observations:									
Surface water present? Yes X	No Depth	(inches):	2		Wetland				
Water table present? Yes X	No Depth	(inches):	8		Hydrology	Yes			
Saturation present? Yes X	No Depth	(inches): 0	-20		Present?				
(includes capillary fringe)									
Describe recorded data (stream gauge, mor	nitoring well, aerial	photos, previou	ıs inspectio	ons), if ava	ilable:				
Remarks:									
FAC-Neutral Test: 4-0									
İ									

VEGETATION Use scientific names of plan	nts.			Sampling Point: DP3
	Absolute	Dominant	Indicator	Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size: 30 feet)	% Cover	Species	Staus	Number of Dominant
1 Quercus laurifolia	20	Υ	FACW	Species that are OBL, FACW, or FAC: 7 (A)
2 Quercus nigra	10	<u>Y</u>	FAC	Total Number of Dominant
3 Celtis laevigata	5	N	FACW	Species Across all Strata: 7 (B)
4				Percent of Dominant Species
5				that are OBL, FACW, or
6				FAC: 100.00% (A/B)
7				
8				
		= Total Cove	r	
50% of total cover: 17.5	20% of to	otal cover:	7	Prevalence Index Worksheet
				Total % Cover of:
Sapling/Shrub Stratum (Plot size: 30 feet)			OBL species x 1 =0
1 Quercus nigra	5	Υ	FAC	FACW species x 2 = 0
2 Quercus laurifolia	5	<u> </u>	FACW	FAC species x 3 = 0
3				FACU species $x = 4 = 0$ UPL species $x = 5 = 0$
5				Column totals (A) 0 (B)
6				(N)(D)
7				Prevalence Index = B/A =
8				
	10	= Total Cove	•	
50% of total cover: 5	20% of to	otal cover:	2	Hydrophytic Vegetation Indicators:
		_		Rapid test for hydrophytic vegetation
Herb stratum (Plot size: 30 feet)			X Dominance test is >50%
1 Carex cherokeensis	5	Y	FACW	Prevalence index is ≤3.0*
2 Sabal minor	5	Υ	FACW	Problematic hydrophytic
3				vegetation* (explain)
4				*Indicators of hydric soil and wetland hydrology must
5 6				be present, unless disturbed or problematic Definitions of Four Vegetation Strata
7				
8				Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and
9				greater than 3 in. (7.6 cm) DBH.
10				,
11				Sapling/Shrub - Woody plants, excluding vines,
12				less than 3 in. DBH and greater than 3.26 ft (1m)
		= Total Cove		tall
50% of total cover: 5	20% of to	otal cover:	2	Herb - All herbaceous (non-woody) plants,
Woody vine stratum (Plot size: 30 feet	`			including herbaceous vines, regardless of size,
Woody vine stratum (Plot size: 30 feet 1 Smilax bona-nox	<i>)</i> 5	Υ	FAC	and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
2				Woody vine - All woody vines, regardless of
3				height.
4				
5				Hydrophytic
	5	=Total Cove	r	Vegetation Yes
50% of total cover: 2.5	20% of to	otal cover:	1	Present?
Remarks: (If observed, list morphological	adaptation	s below).		
, , , , , , , , , , , , , , , , , , , ,				

