



January 22, 2021

Mr. Kirk
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Orleans, Louisiana 70

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

Dear Mr. Kirk:

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 (*Dichantherium 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



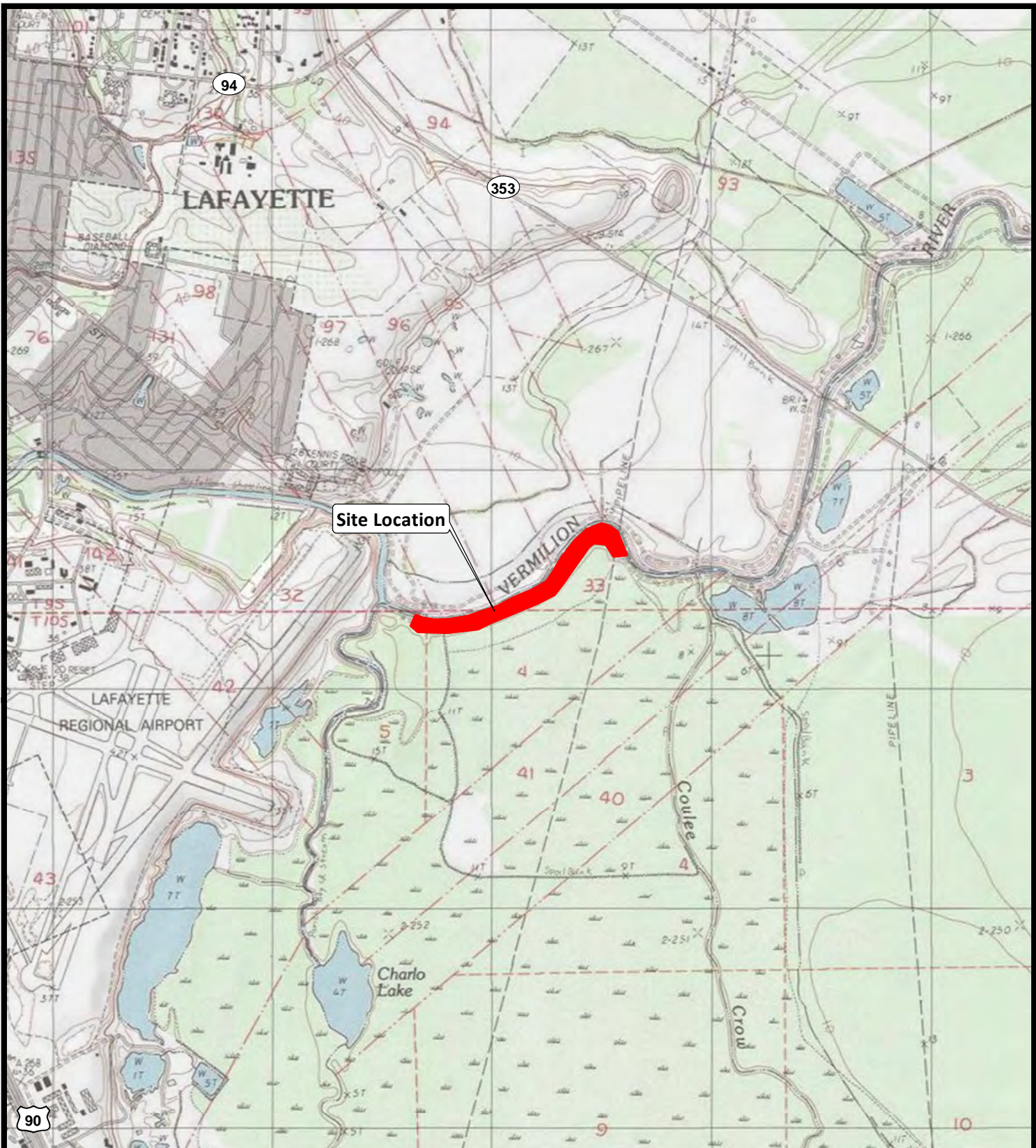
Olivia Barry
Environmental Specialist



Autry Akins, PWS
Environmental Scientist

ATTACHMENTS:

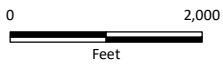
- FIGURE 1 – SITE LOCATION MAP**
- FIGURE 2 – WETLAND MAP**
- FIGURE 3 – FLAGGING KEY MAP**
- FIGURE 4 – INFRARED IMAGERY**
- FIGURE 5 – SOILS MAP**
- FIGURE 6 – LIDAR MAP**
- FIGURE 7 – NWI MAP**
- ORM WORKSHEET**
- WETLAND DETERMINATION DATA FORMS AND PHOTOGRAPHS**



Site Location



St. Martin Parish



USGS 24K Series Topo Map, Broussard, LA.



Southeast Engineers, LLC
Lafayette, Louisiana

Vermillion River Spoil Bank Restoration

Site Location Map

St. Martin Parish

Drawn: OPB

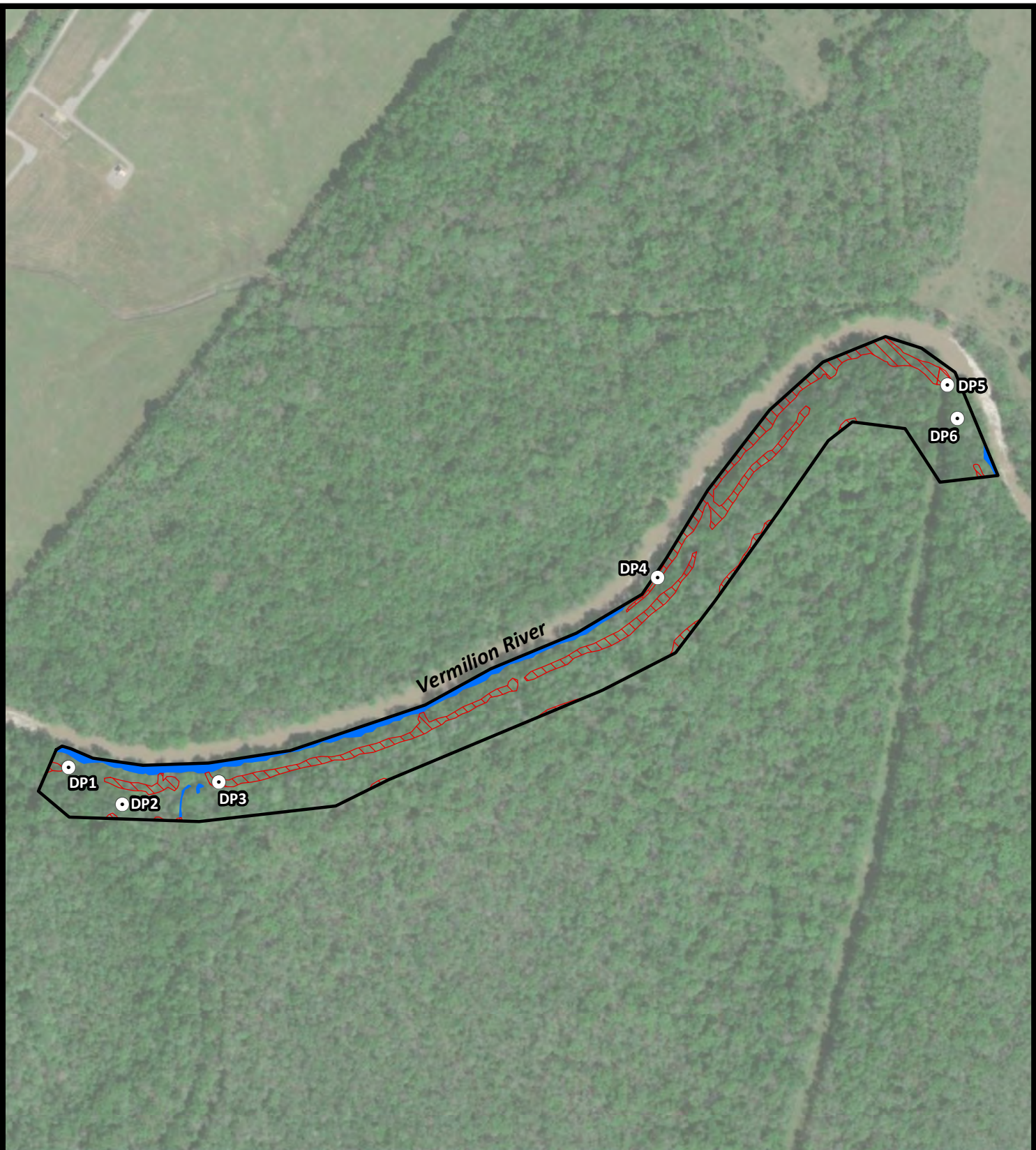
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Date: 1/13/2020

