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ENR TOP 500 DESIGN FIRMS

December 10, 2013

U.S. Army Engineer District, New Orleans
Regulatory Branch
ATTN: Martin Mayer
7400 Leake Avenue
New Orleans, LA 70118

Exhibit GG. Livingston Industrial Park Wetlands Delineation Report & Transmittal Letter

RE:
WETLAND DELINEATION REPORT
LEDC INDUSTRIAL PARK 77-ACRE TRACT
LIVINGSTON PARISH, LOUISIANA

Dear Mr. Mayer:

On behalf of, the Baton Rouge Area Chamber and Livingston Economic Development Council, GEC is pleased to forward one copy of the LEDC Industrial Park 77-Acre Tract Wetland Delineation Report. The enclosed document presents the habitat data gathered and a delineation of the wetland habitats within the study area.

GEC is requesting an **Approved Jurisdictional Determination** on behalf of the Baton Rouge Area Chamber.

Thank you for your attention in this project. Please do not hesitate to contact me at (225) 612-4175 or lmccauley@gecinc.com if you have any comments or require additional information.

Sincerely,

Leonard McCauley

Enclosures

December 2013

WETLAND DELINEATION REPORT
LEDC INDUSTRIAL PARK
77 – ACRE TRACT
LIVINGSTON PARISH,
WALKER, LOUISIANA

Prepared for

Livingston Economic Development Council
20355 Government Boulevard, Suite E
P.O. Box 809
Livingston, Louisiana 70754

Prepared by

Gulf Engineers & Consultants
Baton Rouge, Louisiana

WETLAND DELINEATION REPORT
LEDC INDUSTRIAL PARK
77 – ACRE TRACT
LIVINGSTON PARISH,
WALKER, LOUISIANA

GEC Project Number: 0013.2122013.009

Prepared by

Gulf Engineers & Consultants

8282 Goodwood Boulevard
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Phone – 225/612-3000

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WETLAND DELINEATION REPORT
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INTRODUCTION

G.E.C., Inc. (GEC) recently conducted a wetland delineation for Livingston Economic Development Counsel (LEDC) in Livingston Parish, Louisiana (Figure 1). Access to the property was through the use of Industrial Park Drive to the west and N. Corbin Road to the south of the project area (Figure 2). The project area consists of mature Pine/Hardwood forest outside of wetland areas and BLH forest along and within wetland areas. The purpose of this delineation was to determine the wetland boundaries within the approximately 77-acre tract.