SOIL							;	Sampling Point:	DP3		
Profile Des	cription: (Describe	to the c	lepth neede	d to d	locume	nt the indic	ator or confirm t	he absence of	indicators.)		
Depth	<u>Matrix</u>				Redo	x Features					
(Inches)	Color (moist)	%	Color (mo	oist)	%	Type*	Loc**	Texture	Remarks		
0-20	10YR 4/2	80	10YR 4	/6	10	С	PL/M	Silt Loam			
			10YR 5	/1	10	D	М				
O									<u> </u>		
	Concentration, D = D	epletion	RM = Redu	iced M	latrix, M	S = Masked	Sand Grains.		L = Pore Lining, M = Matrix		
-	oil Indicators:			Daluma	alua Dala	···· C·····fa.a.a. (6	20) (I DD C T II)		r Problematic Hydric Soils:		
	isol (A1)			-			88) (LRR S, T, U)		ck (A9) (LRR O) ck (A10) (LRR S)		
	Histic Epipedon (A2) Black Histic (A3) Thin Dark Surface (S9) Loamy Mucky Minera						-		Vertic(F18) (outside MLRA 150A,B)		
	Hydrogen Sulfide (A4) Loamy Gleyed Matrix (t Floodplain Soils (F19) (LRR P, S, T)		
Stratified Layers (A5) X Depleted Matrix (F3)							'	Anomolous Bright Loamy Soils (F20) (ML			
Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6								153B)	de Bright Learny Come (i Le) (iiiLit)		
	5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (, ,	7)	Red Pare	ent Material (TF2)		
	ck Presence (A8) (LR			•		ssions (F8)	•		llow Dark Surface (TF12)		
1 cn	n Muck (A9) (LRR P,	T)		Marl (F10) (L l	RR U)		Other (ex	plain in remarks)		
Dep	leted Below Dark Su	rface (A	11)	Deplet	ted Ochr	ric (F11) (ML	RA 151)				
Thic	k Dark Surface (A12)		Iron-N	1angane	ese Masses	(F12) (LRR O, P,	T)	*Indicators of hydrophytic vegetation		
Coa	st Prairie Redox (A16	6) (MLR	A 150A)	Umbri	ic Surfa	ce (F13) (LR	(LRR P, T, U) and weltand hydrology mu				
	dy Mucky Mineral (S					(F17) (MLR	•				
	dy Gleyed Matrix (S4	.)					3) (MLRA 150A, 150B)				
	dy Redox (S5)					•	Soils (F19) (MLRA 149A)				
	oped Matrix (S6)	пст		Anom	olous B	right Loamy	Soils (F20) (MLR	A 149A, 153C,	153D)		
Dan	k Surface (S7) (LRR	P, S, 1,	U)								
Restrictive	Layer (if observed):										
Type:	Layer (ii observea)	•					Hydric Soil	l			
. ypo	Depth (inches):						Present?	Yes			
Remarks:											



DP3 facing east taken 1/14/2021



DP3 facing south taken 1/14/2021



Soil profile at DP3 taken 1/14/2021

Project/Site Vermilion River Spoil Bank Res	storation City	y/County:	St. Martin Pa	arish	Sampling Date:	01/14/2	2021
Applicant/Owner: Southeast En	gineers, LLC	State:	Louisia	ana	Sampling Point:	DP	4
Investigator(s): Olivia Barry & C	liff Johnson	Section,	Township,	Range:	Section	33, T10S, R5	E
Landform (hillslope, terrace, etc.):	epression	Local relief (co	oncave, co	nvex, none	e): Concave	Slope (%):	0-5
Subregion (LRR or MLRA): 131A	Lat: 30° 12	' 42.5612" N	Long:	91°	58' 7.5965" W	Datum:	NAD 83
Soil Map Unit Name Ga	a: Gallion silt loam		NV	VI Classifi	cation:	PFO1A	
Are climatic/hydrologic conditions of the site to	typical for this time	e of the year?	Yes	(If no, exp	lain in remarks)		
Are vegetation, soil, or	r hydrology	significantly di	sturbed?	Are "nor	mal circumstance	es" present?	Yes
Are vegetation, soil, or	r hydrology	naturally probl	ematic?	(If neede	ed, explain any a	nswers in rem	narks.)
SUMMARY OF FINDINGS Attach	site map showing	ng sampling	point loca	ations, tra	nsects, impor	tant features	s, etc.
Hydrophytic vegetation present?	Yes						
Hydric soil present?	Yes	Is the	Sampled .	Area with	nin a Wetland?	Yes	
Indicators of wetland hydrology present?	Yes	12				. 00	
D I .							
Remarks:							
HYDROLOGY							
Wetland Hydrology Indicators:							
Primary Indicators (minimum of one is require	ed; check all that a	<u>ap</u>	<u>Se</u>	econdary I	ndicators (minim	um of two req	uired)
Surface Water (A1)	Aquatic Faun	na (B13)		Surf	ace Soil Cracks (I	B6)	
High Water Table (A2)	Marl Deposits	s (B15) (LRR U))	Spai	rsely Vegetated C	Concave Surfac	e (B8)
Saturation (A3)	Hydrogen Su	Ilfide Odor (C1)	de Odor (C1) Drainage Patterns (B10)				
Water Marks (B1)	Oxidized Rhi:	Dry-Season Water Table (C2)					
X Sediment Deposits (B2)	Roots (C3)		3	Mos	s Trim Lines (B16	6)	
X Drift Deposits (B3)	Presence of I	Reduced Iron (C	24)	Cray	fish Burrows (C8))	
Algal Mat or Crust (B4)	Recent Iron F	Reduction in Tilled Saturation Visible on Aerial Imager					(C9)
Iron Deposits (B5)	Soils (C6)			X Geo	(D2)		
Inundation Visible on Aerial Imagery (B7)	Thin Muck Su	urface (C7)		Shal	llow Aquitard (D3))	
X Water-Stained Leaves (B9)	Other (Explai	in in Remarks)		X FAC	-Neutral Test (D5	5)	
				Spha	agnum moss (D8)	(LRR T, U)	
Field Observations:							
Surface water present? Yes	No X Depth	(inches):			Water I		
Water table present? Yes	No X Depth	(inches):			Wetland Hydrology	Yes	
Saturation present? Yes	No X Depth	(inches):			Present?		
(includes capillary fringe)							
Describe recorded data (stream gauge, moni	toring well, aerial	photos, previou	is inspection	ons), if ava	ilable:		
Remarks:							
FAC-Neutral Test: 3-0							