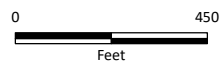
Approved: AGA

Dwg. No.:
SO3101-18620-A01

Figure 1



-  DP
-  Project Area (18.52 Acres)
-  Wetlands (2.78 Acres)
-  Non-wetland Waters of the US (1.00 Acre)



ESRI World Imagery 2019

Southeast Engineers, LLC

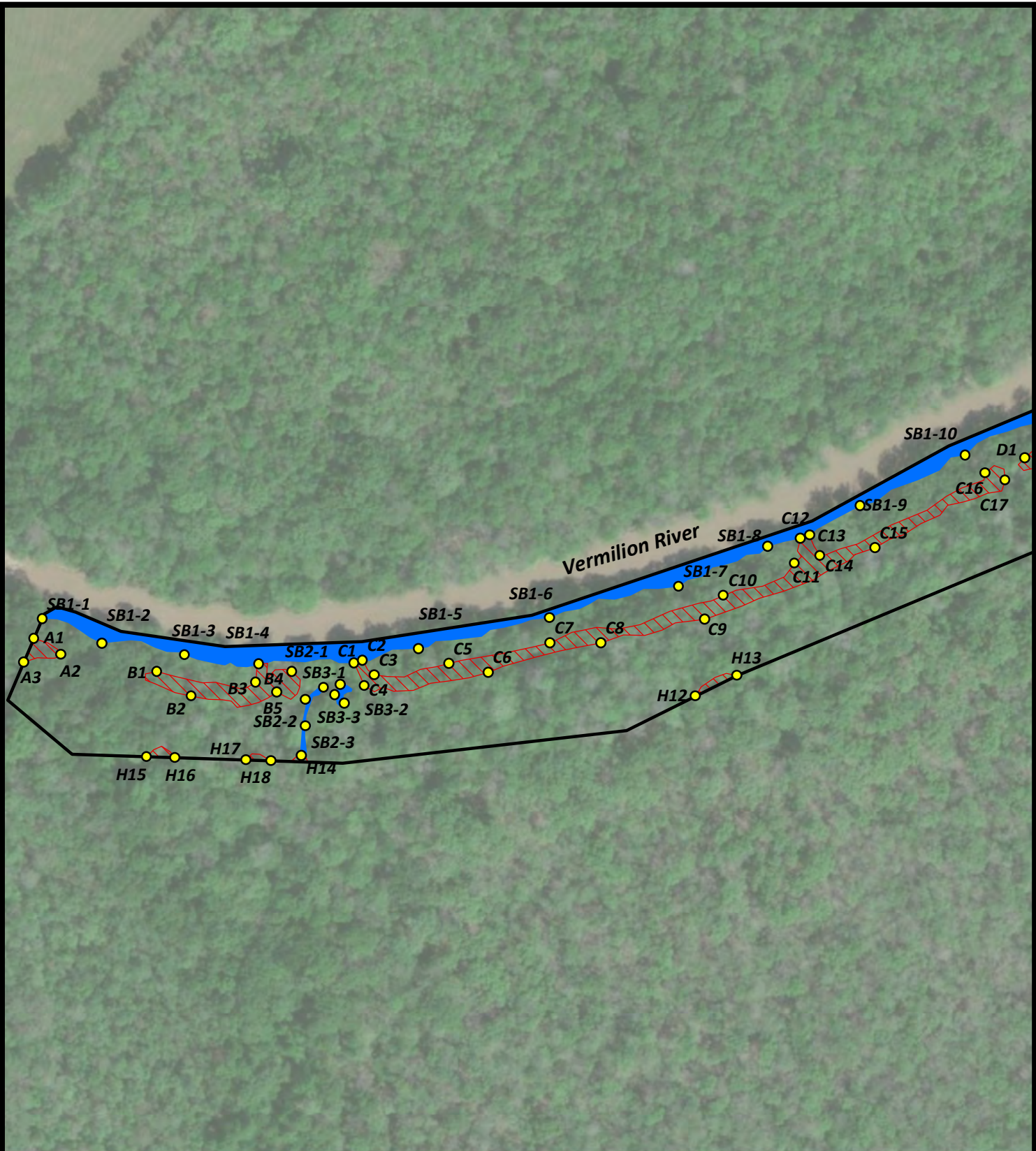
Lafayette, Louisiana

Vermillion River Spoil Bank Restoration

Wetland Map

St. Martin Parish

Drawn: OPB	Checked: CAL
Date: 1/15/2020	Approved: AGA
Dwg. No.: SO3101-18620-A02	Figure 2



- Flags
- Project Area (18.52 Acres)
- Wetlands (2.78 Acres)
- Non-wetland Waters of the US (1.00 Acre)