METHODOLOGY

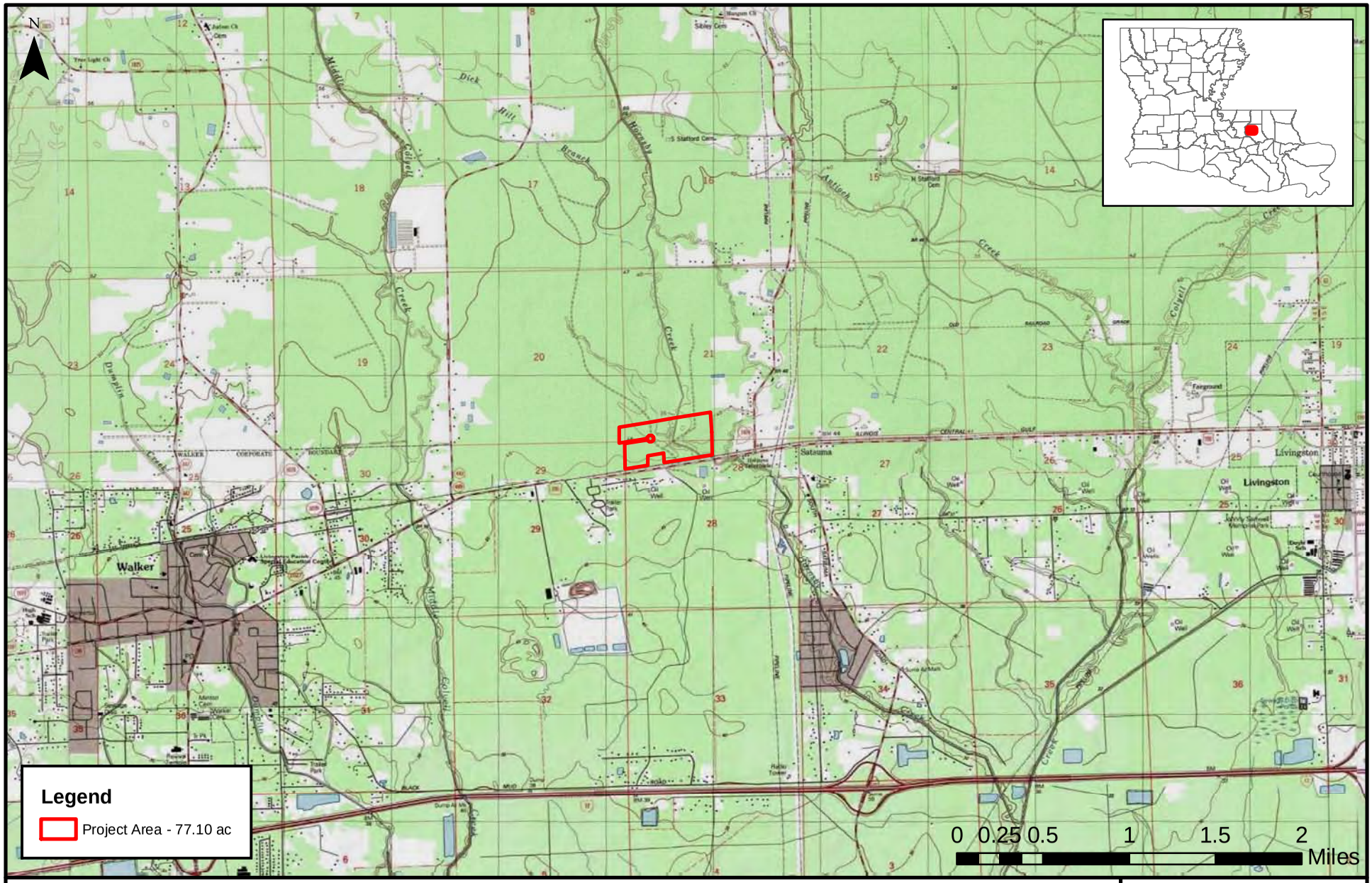
GEC conducted the wetland delineation in accordance with Section D, Subsection 2 of Technical Report Y-87-1, Corps of Engineers Wetlands Delineation Manual as well as the Atlantic and Gulf Coastal Plains Regional Supplement. Aerial photography, Natural Resources Conservation Service (NRCS) Livingston Parish soil survey map, U.S. Geological Survey (USGS) topographic quadrangle maps, and LIDAR were reviewed prior to the initiation of field work to identify the potential extent of wetlands present on the subject property.

Routine Wetland Delineation Data Forms (Appendix A), as approved by Headquarters, U.S. Army Corps of Engineers (USACE) 10/08, were completed for the various vegetative communities encountered within the project area. These data forms contain sufficient information regarding the presence or absence of hydric soils, hydrophytic vegetation, and wetland hydrology, to support the demarcation of a wetland boundary. The location of each sample plot along with mapped wetlands and other waters are shown in Figure 3.

Dominant vegetation was recorded on the data forms along with the indicator status as listed in the *National List of Plant Species Occurring in Wetlands (Region 2)* released by USACE in May 2012 (Release no. 12-005). Once dominant vegetation was recorded and evaluated, if more than 50 percent of the dominant vegetation had an indicator status of FAC, FACW, or OBL or the prevalence index was ≤ 3.0, the hydrophytic vegetation criterion was met.

A soil pit was excavated to a depth of approximately 18 inches at each sample plot. The pit remained open for at least 15 minutes to allow the pit to fill with water, if present. Soils were sampled along the exposed stratum. Information recorded on the data forms included soil colors (hue, value, and chroma as per the 1992 revised edition of the Munsell Color Chart), size, color, abundance, and depth of mottles, as well as soil texture. Soil texture was determined using the "texture by feel" analysis. Figure 4 depicts the soils mapped by the NRCS within the project area.

Due to the difficult nature of mapping wetlands within a forested system, field biologist used LIDAR to indicate areas where wetlands may be present and then surveyed those areas intensively collecting GPS points along a wet/nonwet boundary, whereas the rest of the property was surveyed by transect. The wet/nonwet boundaries in Figure 3 encompass wetlands observed as mapped by contour and informed by the observations of field staff.