/EGETATION Use scientific names of plan	∩ts.			Sampling Point: DP4		P4
	Absolute	Dominant	Indicator	Dominance Test Worksheet		
<u>Tree Stratum</u> (Plot size: 30 feet)	% Cover	Species	Staus	Number of Dominant		
1 Celtis laevigata	15	Υ	FACW	Species that are OBL, FACW, or FAC:	5	(A)
2 Ulmus americana	10	Υ	FAC	Total Number of Dominant		_` ′
3 Fraxinus pennsylvanica	5	N	FACW	Species Across all Strata:	5	(B)
4				Percent of Dominant Species		
5				that are OBL, FACW, or		
6				FAC:	100.00%	_(A/B)
7						
8		Tital Oi				
500/ ()		= Total Cove		<u> </u>		
50% of total cover: 15	20% of to	otal cover:	6	Prevalence Index Worksheet		
				Total % Cover of:		
Sapling/Shrub Stratum (Plot size: 30 feet	_)			OBL species x 1 =	0	_
1				FACW species x 2 =	0	_
2				FAC species x 3 = FACU species x 4 =	0	_
4	. ——			UPL species x 5 =	0	_
5				Column totals (A)	0	(B)
6				``		_` ′
7				Prevalence Index = B/A =		
8						
	0 :	= Total Cove	r			
50% of total cover: 0	20% of to	otal cover:	0	Hydrophytic Vegetation Indic	ators:	
	ņ			Rapid test for hydrophytic v	vegetation	l
Herb stratum (Plot size: 30 feet)			X Dominance test is >50%		
1 Carex cherokeensis	20	Υ	FACW	Prevalence index is ≤3.0*		
2 Sabal minor	5	Y	FACW	Problematic hydrophytic		
3				vegetation* (explain)		
4				*Indicators of hydric soil and wetland be present, unless disturbed or p		nust
6				Definitions of Four Vegetatio	•	
7						
8				Tree- Woody plants, excluding approximately 20 ft (6m) or mo		
9				greater than 3 in. (7.6 cm) DBH		it and
0						
1				Sapling/Shrub - Woody plants	s. excludin	a vines.
2				less than 3 in. DBH and greate		
		= Total Cove		tall		
50% of total cover: 12.5	20% of to	otal cover:	5	Herb - All herbaceous (non-wo		
Manda vine stratum (Diet size) 20 feet	`			including herbaceous vines, reg		
Woody vine stratum (Plot size: 30 feet 1 Smilax bona-nox	_) 10	Υ	FAC	and woody plants, except wood approximately 3 ft (1 m) in height		ess thar
2				Woody vine - All woody vines,		ss of
3				height.		
4						
5				Hydrophytic		
	10	= Total Cove	r		'es	
50% of total cover: 5	20% of to	otal cover:	2	Present?		
Remarks: (If observed, list morphological	adaptation	s below)				
	adaptation					
						1