ESRI World Imagery 2019

Southeast Engineers, LLC
Lafayette, Louisiana

Vermillion River Spoil Bank Restoration

Flagging Key Map

St. Martin Parish



Drawn: OPB

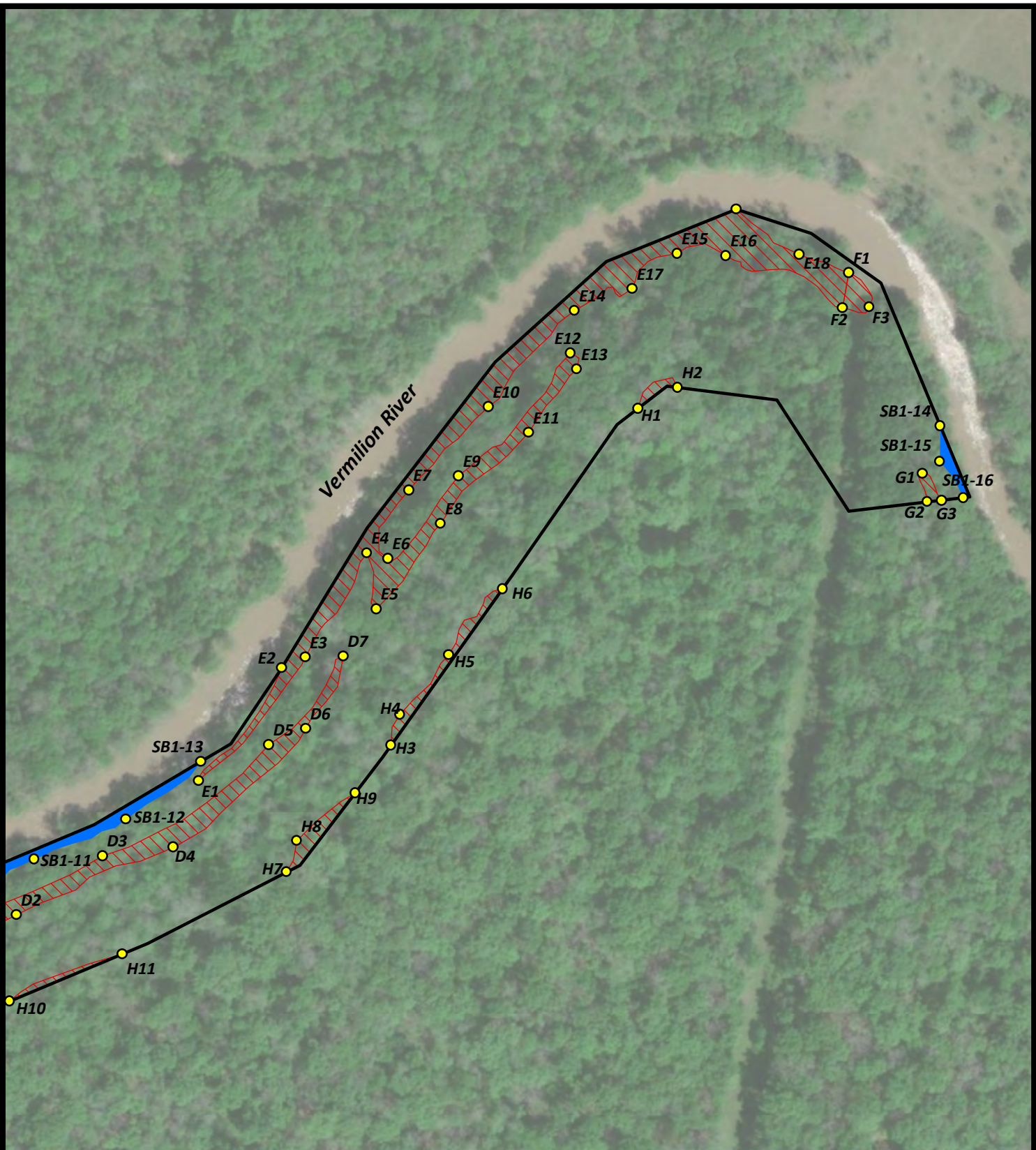
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Date: 1/15/2020

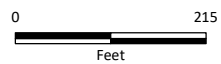
Approved: AGA

Dwg. No.:
SO3101-18620-A03

Figure 3A



-  Flags
-  Project Area (18.52 Acres)
-  Wetlands (2.78 Acres)
-  Non-wetland Waters of the US (1.00 Acre)



ESRI World Imagery 2019

Southeast Engineers, LLC
Lafayette, Louisiana

Vermilion River Spoil Bank Restoration

Flagging Key Map


St. Martin Parish

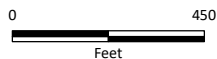


Drawn: OPB	Checked: CAL
Date: 1/15/2020	Approved: AGA
Dwg. No.: SO3101-18620-A08	Figure 3B

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 Project Area (18.52 Acres)



USA NAIP Imagery 2019

Southeast Engineers, LLC
Lafayette, Louisiana

Vermillion River Spoil Bank Restoration

Infrared Imagery Map

St. Martin Parish



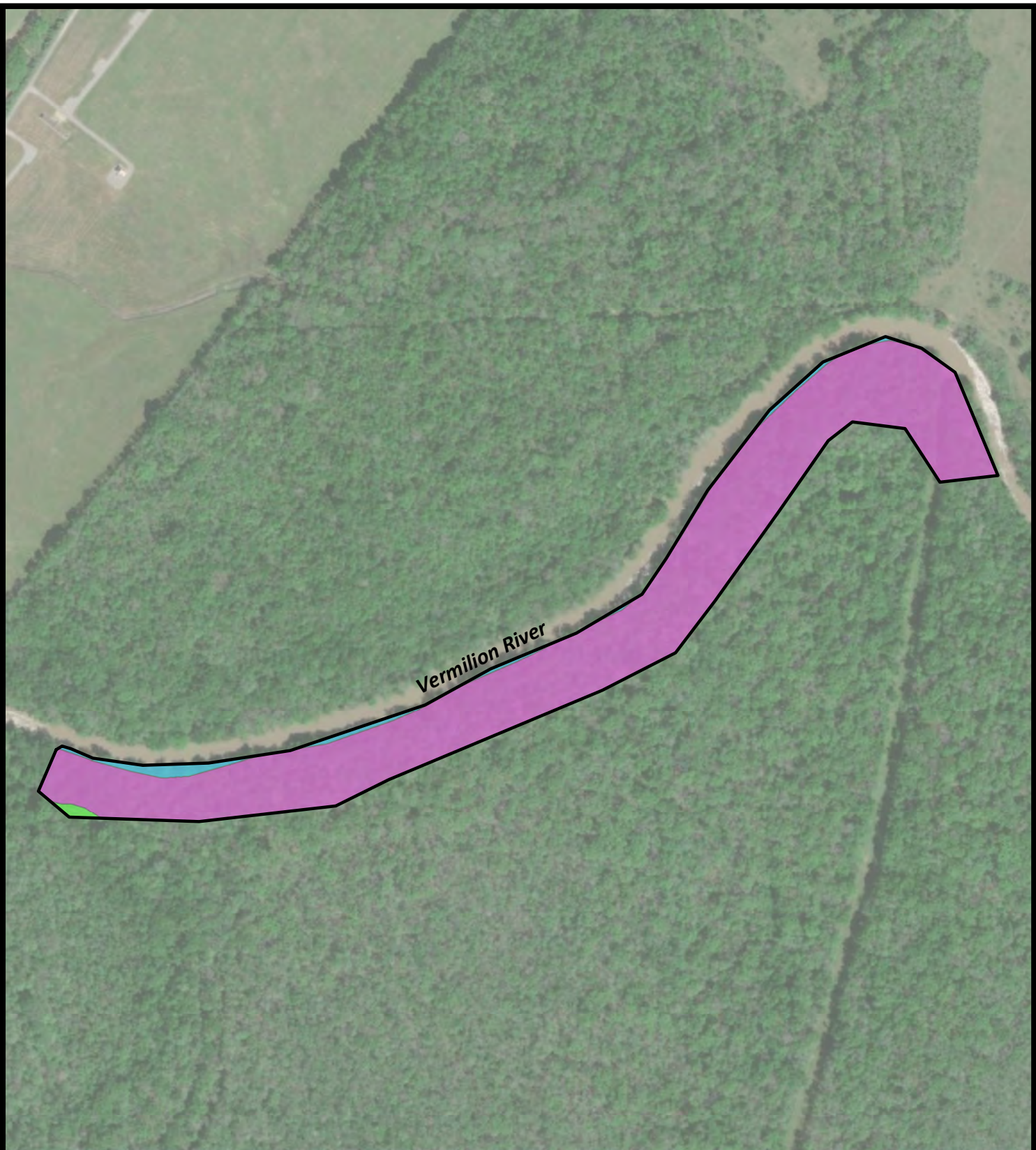
Drawn: OPB
Date: 1/13/2020


Checked: CAL
Approved: AGA

Dwg. No.:
SO3101-18620-A04




Figure 4

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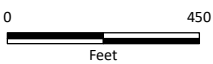


 Project Area (18.52 Acres)

Soil Data

-  Ga: Gallion silt loam
-  Sk: Sharkey clay, 0 to 1 percent slopes, frequently flooded
-  W: Water

U.S. Department of Agriculture, Natural Resources
Conservation Service, Soil Survey Geographic (SSURGO)
database for St. Martin Parish, LA.