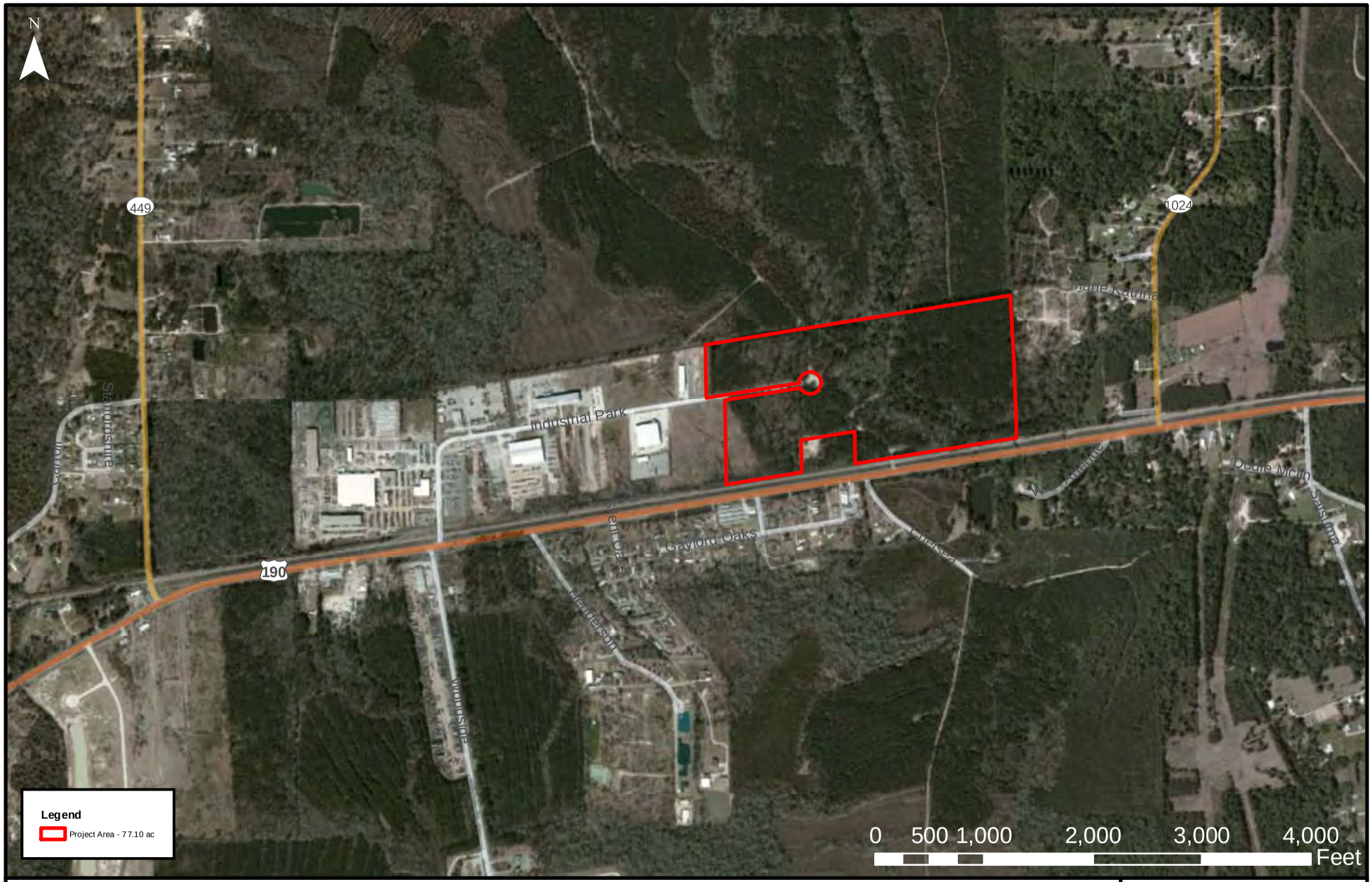


SITE LOCATION MAP

Livingston Economic Development Council

Service Layer Credits: Copyright:© 2013 National Geographic Society, i-cubed

Figure: 1
Date: December 2013
Scale:1:50,000
Source: ESRI/GEC
Map ID: 276821001-3110