SOIL							Sampling Point:	DP4			
Profile Des	cription: (Describe	to the c	lepth needed to d	locume	ent the indica	ator or confirm	the absence of	indicators.)			
	· · ·		<u> </u>				1				
Depth	Matrix	T 0/	0.1(T	x Features	1 ++		D d .			
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks			
0-20	10YR 4/2	90	10YR 3/6	10	С	М	Silty Clay Loar				
*Type: C = 0	<u>I </u>	enletion	RM = Reduced M	l 1atriy M	I IS = Masked	Sand Grains	**Location: P	L = Pore Lining, M = Matrix			
	oil Indicators:	opiction,	Trivi – reduced iv	iduix, iv	io – masica	Caria Grains.		r Problematic Hydric Soils:			
	isol (A1)		Polyv	alue Belo	ow Surface (S	88) (LRR S, T, U)		ck (A9) (LRR O)			
	ic Epipedon (A2)				face (S9) (LR			ck (A10) (LRR S)			
	Black Histic (A3) Loamy Mucky Mineral							Vertic(F18) (outside MLRA 150A,B)			
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (•		Floodplain Soils (F19) (LRR P, S, T)			
Stratified Layers (A5) X Depleted Matrix (F3)							Anomolous Bright Loamy Soils (F20) (MLI				
Orga	Organic Bodies (A6) (LRR P, T, U) Redox Dark S						153B)				
5 cm	5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark					7)	Red Pare	nt Material (TF2)			
Muc	k Presence (A8) (LR	R U)	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)				
Dep	leted Below Dark Su	rface (A	11) Deple	ted Och	ric (F11) (ML I	RA 151)					
Thic	k Dark Surface (A12)	Iron-N	/langane	ese Masses	(F12) (LRR O, P	, T)	*Indicators of hydrophytic vegetation			
Coa	st Prairie Redox (A1	6) (MLR .	A 150A) Umbr	ic Surfa	ce (F13) (LR	R P, T, U)	and weltand hydrology must be present, unless disturbed or problematic				
	dy Mucky Mineral (S				(F17) (MLRA	-		unless disturbed of problematic			
	dy Gleyed Matrix (S4	!)				.RA 150A, 150B					
	dy Redox (S5)				-	(F19) (MLRA 1	-	.===\			
	oped Matrix (S6)	D С Т		iolous B	Bright Loamy	Soils (F20) (MLF	RA 149A, 153C,	153D)			
Dark	Surface (S7) (LRR	P, S, 1,	U)								
Restrictive	Layer (if observed)	:									
Type:	,					Hydric So	il v				
	Depth (inches)	:			- -	Present?					
Remarks:											



DP4 facing north taken 1/14/2021



DP4 facing east taken 1/14/2021



DP4 facing south taken 1/14/2021



DP4 facing west taken 1/14/2021



Soil profile at DP4 taken 1/14/2021

Project/Site Vermilion River Spoil	Bank Restoration Cit	ty/County:	St. Martin Parish	Sampling Date:	01/14/2	:021		
Applicant/Owner: Sou	theast Engineers, LLC	State:	Louisiana	Sampling Point:	DP5	5		
Investigator(s): Olivia	Barry & Cliff Johnson	Section,	Township, Range:	Section 3	33, T10S, R5E	:		
Landform (hillslope, terrace, etc.):	Depression	Local relief (co	oncave, convex, non-	e): Concave	Slope (%):	0-5		
Subregion (LRR or MLRA):1	31A Lat: 30° 12	2' 48.8601" N	Long: 91°	57' 56.4301" W	Datum:	NAD 83		
Soil Map Unit Name	Ga: Gallion silt loam	<u> </u>	NWI Classif	ication:	PFO1A			
Are climatic/hydrologic conditions of	of the site typical for this time	e of the year?	Yes (If no, exp	plain in remarks)				
Are vegetation, soil	, or hydrology	significantly di	sturbed? Are "nor	rmal circumstance	s" present?	Yes		
Are vegetation, soil	, or hydrology	naturally probl	•	led, explain any ar		-		
SUMMARY OF FINDINGS -		ng sampling	point locations, tra	ansects, import	ant features,	, etc.		
Hydrophytic vegetation present								
Hydric soil present?	Yes	Is the	Sampled Area witl	hin a Wetland?	Yes			
Indicators of wetland hydrology	present? Yes		-					
Remarks:								
Nomano.								
HYDROLOGY								
Wetland Hydrology Indicators:								
Primary Indicators (minimum of one	is required; check all that a	<u>ap</u>	-	Indicators (minimu	-	<u>uired)</u>		
Surface Water (A1)	Aquatic Faun	, ,		face Soil Cracks (B				
High Water Table (A2)	Marl Deposits	s (B15) (LRR U)) Spa	arsely Vegetated Co	oncave Surface	e (B8)		
X Saturation (A3)	Hydrogen Su	ılfide Odor (C1)	Dra	inage Patterns (B1	0)			
Water Marks (B1)	Oxidized Rhi	zospheres on Li	ivingDry	-Season Water Tal	ole (C2)			
Sediment Deposits (B2)	Roots (C3)		Mos	ss Trim Lines (B16))			
Drift Deposits (B3)	Presence of	Reduced Iron (C	Cra Cra	yfish Burrows (C8)				
Algal Mat or Crust (B4)	Recent Iron F	Reduction in Till	edSate	uration Visible on A	Aerial Imagery ((C9)		
Iron Deposits (B5)	Soils (C6)		Ged	Geomorphic Position (D2)				
Inundation Visible on Aerial Imag	gery (B7) Thin Muck St	urface (C7)	Sha	allow Aquitard (D3)				
X Water-Stained Leaves (B9)	Other (Explai	in in Remarks)		C-Neutral Test (D5)	•			
			Sph	nagnum moss (D8)	(LRR T, U)			
Field Observations:								
Surface water present? Yes	No X Depth	(inches):		Wetland				
Water table present? Yes	No X Depth	(inches):		Hydrology	Yes			
Saturation present? Yes	X No Depth	(inches): 0)-20	Present?				
(includes capillary fringe)								
Describe recorded data (stream ga	uge, monitoring well, aerial	photos, previou	us inspections), if ava	ailable:				
Remarks:								
FAC-Neutral Test: 1-0								