Southeast Engineers, LLC
Lafayette, Louisiana

Vermillion River Spoil Bank Restoration

Soils Map

St. Martin Parish

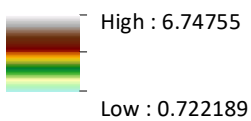


Drawn: OPB	Checked: CAL
Date: 1/13/2020	Approved: AGA
Dwg. No.: SO3101-18620-A05	Figure 5



 Project Area (18.52 Acres)

Elevation (Meters)



ArcGIS Imagery Service: WorldElevation/Terrain

Southeast Engineers, LLC
Lafayette, Louisiana

Vermillion River Spoil Bank Restoration

Lidar Map

St. Martin Parish



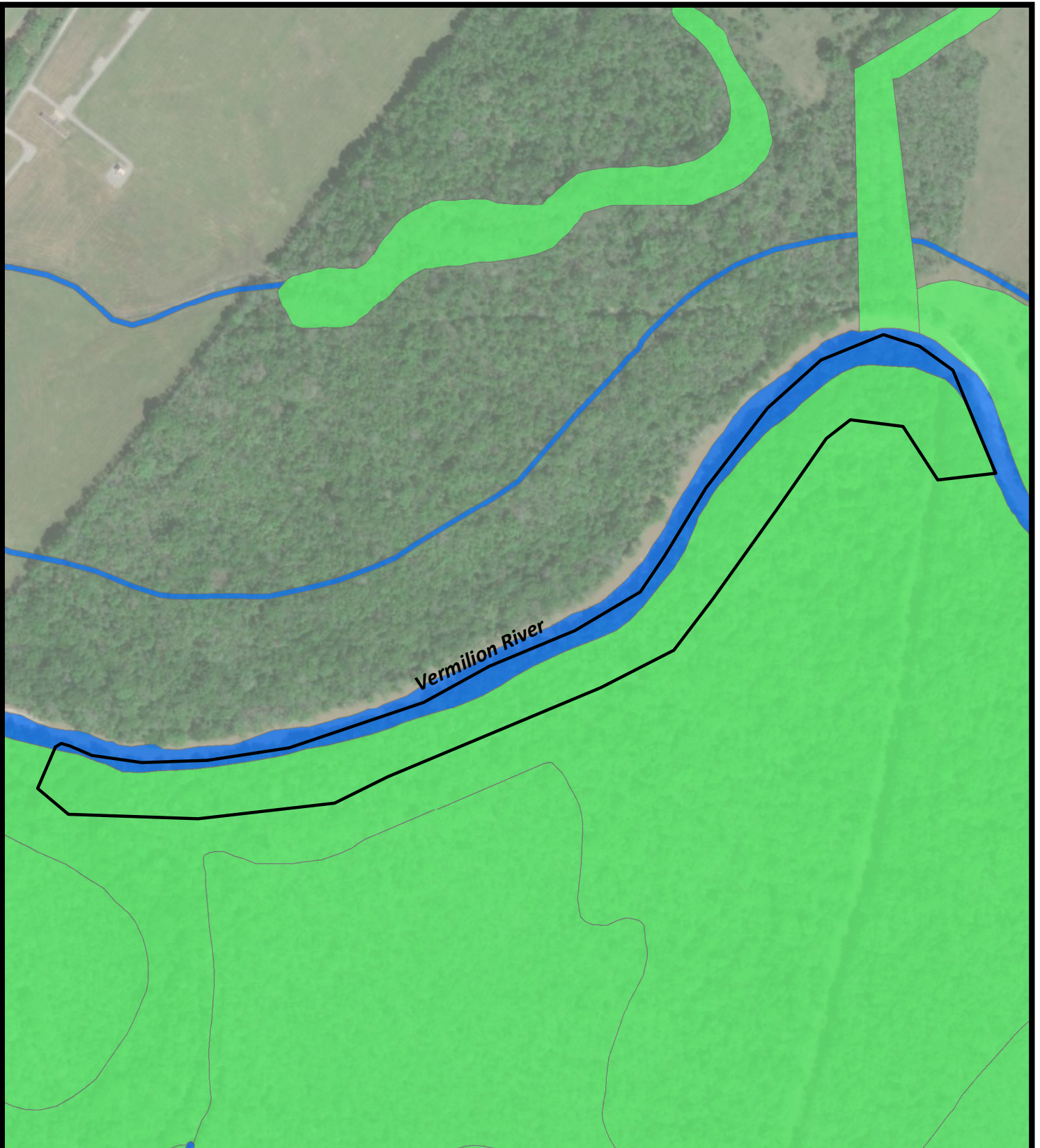
Drawn: OPB
Date: 1/13/2020










Checked: CAL
Approved: AGA

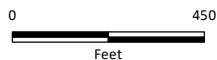
Dwg. No.:
SO3101-18620-A06

Figure 6

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- | | |
|-------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
|  Project Area (18.52 Acres) |  Freshwater Forested/Shrub Wetland |
| NWI Data |  Freshwater Pond |
|  Estuarine and Marine Deepwater |  Lake |
|  Estuarine and Marine Wetland |  Other |
|  Freshwater Emergent Wetland |  Riverine |



- ESRI World Imagery 2018.
- U.S. Fish and Wildlife Service, National Wetlands Inventory, <http://www.fws.gov/wetland/>

Southeast Engineers, LLC

Lafayette, Louisiana

Vermillion River Spoil Bank Restoration

NWI Map

St. Martin Parish



Drawn: OPB
Date: 1/13/2020

Checked: CAL
Approved: AGA

Dwg. No.:
SO3101-18620-A07

Figure 7

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site Vermilion River Spoil Bank Restoration City/County: St. Martin Parish Sampling Date: 01/14/2021
 Applicant/Owner: Southeast Engineers, LLC State: Louisiana Sampling Point: DP1
 Investigator(s): Olivia Barry & Cliff Johnson Section, Township, Range: Section 4, T10S, R5E
 Landform (hillslope, terrace, etc.): Ridge Local relief (concave, convex, none): Convex Slope (%): 0-5
 Subregion (LRR or MLRA): 131A Lat: 30° 12' 36.4319" N Long: 91° 58' 30.2119" W Datum: NAD 83
 Soil Map Unit Name Ga: Gallion silt loam NWI Classification: PFO1A

Are climatic/hydrologic conditions of the site typical for this time of the year? **Yes** (If no, explain in remarks)
 Are vegetation , soil , or hydrology significantly disturbed? Are "normal circumstances" present? **Yes**
 Are vegetation , soil , or hydrology naturally problematic? (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS -- Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic vegetation present? <u>Yes</u>	Is the Sampled Area within a Wetland? No
Hydric soil present? <u>Yes</u>	
Indicators of wetland hydrology present? <u>No</u>	

Remarks:

 Point located on a convex ridge along the south bank of the Vermilion River. Hydrology was not met at this location.