SITE VICINITY MAP

Livingston Economic Development Council

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

GEC
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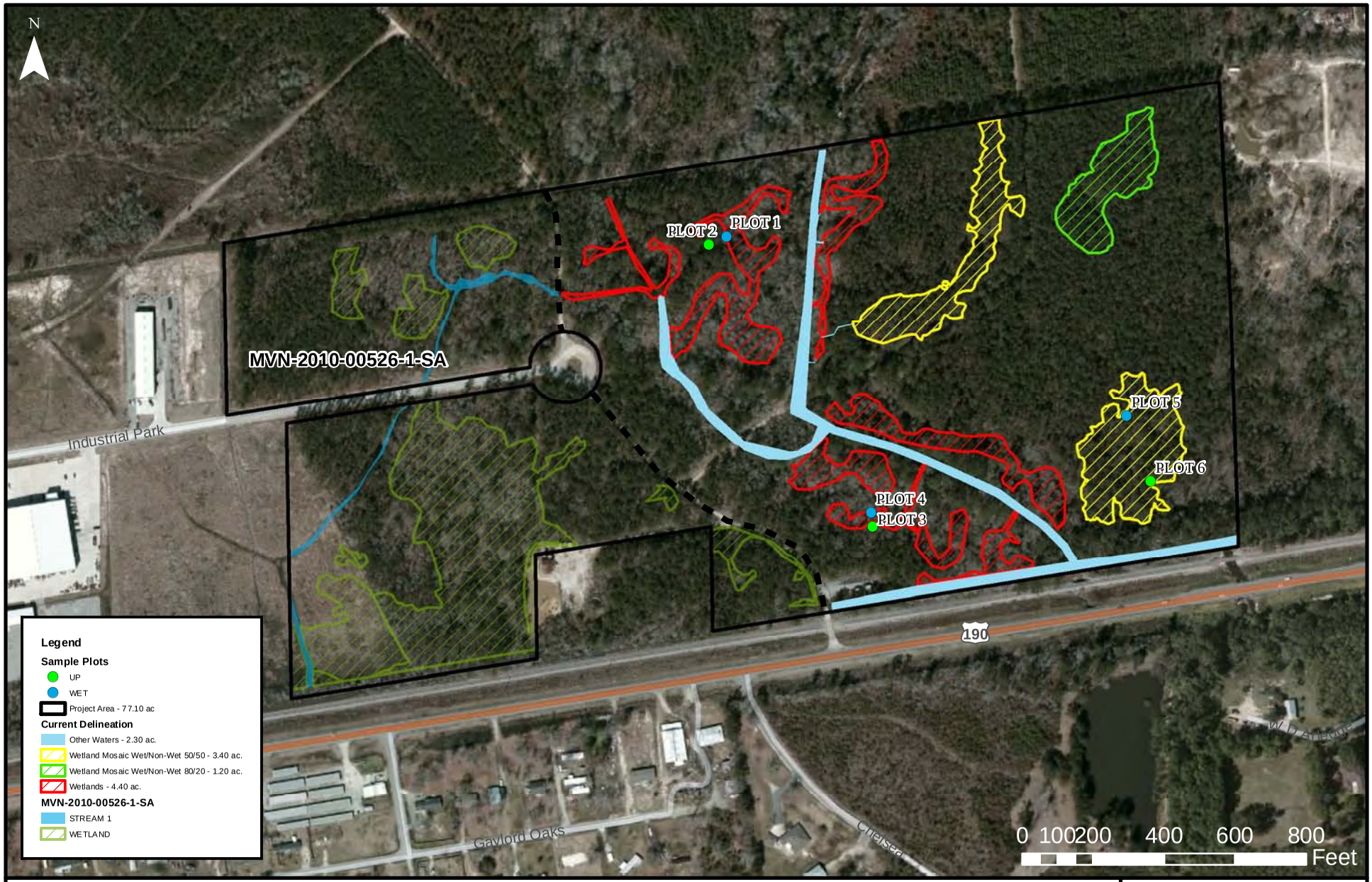