VEGETATION Use scientific names of plan	nts.			Sampling Point:	DP5
	Absolute	Dominant	Indicator	Dominance Test Worksheet	
<u>Tree Stratum</u> (Plot size: 30 feet)	% Cover	Species	Staus	Number of Dominant	
		-1		Species that are OBL,	(4)
				FACW, or FAC: 1	(A)
2				Total Number of Dominant	(5)
3				Species Across all Strata: 1	(B)
4				Percent of Dominant Species	
5				that are OBL, FACW, or	
6				FAC: 100.00	0% (A/B)
7					
8					
	0	= Total Cove	r		
50% of total cover: 0	20% of to	otal cover:	0	Prevalence Index Worksheet	
		_		Total % Cover of:	
andia a/Charak Chartana /Diat sina 20 fact	`				
apling/Shrub Stratum (Plot size: 30 feet	.)			OBL species x 1 =0	
1				FACW species x 2 = 0	
2				FAC species x 3 = 0	
				FACU species x 4 = 0	
4				UPL species x 5 = 0	
				Column totals (A) 0	(B)
<u> </u>					
				Prevalence Index = B/A =	
8					
	0	= Total Cove	r		
50% of total cover: 0	20% of to	otal cover:	0	Hydrophytic Vegetation Indicators	:
	•	-		Rapid test for hydrophytic vegeta	ation
Herb stratum (Plot size: 30 feet)			X Dominance test is >50%	
1 Carex cherokeensis	. ⁷ 70	Υ	FACW	Prevalence index is ≤3.0*	
2 Smilax bona-nox	15	N	FAC	Problematic hydrophytic	
3 Rubus argutus	15	N	FAC	vegetation* (explain)	
4 Sabal minor	5	N	FACW	• • • • • • • • • • • • • • • • • • •	
5 Cornus drummondii	5	N	FAC	*Indicators of hydric soil and wetland hydrolo be present, unless disturbed or problem	
			<u> </u>	Definitions of Four Vegetation Stra	
6				Definitions of Four Vegetation Stra	ala
7				Tree- Woody plants, excluding wood	
⁸				approximately 20 ft (6m) or more in h	neight and
9				greater than 3 in. (7.6 cm) DBH.	
0					
1				Sapling/Shrub - Woody plants, exclu	uding vines,
2				less than 3 in. DBH and greater than	3.26 ft (1m)
		= Total Cove	r	tall	
50% of total cover: 55	20% of to	otal cover:	22	Herb - All herbaceous (non-woody) p	olants,
				including herbaceous vines, regardle	
Woody vine stratum (Plot size: 30 feet)			and woody plants, except woody vine	es, less than
1				approximately 3 ft (1 m) in height.	
2				Woody vine - All woody vines, regar	dless of
3				height.	
4			_		
5				. Hydrophytic	
	0	= Total Cove	r	Vegetation Yes	
50% of total cover: 0		tal cover:		Present?	
50% of total cover: 0	20% 01 10	otal cover:	0		
Remarks: (If observed, list morphological	adaptation	ıs below).			
· · · · · · · · · · · · · · · · · · ·					