HYDROLOGY

Wetland Hydrology Indicators:	
<u>Primary Indicators (minimum of one is required; check all that ap</u>	<u>Secondary Indicators (minimum of two required)</u>
<u> </u> Surface Water (A1)	<u> </u> Aquatic Fauna (B13)
<u> </u> High Water Table (A2)	<u> </u> Marl Deposits (B15) (LRR U)
<u> </u> Saturation (A3)	<u> </u> Hydrogen Sulfide Odor (C1)
<u> </u> Water Marks (B1)	<u> </u> Oxidized Rhizospheres on Living Roots (C3)
<u> </u> Sediment Deposits (B2)	<u> </u> Presence of Reduced Iron (C4)
<u> </u> Drift Deposits (B3)	<u> </u> Recent Iron Reduction in Tilled Soils (C6)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Thin Muck Surface (C7)
<u> </u> Iron Deposits (B5)	<u> </u> Other (Explain in Remarks)
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> Surface Soil Cracks (B6)
<u> </u> Water-Stained Leaves (B9)	<u> </u> Sparsely Vegetated Concave Surface (B8)
	<u> </u> Drainage Patterns (B10)
	<u> </u> Dry-Season Water Table (C2)
	<u> </u> Moss Trim Lines (B16)
	<u> </u> Crayfish Burrows (C8)
	<u> </u> Saturation Visible on Aerial Imagery (C9)
	<u> </u> Geomorphic Position (D2)
	<u> </u> Shallow Aquitard (D3)
	<u> </u> <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
	<u> </u> Sphagnum moss (D8) (LRR T, U)

Field Observations:	Wetland Hydrology Present? No
Surface water present? Yes <u> </u> No <u> X </u> Depth (inches): <u> </u>	
Water table present? Yes <u> </u> No <u> X </u> Depth (inches): <u> </u>	
Saturation present? Yes <u> </u> No <u> X </u> Depth (inches): <u> </u> (includes capillary fringe)	

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Saturated soils observed below 14 inches and no water table above or below the saturation was observed.
 FAC-Neutral Test: 2-0

VEGETATION -- Use scientific names of plants.

Sampling Point: DP1

Tree Stratum (Plot size: 30 feet)		Absolute % Cover	Dominant Species	Indicator Staus
1	<i>Quercus nigra</i>	40	Y	FAC
2				
3				
4				
5				
6				
7				
8				
		40 = Total Cover		
50% of total cover: 20		20% of total cover: 8		

Sapling/Shrub Stratum (Plot size: 30 feet)		Absolute % Cover	Dominant Species	Indicator Staus
1	<i>Sabal minor</i>	20	Y	FACW
2				
3				
4				
5				
6				
7				
8				
		20 = Total Cover		
50% of total cover: 10		20% of total cover: 4		

Herb stratum (Plot size: 30 feet)		Absolute % Cover	Dominant Species	Indicator Staus
1	<i>Carex cherokeensis</i>	15	Y	FACW
2	<i>Chasmanthium sessiliflorum</i>	10	Y	FAC
3	<i>Chasmanthium latifolium</i>	10	Y	FAC
4	<i>Dichantheium dichotomum</i>	10	Y	FAC
5	<i>Rubus trivialis</i>	5	N	FACU
6				
7				
8				
9				
10				
11				
12				
		50 = Total Cover		
50% of total cover: 25		20% of total cover: 10		

Woody vine stratum (Plot size: 30 feet)		Absolute % Cover	Dominant Species	Indicator Staus
1	<i>Lygodium japonicum</i>	20	Y	FAC
2	<i>Smilax bona-nox</i>	5	N	FAC
3	<i>Campsis radicans</i>	5	N	FAC
4	<i>Toxicodendron radicans</i>	5	N	FAC
5				
		35 = Total Cover		
50% of total cover: 17.5		20% of total cover: 7		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across all Strata: 7 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species x 1 = 0

FACW species x 2 = 0

FAC species x 3 = 0

FACU species x 4 = 0

UPL species x 5 = 0

Column totals (A) 0 (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

 Rapid test for hydrophytic vegetation

Dominance test is >50%

 Prevalence index is ≤3.0*

 Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

Tree- Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and greater than 3 in. (7.6 cm) DBH.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.26 ft (1m) tall

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 height.

Hydrophytic Vegetation Present? Yes

Remarks: (If observed, list morphological adaptations below).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-20	10YR 4/2	70	10YR 5/8	10	C	PL/M	Silty Clay Loam	
			10YR 5/1	20	D	M		

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

<p>Hydric Soil Indicators:</p> <p><input type="checkbox"/> Histisol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>	<p>Indicators for Problematic Hydric Soils:</p> <p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input checked="" type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>	<p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic(F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (explain in remarks)</p> <p style="font-size: small; margin-top: 10px;">*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic</p>
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<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p style="padding-left: 40px;">Depth (inches): _____</p>	<p>Hydric Soil Present? Yes</p>
----------------------------------------------------------------------------------------------------------------------------	---------------------------------------------

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

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site Vermilion River Spoil Bank Restoration City/County: St. Martin Parish Sampling Date: 01/14/2021
 Applicant/Owner: Southeast Engineers, LLC State: Louisiana Sampling Point: DP2
 Investigator(s): Olivia Barry & Cliff Johnson Section, Township, Range: Section 4, T10S, R5E
 Landform (hillslope, terrace, etc.): Ridge Local relief (concave, convex, none): Convex Slope (%): 0-5
 Subregion (LRR or MLRA): 131A Lat: 30° 12' 35.1649" N Long: 91° 58' 28.1745" W Datum: NAD 83
 Soil Map Unit Name Ga: Gallion silt loam NWI Classification: PFO1A

Are climatic/hydrologic conditions of the site typical for this time of the year? **Yes** (If no, explain in remarks)
 Are vegetation , soil , or hydrology significantly disturbed? Are "normal circumstances" present? **Yes**
 Are vegetation , soil , or hydrology naturally problematic? (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS -- Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic vegetation present? <u>Yes</u>	Is the Sampled Area within a Wetland? No
Hydric soil present? <u>Yes</u>	
Indicators of wetland hydrology present? <u>No</u>	

Remarks:

Point located on a manmade spoil bank. No hydrology was observed.

HYDROLOGY

Wetland Hydrology Indicators:		
<u>Primary Indicators (minimum of one is required; check all that ap</u>	<u>Secondary Indicators (minimum of two required)</u>	
<u> </u> Surface Water (A1)	<u> </u> Aquatic Fauna (B13)	<u> </u> Surface Soil Cracks (B6)
<u> </u> High Water Table (A2)	<u> </u> Marl Deposits (B15) (LRR U)	<u> </u> Sparsely Vegetated Concave Surface (B8)
<u> </u> Saturation (A3)	<u> </u> Hydrogen Sulfide Odor (C1)	<u> </u> Drainage Patterns (B10)
<u> </u> Water Marks (B1)	<u> </u> Oxidized Rhizospheres on Living Roots (C3)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Sediment Deposits (B2)	<u> </u> Presence of Reduced Iron (C4)	<u> </u> Moss Trim Lines (B16)
<u> </u> Drift Deposits (B3)	<u> </u> Recent Iron Reduction in Tilled Soils (C6)	<u> </u> Crayfish Burrows (C8)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Thin Muck Surface (C7)	<u> </u> Saturation Visible on Aerial Imagery (C9)
<u> </u> Iron Deposits (B5)	<u> </u> Other (Explain in Remarks)	<u> </u> Geomorphic Position (D2)
<u> </u> Inundation Visible on Aerial Imagery (B7)		<u> </u> Shallow Aquitard (D3)
<u> </u> Water-Stained Leaves (B9)		<u> </u> FAC-Neutral Test (D5)
		<u> </u> Sphagnum moss (D8) (LRR T, U)

Field Observations:	Wetland Hydrology Present? No
Surface water present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u>	
Water table present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u>	
Saturation present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe)	

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION -- Use scientific names of plants.