SITE WETLANDS MAP

Livingston Economic Development Council

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

GEC

Figure: 3
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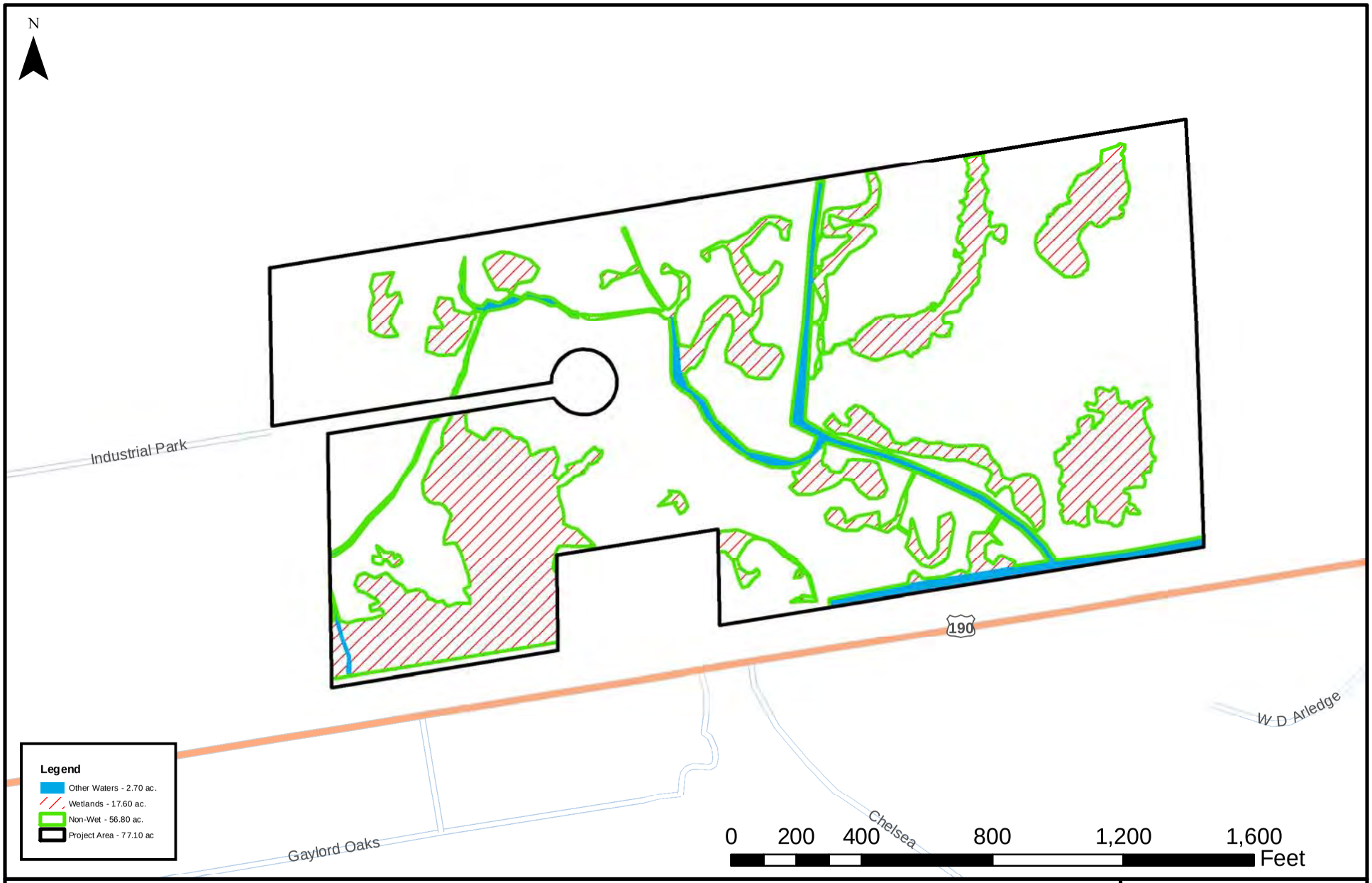
Source: ESRI/GEC
Map ID: 276821001-3110