SOIL						,	Sampling Point:	DP5		
Profile Des	cription: (Describe	to the c	lepth needed to d	docume	ent the indic	ator or confirm t	he absence of	indicators.)		
	· · ·		1					T		
Depth	Matrix	0/	0.1(1	x Features	Loc**		D d .		
(Inches)	Color (moist)	%	Color (moist)	` '			Texture	Remarks		
0-20	10YR 4/2	80	5YR 4/4	20	С	M	Clay Loam			
*T. ma. C = (Composition D = D	anlatian	DM = Dadward A	Antria N	IC - Maakad	Sand Crains	**Leastion: D	L - Dave Lining M - Metrix		
	Concentration, D = D	epietion	, Rivi = Reduced i	iatrix, iv	15 = Masked	Sand Grains.		L = Pore Lining, M = Matrix		
	oil Indicators:		Dahar	alua Dal	Cf (C	**************************************		r Problematic Hydric Soils:		
	isol (A1)					88) (LRR S, T, U)	1 cm Muck (A9) (LRR O)			
	ic Epipedon (A2) k Histic (A3)				face (S9) (LR		2 cm Muck (A10) (LRR S)			
	rogen Sulfide (A4)				y Mineral (F1 ed Matrix (F2)	,	Reduced Vertic(F18) (outside MLRA 150A,B) Piedmont Floodplain Soils (F19) (LRR P, S, T)			
	tified Layers (A5)		X Deple				Anomolous Bright Loamy Soils (F20) (MLRA			
	anic Bodies (A6) (LR	R P. T.			Surface (F6)		153B)	ds Bright Loamy Solls (1 20) (MENA		
	n Mucky Mineral (A7)				rk Surface (F	7)	Red Parent Material (TF2)			
	k Presence (A8) (LR				essions (F8)	.,	Very Shallow Dark Surface (TF12)			
1 cn		Mari (F10) (LRR U)				plain in remarks)				
—— Dep			ric (F11) (ML I	RA 151)		,				
	k Dark Surface (A12	-		/langane	ese Masses	(F12) (LRR O, P ,	T)	*Indicators of hydrophytic vegetation		
	st Prairie Redox (A1		A 150A) Umbr	ic Surfa	ice (F13) (LR	R P, T, U)		and weltand hydrology must be present,		
San	dy Mucky Mineral (S	1) (LRR	O, S) Delta	Ochric	(F17) (MLR	151)		unless disturbed or problematic		
	dy Gleyed Matrix (S4									
San	dy Redox (S5)		Piedn	Piedmont Floodplain Soils (F19) (MLRA 149A)						
Strip	pped Matrix (S6)		Anom	olous B	Bright Loamy	Soils (F20) (MLR	A 149A, 153C,	153D)		
Darl	Surface (S7) (LRR	P, S, T,	U)							
Dantuintina	1 a (# ab.aa									
Type:	Layer (if observed)	:				Hydric Soi	ı			
туре.	Depth (inches)				_	Present?	Yes			
	Deptil (iliches)				-					
Remarks:										