Sampling Point: DP2

<u>Tree Stratum</u> (Plot size: <u>30 feet</u>)		Absolute % Cover	Dominant Species	Indicator Staus
1	<u>Quercus nigra</u>	<u>40</u>	<u>Y</u>	<u>FAC</u>
2	<u>Celtis laevigata</u>	<u>10</u>	<u>N</u>	<u>FACW</u>
3	<u>Ligustrum japonicum</u>	<u>10</u>	<u>N</u>	<u>FAC</u>
4	<u>Gleditsia triacanthos</u>	<u>5</u>	<u>N</u>	<u>FAC</u>
5	<u>Ulmus americana</u>	<u>5</u>	<u>N</u>	<u>FAC</u>
6				
7				
8				
		<u>70</u>	= Total Cover	
50% of total cover: <u>35</u>		20% of total cover: <u>14</u>		

<u>Sapling/Shrub Stratum</u> (Plot size: <u>30 feet</u>)		Absolute % Cover	Dominant Species	Indicator Staus
1	<u>Ligustrum sinense</u>	<u>30</u>	<u>Y</u>	<u>FAC</u>
2	<u>Quercus nigra</u>	<u>10</u>	<u>N</u>	<u>FAC</u>
3	<u>Prunus serotina</u>	<u>10</u>	<u>N</u>	<u>FACU</u>
4	<u>Ligustrum japonicum</u>	<u>5</u>	<u>N</u>	<u>FAC</u>
5	<u>Juniperus virginiana</u>	<u>5</u>	<u>N</u>	<u>FACU</u>
6				
7				
8				
		<u>60</u>	= Total Cover	
50% of total cover: <u>30</u>		20% of total cover: <u>12</u>		

<u>Herb stratum</u> (Plot size: <u>30 feet</u>)		Absolute % Cover	Dominant Species	Indicator Staus
1	<u>Prunus serotina</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>
2	<u>Carex cherokeensis</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>
3	<u>Smilax bona-nox</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>
4				
5				
6				
7				
8				
9				
10				
11				
12				
		<u>30</u>	= Total Cover	
50% of total cover: <u>15</u>		20% of total cover: <u>6</u>		

<u>Woody vine stratum</u> (Plot size: <u>30 feet</u>)		Absolute % Cover	Dominant Species	Indicator Staus
1	<u>Rubus trivialis</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>
2	<u>Campsis radicans</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>
3				
4				
5				
		<u>15</u>	= Total Cover	
50% of total cover: <u>7.5</u>		20% of total cover: <u>3</u>		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across all Strata: 7 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 71.43% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species x 1 = 0

FACW species x 2 = 0

FAC species x 3 = 0

FACU species x 4 = 0

UPL species x 5 = 0

Column totals (A) 0 (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

Rapid test for hydrophytic vegetation

Dominance test is >50%

Prevalence index is ≤3.0*

Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

Tree- Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and greater than 3 in. (7.6 cm) DBH.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.26 ft (1m) tall

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 height.

Hydrophytic Vegetation Present? **Yes**

Remarks: (If observed, list morphological adaptations below).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-10	10YR 3/1	95	10YR 4/4	5	C	M	Silty Clay Loam	
10-20	10YR 4/1	95	10YR 4/6	5	C	M	Silty Clay	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

<p>Hydric Soil Indicators:</p> <p><input type="checkbox"/> Histisol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>	<p>Indicators for Problematic Hydric Soils:</p> <p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input checked="" type="checkbox"/> Depleted Matrix (F3)</p> <p><input checked="" type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>	<p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic(F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (explain in remarks)</p> <p style="font-size: small;">*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic</p>
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<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p style="padding-left: 40px;">Depth (inches): _____</p>	<p>Hydric Soil Present? Yes</p>
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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

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site Vermilion River Spoil Bank Restoration City/County: St. Martin Parish Sampling Date: 01/14/2021
 Applicant/Owner: Southeast Engineers, LLC State: Louisiana Sampling Point: DP3
 Investigator(s): Olivia Barry & Cliff Johnson Section, Township, Range: Section 4, T10S, R5E
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-5
 Subregion (LRR or MLRA): 131A Lat: 30° 12' 35.9019" N Long: 91° 58' 24.4653" W Datum: NAD 83
 Soil Map Unit Name _____ Ga: Gallion silt loam NWI Classification: PFO1A

Are climatic/hydrologic conditions of the site typical for this time of the year? **Yes** (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? **Yes**
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS -- Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic vegetation present? <u>Yes</u> Hydric soil present? <u>Yes</u> Indicators of wetland hydrology present? <u>Yes</u>	Is the Sampled Area within a Wetland? Yes
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that ap	Secondary Indicators (minimum of two required)
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input checked="" type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input checked="" type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Moss Trim Lines (B16)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input checked="" type="checkbox"/> Geomorphic Position (D2)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
	<input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)

Field Observations: Surface water present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>2</u> Water table present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>8</u> Saturation present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0-20</u> (includes capillary fringe)	Wetland Hydrology Present? Yes
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Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

FAC-Neutral Test: 4-0

VEGETATION -- Use scientific names of plants.

Sampling Point: DP3

<u>Tree Stratum</u> (Plot size: <u>30 feet</u>)		Absolute % Cover	Dominant Species	Indicator Staus
1	<u>Quercus laurifolia</u>	20	Y	FACW
2	<u>Quercus nigra</u>	10	Y	FAC
3	<u>Celtis laevigata</u>	5	N	FACW
4				
5				
6				
7				
8				
		35 = Total Cover		
50% of total cover: <u>17.5</u>		20% of total cover: <u>7</u>		

<u>Sapling/Shrub Stratum</u> (Plot size: <u>30 feet</u>)		Absolute % Cover	Dominant Species	Indicator Staus
1	<u>Quercus nigra</u>	5	Y	FAC
2	<u>Quercus laurifolia</u>	5	Y	FACW
3				
4				
5				
6				
7				
8				
		10 = Total Cover		
50% of total cover: <u>5</u>		20% of total cover: <u>2</u>		

<u>Herb stratum</u> (Plot size: <u>30 feet</u>)		Absolute % Cover	Dominant Species	Indicator Staus
1	<u>Carex cherokeensis</u>	5	Y	FACW
2	<u>Sabal minor</u>	5	Y	FACW
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
		10 = Total Cover		
50% of total cover: <u>5</u>		20% of total cover: <u>2</u>		