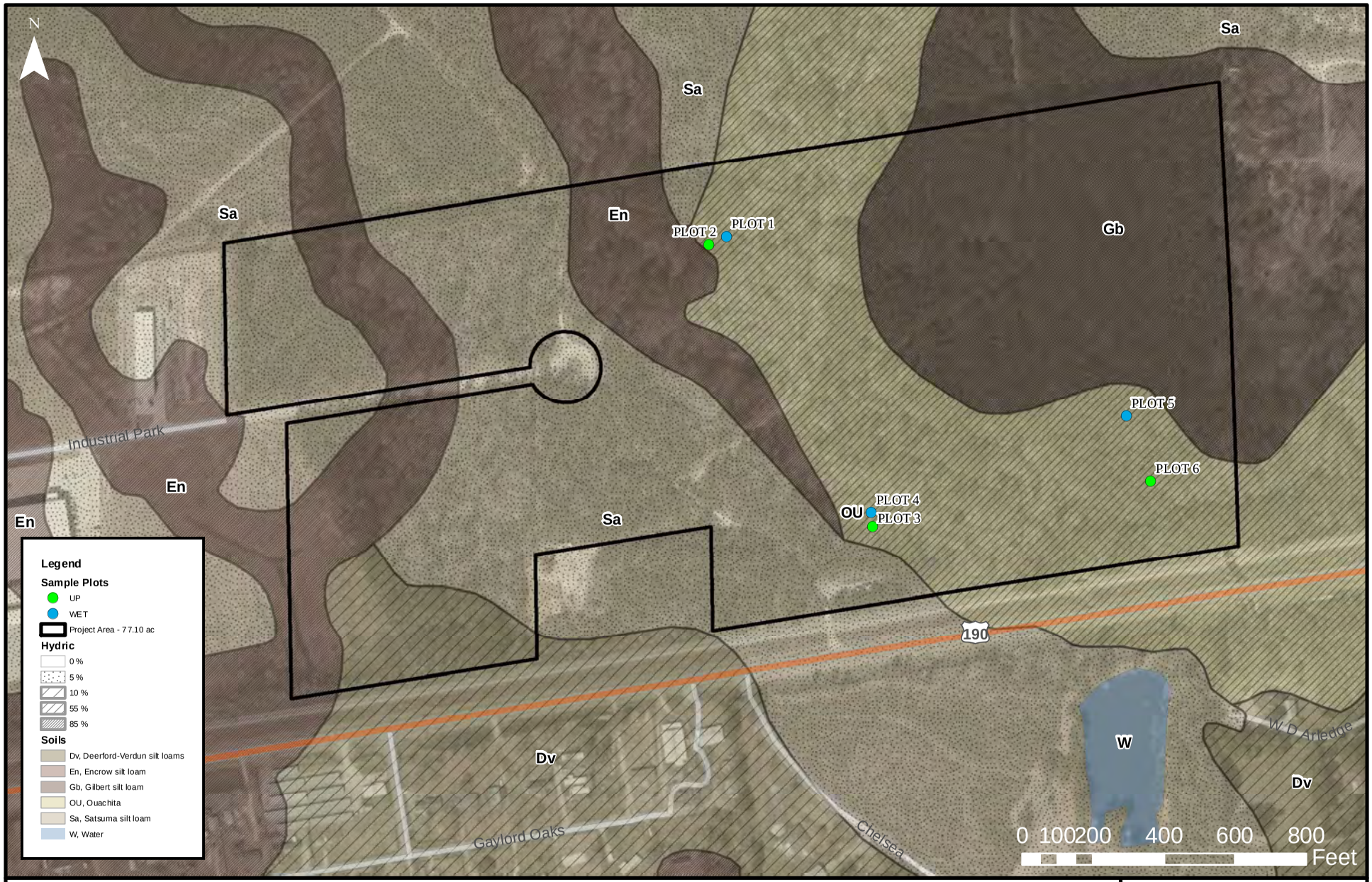


WETLAND MAP - JD

Livingston Economic Development Council

GEC

Figure: 3A
Date: December 2013
Scale:1:5,000
Source: ESRI/GEC
Map ID: 276821001-3110



SOILS MAP

Livingston Economic Development Council

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

GEC
Figure: 4
Date: December 2013
Scale:1:4,600
Source: ESRI/GEC
Map ID: 276821001-3110

Wetland hydrology indicators were also recorded at each sample plot as per the USACE requirements. If at least one primary or two secondary hydrology indicators were present, the sample plot was classified as having wetland hydrology.

Photographs were taken at each sample plot where a data form was completed. These photographs show a representative soil profile, as well as overviews in the cardinal directions of the sample plot (Appendix B).

RESULTS

The following subsections provide descriptions of each of the sites identified during the field survey. Descriptions of vegetation, soil characteristics, and hydrology indicators at each sample plot recorded are provided

Sample Plot - 1: Sample Plot 1 is located within a backwater depression (Figure 3). The tree stratum is dominated by red maple (*Acer rubrum*), and black tupelo (*Nyssa aquatica*) while the sapling/shrub stratum is dominated by persimmon (*Diospyros virginiana*), and winged elm (*Ulmus rubra*). The herbaceous stratum is dominated by lizards tail (*Saururus cernuus*). The woody vine stratum is absent from this plot. The hydrophytic vegetation criterion is met within this sample plot.

The soil series mapped at this plot is the Ouachita, Ochlockonee, Guyton association, described as frequently flooded by the NRCS. Within this association, the Guyton series is listed on the National Hydric Soils list and the Ouachita and Guyton series are listed on the Louisiana Hydric Soils list. The hydric soils criterion is met at this plot due to the presence of a depleted matrix. Primary indicators of hydrology include water-stained leaves (B9) and aquatic fauna (B13) while secondary indicators include a positive FAC-neutral test (D5). It is GEC's opinion that this sample plot is within a wetland, based on the presence of hydric vegetation, hydric soils, and wetland hydrology within the plot (see Data Form Plot - 1).

Sample Plot - 2: Sample Plot 2 is located in a mature pine/hardwood forest next to the wetland in plot 1 (Figure 3). The tree stratum is dominated loblolly pine (*Pinus taeda*) while the sapling/shrub stratum is dominated by winged elm, and American hornbeam (*Carpinus caroliniana*). The herbaceous stratum is dominated by dwarf palmetto (*Sabal minor*), and long-leaf wood oats (*Chasmanthium sessiliflorum*). The woody vine stratum is dominated by muscadine grape (*Vitis rotundifolia*). The hydrophytic vegetation criterion is met within this sample plot.

The soil series mapped at this plot is the Ouachita, Ochlockonee, Guyton association, described as frequently flooded by the NRCS. Within this association, the Guyton series is listed on the National Hydric Soils list and the Ouachita and Guyton series are listed on the Louisiana Hydric Soils list. The hydric soils criterion is not met at this plot due to the absence of hydric soil indicators. Primary indicators of hydrology are lacking at this plot while the one secondary indicator includes a positive FAC-neutral test (D5). It is GEC's opinion that this sample plot is not within a wetland, based on the lack of hydric soils, and wetland hydrology within the plot (see Data Form Plot - 2).