DP5 facing north taken 1/14/2021



DP5 facing east taken 1/14/2021



DP5 facing south taken 1/14/2021



DP5 facing west taken 1/14/2021



Soil profile at DP5 taken 1/14/2021

Project/Site Vermilion Rive	er Spoil Bank Res	storation	City/County:	St. Martin Parish	Sampling Date:	01/14/2021		
Applicant/Owner:	Southeast En	igineers, LLC	State:	Louisiana	Sampling Point:	DP6		
Investigator(s):	Olivia Barry & C	Cliff Johnson	Section	, Township, Range:	Section 33, T10S, R5E			
Landform (hillslope, terrace,	etc.):	Plain	Local relief (d	concave, convex, non	ne): None	Slope (%): 0-5		
Subregion (LRR or MLRA):	131A	Lat: 30°	° 12' 47.7597" N	Long: 91°	57' 56.0658" W	Datum: NAD 83		
Soil Map Unit Name	Ga	a: Gallion silt lo	pam	NWI Classif	fication:	PFO1A		
Are climatic/hydrologic cond	litions of the site	typical for this	time of the year?	Yes (If no, ex	plain in remarks)			
Are vegetation, so	oil , o	r hydrology	significantly o	disturbed? Are "no	rmal circumstances	s" present? Yes		
Are vegetation, so	oil, o	r hydrology	naturally prob	olematic? (If need	ded, explain any an	swers in remarks.)		
SUMMARY OF FINDIN	GS Attach	site map sho	owing sampling	point locations, tr	ansects, importa	ınt features, etc.		
Hydrophytic vegetation	present?	Yes						
Hydric soil present?		No	ls the	Sampled Area wit	hin a Watland?	No		
Indicators of wetland hy	drology present?	No No	13 1110	Sampleu Alea wit	IIIII a Welland:	INU		
Remarks:								
	Point loca	ated in a fore	ested area. No l	hydrology was obs	served.			
HYDROLOGY								
Wetland Hydrology Indica	tors:							
Primary Indicators (minimun	n of one is require	ed; check all th	nat ap	Secondary	Indicators (minimu	m of two required)		
Surface Water (A1)		Aquatic F	auna (B13)	Sur	ace Soil Cracks (B6)			
High Water Table (A2)		Marl Dep	osits (B15) (LRR L	s (B15) (LRR U) Sparsely Vegetated Concave Surface (B8)				
Saturation (A3)		Hydroger	n Sulfide Odor (C1)	Dra	ainage Patterns (B10))		
Water Marks (B1)		Oxidized	Rhizospheres on L	ivingDry	-Season Water Tab	le (C2)		
Sediment Deposits (B2)	Roots (C:		-	Moss Trim Lines (B16)				
Drift Deposits (B3)	e of Reduced Iron (C4) Cra	Crayfish Burrows (C8)					
Algal Mat or Crust (B4)		Recent Ir	on Reduction in Ti	Reduction in Tilled Saturation Visible on Aerial Imagery (C9)				
Iron Deposits (B5))		omorphic Position (D	02)				
Inundation Visible on Aer	ial Imagery (B7)	Thin Muc	k Surface (C7)	urface (C7) Shallow Aquitard (D3)				
Water-Stained Leaves (B	9)	Other (E)	κρlain in Remarks)	FAC	FAC-Neutral Test (D5)			
			Sphagnum moss (D8) (LRR T, U)					
Field Observations:								
Surface water present?	Yes	No X De	epth (inches):		Wetland			
Water table present?	Yes	No X De	epth (inches):		Hydrology	No		
Saturation present?	Yes	No X De	epth (inches):		Present?			
(includes capillary fringe)								
Describe recorded data (stre	eam gauge, mon	itoring well, ae	rial photos, previo	ous inspections), if av	ailable:			
Remarks:								
1								

/EGETATION Use scientific names of plar	nts.			Sampling Point: DP6
·	Absolute	Dominant	Indicator	Dominance Test Worksheet
Tree Stratum (Plot size: 30 feet)	% Cover	Species	Staus	Number of Dominant
1 Quercus nigra	25	Υ	FAC	Species that are OBL, FACW, or FAC: 3 (A)
2 Quercus virginiana	5	N	FACU	Total Number of Dominant
3				Species Across all Strata:3(B)
4				Percent of Dominant Species
5				that are OBL, FACW, or
6				FAC: 100.00% (A/B)
8		· ·		
	30	= Total Cover		
E00/ of total covery 15				Prevalence Index Worksheet
50% of total cover:15	20% OI U	otal cover:	6	
				Total % Cover of:
Sapling/Shrub Stratum (Plot size: 30 feet)	Υ	EAC	OBL species x 1 = 0
1 Quercus nigra 2	30	<u> </u>	FAC	FACW species $x 2 = 0$ FAC species $x 3 = 0$
3				FACU species $x = 4 = 0$
4				UPL species x 5 = 0
5				Column totals (A) 0 (B)
6				
7				Prevalence Index = B/A =
3				
	30	= Total Cover		
50% of total cover: 15	20% of to	otal cover:	6	Hydrophytic Vegetation Indicators:
				Rapid test for hydrophytic vegetation
Herb stratum (Plot size: 30 feet)			X Dominance test is >50%
1 Chasmanthium sessiliflorum	35	<u>Y</u>	FAC	Prevalence index is ≤3.0*
2 Sabal minor	5		FACU	Problematic hydrophytic
3 Rubus trivialis	5	<u>N</u>	FACU	vegetation* (explain)
 5	-	· ——		*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
6 6		· ·		Definitions of Four Vegetation Strata
7				Tree- Woody plants, excluding woody vines,
3				approximately 20 ft (6m) or more in height and
9				greater than 3 in. (7.6 cm) DBH.
)				
1				Sapling/Shrub - Woody plants, excluding vines,
2				less than 3 in. DBH and greater than 3.26 ft (1m)
50% of total cover: 22.5	45	= Total Cover		tall
50% of total cover: 22.5	20% OI U	otal cover:	9	Herb - All herbaceous (non-woody) plants,
Noody vine stratum (Plot size: 30 feet)			including herbaceous vines, regardless of size, and woody plants, except woody vines, less than
1	,			approximately 3 ft (1 m) in height.
2				Woody vine - All woody vines, regardless of
3				height.
4				
5				Hydrophytic
	0	= Total Cover		Vegetation Yes
50% of total cover: 0	20% of to	otal cover:	0	Present?
Remarks: (If observed, list morphological	adaptation	ns below).		