<u>Woody vine stratum</u> (Plot size: <u>30 feet</u>)		Absolute % Cover	Dominant Species	Indicator Staus
1	<u>Smilax bona-nox</u>	5	Y	FAC
2				
3				
4				
5				
		5 = Total Cover		
50% of total cover: <u>2.5</u>		20% of total cover: <u>1</u>		

Dominance Test Worksheet	
Number of Dominant Species that are OBL, FACW, or FAC:	<u>7</u> (A)
Total Number of Dominant Species Across all Strata:	<u>7</u> (B)
Percent of Dominant Species that are OBL, FACW, or FAC:	<u>100.00%</u> (A/B)

Prevalence Index Worksheet	
Total % Cover of:	
OBL species	<u>0</u>
FACW species	<u>0</u>
FAC species	<u>0</u>
FACU species	<u>0</u>
UPL species	<u>0</u>
Column totals	<u>0</u> (B)
Prevalence Index = B/A = <u> </u>	

Hydrophytic Vegetation Indicators:
 Rapid test for hydrophytic vegetation
 Dominance test is >50%
 Prevalence index is ≤3.0*
 Problematic hydrophytic vegetation* (explain)
 *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata
Tree- Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and greater than 3 in. (7.6 cm) DBH.
Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.26 ft (1m) tall
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 height.

Hydrophytic Vegetation Present? **Yes**

Remarks: (If observed, list morphological adaptations below).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-20	10YR 4/2	80	10YR 4/6	10	C	PL/M	Silt Loam	
			10YR 5/1	10	D	M		

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

<p>Hydric Soil Indicators:</p> <p><input type="checkbox"/> Histisol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>	<p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input checked="" type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>	<p>Indicators for Problematic Hydric Soils:</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic(F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (explain in remarks)</p> <p style="font-size: small; margin-top: 10px;">*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic</p>
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<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p style="padding-left: 40px;">Depth (inches): _____</p>	<p>Hydric Soil Present? Yes</p>
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Remarks:



DP3 facing east taken 1/14/2021



DP3 facing south taken 1/14/2021



Soil profile at DP3 taken 1/14/2021

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site Vermilion River Spoil Bank Restoration City/County: St. Martin Parish Sampling Date: 01/14/2021
 Applicant/Owner: Southeast Engineers, LLC State: Louisiana Sampling Point: DP4
 Investigator(s): Olivia Barry & Cliff Johnson Section, Township, Range: Section 33, T10S, R5E
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): 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: Gallion silt loam NWI Classification: PFO1A

Are climatic/hydrologic conditions of the site typical for this time of the year? **Yes** (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? **Yes**
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS -- Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic vegetation present? <u>Yes</u> Hydric soil present? <u>Yes</u> Indicators of wetland hydrology present? <u>Yes</u>	Is the Sampled Area within a Wetland? Yes
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that ap	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input checked="" type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input checked="" type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input checked="" type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Moss Trim Lines (B16)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input checked="" type="checkbox"/> Geomorphic Position (D2)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
	<input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)

Field Observations: Surface water present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water table present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes
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Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

FAC-Neutral Test: 3-0

VEGETATION -- Use scientific names of plants.

Sampling Point: DP4

<u>Tree Stratum</u> (Plot size: <u>30 feet</u>)		Absolute % Cover	Dominant Species	Indicator Staus
1	<i>Celtis laevigata</i>	15	Y	FACW
2	<i>Ulmus americana</i>	10	Y	FAC
3	<i>Fraxinus pennsylvanica</i>	5	N	FACW
4				
5				
6				
7				
8				
		<u>30</u> = Total Cover		
50% of total cover: <u>15</u>		20% of total cover: <u>6</u>		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across all Strata: 5 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

<u>Sapling/Shrub Stratum</u> (Plot size: <u>30 feet</u>)		Absolute % Cover	Dominant Species	Indicator Staus
1				
2				
3				
4				
5				
6				
7				
8				
		<u>0</u> = Total Cover		
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>		

Prevalence Index Worksheet

Total % Cover of:

OBL species x 1 = 0

FACW species x 2 = 0

FAC species x 3 = 0

FACU species x 4 = 0

UPL species x 5 = 0

Column totals (A) 0 (B)

Prevalence Index = B/A =

<u>Herb stratum</u> (Plot size: <u>30 feet</u>)		Absolute % Cover	Dominant Species	Indicator Staus
1	<i>Carex cherokeensis</i>	20	Y	FACW
2	<i>Sabal minor</i>	5	Y	FACW
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
		<u>25</u> = Total Cover		
50% of total cover: <u>12.5</u>		20% of total cover: <u>5</u>		

Hydrophytic Vegetation Indicators:

Rapid test for hydrophytic vegetation

Dominance test is >50%

Prevalence index is ≤3.0*

Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

<u>Woody vine stratum</u> (Plot size: <u>30 feet</u>)		Absolute % Cover	Dominant Species	Indicator Staus
1	<i>Smilax bona-nox</i>	10	Y	FAC
2				
3				
4				
5				
		<u>10</u> = Total Cover		
50% of total cover: <u>5</u>		20% of total cover: <u>2</u>		

Definitions of Four Vegetation Strata

Tree- Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and greater than 3 in. (7.6 cm) DBH.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.26 ft (1m) tall

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 height.

Hydrophytic Vegetation Present? Yes

Remarks: (If observed, list morphological adaptations below).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-20	10YR 4/2	90	10YR 3/6	10	C	M	Silty Clay Loam	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

<p>Hydric Soil Indicators:</p> <p><input type="checkbox"/> Histisol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>	<p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input checked="" type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>	<p>Indicators for Problematic Hydric Soils:</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic(F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (explain in remarks)</p> <p style="font-size: small; margin-top: 10px;">*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic</p>
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<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p style="padding-left: 40px;">Depth (inches): _____</p>	<p>Hydric Soil Present? Yes</p>
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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

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site Vermilion River Spoil Bank Restoration City/County: St. Martin Parish Sampling Date: 01/14/2021
 Applicant/Owner: Southeast Engineers, LLC State: Louisiana Sampling Point: DP5
 Investigator(s): Olivia Barry & Cliff Johnson Section, Township, Range: Section 33, T10S, R5E
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-5
 Subregion (LRR or MLRA): 131A Lat: 30° 12' 48.8601" N Long: 91° 57' 56.4301" W Datum: NAD 83
 Soil Map Unit Name _____ Ga: Gallion silt loam NWI Classification: PFO1A

Are climatic/hydrologic conditions of the site typical for this time of the year? **Yes** (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? **Yes**
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS -- Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic vegetation present? <u>Yes</u> Hydric soil present? <u>Yes</u> Indicators of wetland hydrology present? <u>Yes</u>	Is the Sampled Area within a Wetland? Yes
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that ap	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)

Field Observations: Surface water present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water table present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0-20</u> (includes capillary fringe)	Wetland Hydrology Present? Yes
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Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

FAC-Neutral Test: 1-0

VEGETATION -- Use scientific names of plants.