Sample Plot - 3: Sample Plot 3 is located in a mature pine/hardwood forest next to the wetland in plot 4 (Figure 3). The tree stratum is dominated loblolly pine, and winged elm while the

sapling/shrub stratum is dominated by American hornbeam. The herbaceous stratum is dominated by long-leaf wood oats. The woody vine stratum is dominated by muscadine grape. The hydrophytic vegetation criterion is met within this sample plot.

The soil series mapped at this plot is the Ouachita, Ochlockonee, Guyton association, described as frequently flooded by the NRCS. Within this association, the Guyton series is listed on the National Hydric Soils list and the Ouachita and Guyton series are listed on the Louisiana Hydric Soils list. The hydric soils criterion is not met at this plot due to the absence of hydric soil indicators. Primary and secondary indicators of hydrology are lacking at this plot. It is GEC's opinion that this sample plot is not within a wetland, based on the lack of hydric soils, and wetland hydrology within the plot (see Data Form Plot - 3).

Sample Plot - 4: Sample Plot 4 is located within a backwater depression (Figure 3). The tree stratum is dominated by Chinese tallow (*Triadica sebifera*), and black tupelo while the sapling/shrub stratum is dominated by red maple, and green ash (*Fraxinus pensylvanica*). The herbaceous stratum is dominated by dwarf palmetto, and thicket sedge (*Carex abscondita*). The woody vine stratum is dominated by muscadine grape. The hydrophytic vegetation criterion is met within this sample plot.

The soil series mapped at this plot is the Ouachita, Ochlockonee, Guyton association, described as frequently flooded by the NRCS. Within this association, the Guyton series is listed on the National Hydric Soils list and the Ouachita and Guyton series are listed on the Louisiana Hydric Soils list. The hydric soils criterion is met at this plot due to the presence of a depleted matrix. Primary indicators of hydrology include moss trim lines (B16), crayfish burrows (C8), and a positive FAC-neutral test (D5). It is GEC's opinion that this sample plot is within a wetland, based on the presence of hydric vegetation, hydric soils, and wetland hydrology within the plot (see Data Form Plot - 4).

Sample Plot - 5: Sample Plot 5 is located in a mature pine/hardwood forest within a wet/nonwet mosaic area. This area looks to have been impacted by past silver culture activities leaving the ground topography uneven with many areas where wetland hydrology is either present or lacking (Figure 3). The tree stratum is dominated loblolly pine, while the sapling/shrub stratum is dominated by American hornbeam, and sweetgum (*Liquidambar straciflua*). The herbaceous stratum is dominated by water oak (*Quercus nigra*), and long-leaf basket grass (*Oplismenus hirtellus*). The woody vine stratum is dominated by cat greenbrier (*Smilax hispida*). The hydrophytic vegetation criterion is met within this sample plot.

The soil series mapped at this plot is the Ouachita, Ochlockonee, Guyton association, described as frequently flooded by the NRCS. Within this association, the Guyton series is listed on the National Hydric Soils list and the Ouachita and Guyton series are listed on the Louisiana Hydric Soils list. The hydric soils criterion is met at this plot due to the presence of a depleted matrix. Primary indicators of wetland hydrology are lacking at this plot while secondary indicators of hydrology include sparsely vegetated concave surface (B8), and crayfish burrows (C8). It is GEC's opinion that this sample plot is within a wetland, based on the presence of wetland hydrology, hydrophytic vegetation and hydric soils within the plot (see Data Form Plot - 5).

Sample Plot - 6: Sample Plot 6 is located in a mature pine/hardwood forest within a wet/nonwet mosaic area. This area looks to have been impacted by past logging activities leaving the ground topography uneven with many areas where wetland hydrology is either present or lacking

(Figure 3). The tree stratum is dominated loblolly pine, while the sapling/shrub stratum is dominated by red maple, and winged elm. The herbaceous stratum is dominated by spruce pine (*Pinus glabra*), and dwarf palmetto. The woody vine stratum is dominated by trumpet vine (*Campsis radicans*). The hydrophytic vegetation criterion is met within this sample plot.

The soil series mapped at this plot is the Ouachita, Ochlockonee, Guyton association, described as frequently flooded by the NRCS. Within this association, the Guyton series is listed on the National Hydric Soils list and the Ouachita and Guyton series are listed on the Louisiana Hydric Soils list. The hydric soils criterion is met at this plot due to the presence of a depleted matrix. Primary indicators of wetland hydrology are lacking at this plot while the only secondary indicator of hydrology observed is a positive FAC-neutral test (D5). It is GEC's opinion that this sample plot is not within a wetland, based on the lack of wetland hydrology within the plot (see Data Form Plot - 5).