SOIL							Sampling Point:	DP6		
Profile Desc	cription: (Describe	to the c	lepth needed to	docume	ent the indica	ator or confirm t	he absence of	indicators.)		
							1	T		
Depth	<u>Matrix</u>	T 0/	0.1(Redox Features				D d .		
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks		
0-20	10YR 4/3	80	10YR 6/6	10	С	M	Clay Loam			
			5YR 4/4	10	С	М				
*Type: C = C	Concentration, D = D	enletion	RM = Reduced N	latriy M	I IS = Masked	Sand Grains	**Location: P	L = Pore Lining, M = Matrix		
	il Indicators:	Срісцоп,	Trivi – reduced is	natin, ivi	io – masica	Caria Granis.		r Problematic Hydric Soils:		
	sol (A1)		Polyv	alue Belo	ow Surface (S	88) (I RR S. T. U)		ck (A9) (LRR O)		
	c Epipedon (A2)			Polyvalue Below Surface (S8) (LRR S, T, U) Thin Dark Surface (S9) (LRR S, T, U)				2 cm Muck (A10) (LRR S)		
	k Histic (A3)				y Mineral (F1	-	Reduced Vertic(F18) (outside MLRA 150A,B)			
	rogen Sulfide (A4)				d Matrix (F2)	,	Piedmont Floodplain Soils (F19) (LRR P, S, T)			
	tified Layers (A5)			eted Mat			Anomolous Bright Loamy Soils (F20) (MLRA			
Orga	anic Bodies (A6) (LR	R P, T,	U) Redo	x Dark S	Surface (F6)		153B)			
5 cm	n Mucky Mineral (A7)	(LRR I	P, T, U) Deple	eted Dar	k Surface (F	7)	Red Parent Material (TF2)			
Muc	k Presence (A8) (LR	R U)	Redo	x Depre	ssions (F8)		Very Shallow Dark Surface (TF12)			
1 cm	Marl	Marl (F10) (LRR U)				Other (explain in remarks)				
Depl	leted Below Dark Su	rface (A	11) Deple	ted Och	ric (F11) (ML I	RA 151)				
Thic	Iron-l	Mangane	ese Masses	(F12) (LRR O, P,	T)	*Indicators of hydrophytic vegetation				
Coas	st Prairie Redox (A1	6) (MLR	A 150A) Umbi	ic Surfa	ce (F13) (LR	R P, T, U)		and weltand hydrology must be present unless disturbed or problematic		
	dy Mucky Mineral (S				(F17) (MLRA	-		unless disturbed of problematic		
	dy Gleyed Matrix (S4	!)		Reduced Vertic (F18) (MLRA 150A, 150B)						
	dy Redox (S5)			Piedmont Floodplain Soils (F19) (MLRA 149A) Anomolous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)						
	oped Matrix (S6)	D С Т		nolous B	Bright Loamy	Soils (F20) (MLR	A 149A, 153C,	153D)		
Dark	Surface (S7) (LRR	P, S, I,	u)							
Restrictive	Layer (if observed)	•								
Туре:						Hydric Soil	No			
	Depth (inches):			Present?						
Remarks:										



DP6 facing north taken 1/14/2021



DP6 facing east taken 1/14/2021



DP6 facing south taken 1/14/2021



DP6 facing west taken 1/14/2021



Soil profile at DP6 taken 1/14/2021