Sampling Point: DP5

Tree Stratum	(Plot size: 30 feet)	Absolute % Cover	Dominant Species	Indicator Staus
1				
2				
3				
4				
5				
6				
7				
8				
		0 = Total Cover		
50% of total cover: 0		20% of total cover: 0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across all Strata: 1 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Sapling/Shrub Stratum	(Plot size: 30 feet)	Absolute % Cover	Dominant Species	Indicator Staus
1				
2				
3				
4				
5				
6				
7				
8				
		0 = Total Cover		
50% of total cover: 0		20% of total cover: 0		

Prevalence Index Worksheet

Total % Cover of:

OBL species x 1 = 0

FACW species x 2 = 0

FAC species x 3 = 0

FACU species x 4 = 0

UPL species x 5 = 0

Column totals (A) 0 (B)

Prevalence Index = B/A =

Herb stratum	(Plot size: 30 feet)	Absolute % Cover	Dominant Species	Indicator Staus
1	<i>Carex cherokeensis</i>	70	Y	FACW
2	<i>Smilax bona-nox</i>	15	N	FAC
3	<i>Rubus argutus</i>	15	N	FAC
4	<i>Sabal minor</i>	5	N	FACW
5	<i>Cornus drummondii</i>	5	N	FAC
6				
7				
8				
9				
10				
11				
12				
		110 = Total Cover		
50% of total cover: 55		20% of total cover: 22		

Hydrophytic Vegetation Indicators:

 Rapid test for hydrophytic vegetation

Dominance test is >50%

 Prevalence index is ≤3.0*

 Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Woody vine stratum	(Plot size: 30 feet)	Absolute % Cover	Dominant Species	Indicator Staus
1				
2				
3				
4				
5				
		0 = Total Cover		
50% of total cover: 0		20% of total cover: 0		

Definitions of Four Vegetation Strata

Tree- Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and greater than 3 in. (7.6 cm) DBH.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.26 ft (1m) tall

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 height.

Hydrophytic Vegetation Present? Yes

Remarks: (If observed, list morphological adaptations below).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-20	10YR 4/2	80	5YR 4/4	20	C	M	Clay Loam	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

<p>Hydric Soil Indicators:</p> <p><input type="checkbox"/> Histisol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>	<p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input checked="" type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomolous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>	<p>Indicators for Problematic Hydric Soils:</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic(F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomolous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (explain in remarks)</p> <p style="font-size: small; margin-top: 10px;">*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic</p>
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<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p style="padding-left: 40px;">Depth (inches): _____</p>	<p>Hydric Soil Present? Yes</p>
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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

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site Vermilion River Spoil Bank Restoration City/County: St. Martin Parish Sampling Date: 01/14/2021
 Applicant/Owner: Southeast Engineers, LLC State: Louisiana Sampling Point: DP6
 Investigator(s): Olivia Barry & Cliff Johnson Section, Township, Range: Section 33, T10S, R5E
 Landform (hillslope, terrace, etc.): Plain Local relief (concave, convex, none): 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: Gallion silt loam NWI Classification: PFO1A

Are climatic/hydrologic conditions of the site typical for this time of the year? **Yes** (If no, explain in remarks)
 Are vegetation , soil , or hydrology significantly disturbed? Are "normal circumstances" present? **Yes**
 Are vegetation , soil , or hydrology naturally problematic? (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS -- Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic vegetation present? <u>Yes</u>	Is the Sampled Area within a Wetland? No
Hydric soil present? <u>No</u>	
Indicators of wetland hydrology present? <u>No</u>	

Remarks:

Point located in a forested area. No hydrology was observed.

HYDROLOGY

Wetland Hydrology Indicators:		
<u>Primary Indicators (minimum of one is required; check all that ap</u>	<u>Secondary Indicators (minimum of two required)</u>	
<u> </u> Surface Water (A1)	<u> </u> Aquatic Fauna (B13)	<u> </u> Surface Soil Cracks (B6)
<u> </u> High Water Table (A2)	<u> </u> Marl Deposits (B15) (LRR U)	<u> </u> Sparsely Vegetated Concave Surface (B8)
<u> </u> Saturation (A3)	<u> </u> Hydrogen Sulfide Odor (C1)	<u> </u> Drainage Patterns (B10)
<u> </u> Water Marks (B1)	<u> </u> Oxidized Rhizospheres on Living Roots (C3)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Sediment Deposits (B2)	<u> </u> Presence of Reduced Iron (C4)	<u> </u> Moss Trim Lines (B16)
<u> </u> Drift Deposits (B3)	<u> </u> Recent Iron Reduction in Tilled Soils (C6)	<u> </u> Crayfish Burrows (C8)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Thin Muck Surface (C7)	<u> </u> Saturation Visible on Aerial Imagery (C9)
<u> </u> Iron Deposits (B5)	<u> </u> Other (Explain in Remarks)	<u> </u> Geomorphic Position (D2)
<u> </u> Inundation Visible on Aerial Imagery (B7)		<u> </u> Shallow Aquitard (D3)
<u> </u> Water-Stained Leaves (B9)		<u> </u> FAC-Neutral Test (D5)
		<u> </u> Sphagnum moss (D8) (LRR T, U)

Field Observations:	Wetland Hydrology Present? No
Surface water present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u>	
Water table present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u>	
Saturation present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe)	

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION -- Use scientific names of plants.

Sampling Point: DP6

<u>Tree Stratum</u> (Plot size: <u>30 feet</u>)		Absolute % Cover	Dominant Species	Indicator Staus
1	<u>Quercus nigra</u>	25	Y	FAC
2	<u>Quercus virginiana</u>	5	N	FACU
3				
4				
5				
6				
7				
8				
		30 = Total Cover		
50% of total cover: <u>15</u>		20% of total cover: <u>6</u>		

<u>Sapling/Shrub Stratum</u> (Plot size: <u>30 feet</u>)		Absolute % Cover	Dominant Species	Indicator Staus
1	<u>Quercus nigra</u>	30	Y	FAC
2				
3				
4				
5				
6				
7				
8				
		30 = Total Cover		
50% of total cover: <u>15</u>		20% of total cover: <u>6</u>		

<u>Herb stratum</u> (Plot size: <u>30 feet</u>)		Absolute % Cover	Dominant Species	Indicator Staus
1	<u>Chasmanthium sessiliflorum</u>	35	Y	FAC
2	<u>Sabal minor</u>	5	N	FACW
3	<u>Rubus trivialis</u>	5	N	FACU
4				
5				
6				
7				
8				
9				
10				
11				
12				
		45 = Total Cover		
50% of total cover: <u>22.5</u>		20% of total cover: <u>9</u>		

<u>Woody vine stratum</u> (Plot size: <u>30 feet</u>)		Absolute % Cover	Dominant Species	Indicator Staus
1				
2				
3				
4				
5				
		0 = Total Cover		
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across all Strata: 3 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species x 1 = 0

FACW species x 2 = 0

FAC species x 3 = 0

FACU species x 4 = 0

UPL species x 5 = 0

Column totals (A) 0 (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

 Rapid test for hydrophytic vegetation

Dominance test is >50%

 Prevalence index is ≤3.0*

 Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

Tree- Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and greater than 3 in. (7.6 cm) DBH.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.26 ft (1m) tall

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 height.

Hydrophytic Vegetation Present? Yes

Remarks: (If observed, list morphological adaptations below).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-20	10YR 4/3	80	10YR 6/6	10	C	M	Clay Loam	
			5YR 4/4	10	C	M		

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

<p>Hydric Soil Indicators:</p> <p><input type="checkbox"/> Histisol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>	<p>Indicators for Problematic Hydric Soils:</p> <p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>	<p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic(F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (explain in remarks)</p> <p style="font-size: small; margin-top: 10px;">*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic</p>
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<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p style="padding-left: 40px;">Depth (inches): _____</p>	<p>Hydric Soil Present? No</p>
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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