CONCLUSIONS

During the field investigation of the approximately 77-acre site in Livingston Parish, Louisiana, GEC mapped several wetland areas which can be grouped into those areas impacted by ponding associated with the bayou and areas impacted by past logging activities up slope consisting of wetland/upland mosaics where the hydrology is driven by rainfall. The total acreage of the wetland areas associated with the bayou total 4.40 acres. Two wetland areas mapped in yellow on figure 3 are wetland mosaics where approximately 50% of the acreage meets the criteria for a wetland. The wetlands in these two areas total approximately 1.70 acres of wetlands. In addition to those areas, there is a second area of wetland mosaic where an estimated 80percent of the acreage meets the definition of a wetland and encompasses approximately 0.96 acres. There are approximately 7.06 acres of wetlands within the project area.

In addition to the wetlands on site, are other waters and streams. The total acreage of the bayou is approximately 1.00 acre while the stream extending to the northeast and the ditches cut into the natural bank encompass approximately .40 acres within the project area. The remainder of the project area consists of non-wetland mature pine/hardwood forest.

Although GEC uses the same criteria and methodology as that of the USACE, due to the degree of subjectivity associated with studies of this type, there may be some degree of variance in the demarcation of the wetland boundary. Consequently, GEC's opinion may not necessarily reflect that of the USACE, nor does it relieve our client of any legal obligations to verify the wetland findings, consult with the USACE, and possibly obtain a Department of the Army permit prior to performing any dredging, filling and/or construction operations in Waters of the United States, including wetlands.

Appendix A

DATA FORMS

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: LEDC Industrial Complex West Track - 2 City/County: Walker/Livingston Parish Sampling Date: 12-04-2013

Applicant/Owner: Linvingston Economic Development Council State: LA Sampling Point: Plot 1

Investigator(s): J. Avant Section, Township, Range: SEC-21-TS-06-RE-04

Landform (hillslope, terrace, etc.): Backwater stream depression Local relief (concave, convex, none): Concave Slope (%): 0-1

Subregion (LRR or MLRA): LRR P Lat: 30° 30' 16.077" N Long: 90° 48' 59.477" W Datum: NAD 1983

Soil Map Unit Name: Ouachita, Ochlockonee, and Guyton soils, frequently flooded NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

Plot taken in a backwater depressional stream associated with bayou

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ✓ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✓ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes _____	No ✓	Depth (inches): _____
Water Table Present?	Yes _____	No ✓	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No ✓	Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: Plot 1

Tree Stratum (Plot size: 30 ft rad.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer rubrum	40	yes	FAC
2. Nyssa aquatica	25	yes	OBL
3. Diospyros virginiana	6	no	FAC
4.			
5.			
6.			
7.			
8.			
	71 = Total Cover		
50% of total cover: 35.5	20% of total cover: 14.2		
Sapling/Shrub Stratum (Plot size: 30 ft rad.)			
1. Diospyros virginiana	10	yes	FAC
2. Ulmus rubra	7	yes	FAC
3. Ilex decidua	2	no	FACW
4. Fraxinus pennsylvanica	iso	no	FACW
5.			
6.			
7.			
8.			
	19 = Total Cover		
50% of total cover: 9.5	20% of total cover: 3.8		
Herb Stratum (Plot size: 30 ft rad.)			
1. Saururus cernuus	20	yes	OBL
2. Triadica sebifera	7	no	FAC
3. Woodwardia virginica	7	no	OBL
4. Elymus virginicus	2	no	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	36 = Total Cover		
50% of total cover: 18	20% of total cover: 7.2		
Woody Vine Stratum (Plot size: 30 ft rad.)			
1.			
2.			
3.			
4.			
5.			
	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: 5 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A = NaN

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ✓ No ___

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

SOIL

Sampling Point: Plot 1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10 YR 6/2	100					ZC	
3-18	10 YR 7/2	98	7.5 YR 5/6	2	C	PL	ZC	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: None seen

Depth (inches): _____

Hydric Soil Present? Yes ✓ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: LEDC Industrial Complex West Track - 2 City/County: Walker/Livingston Parish Sampling Date: 12-04-2013

Applicant/Owner: Linvingston Economic Development Council State: LA Sampling Point: Plot 2

Investigator(s): J. Avant Section, Township, Range: SEC-21-TS-06-RE-04

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 0-1

Subregion (LRR or MLRA): LRR P Lat: 30° 30' 15.859" N Long: 90° 49' 0.030" W Datum: NAD 1983

Soil Map Unit Name: Ouachita, Ochlockonee, and Guyton soils, frequently flooded NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:
Plot taken on a hillslope next to backwater stream.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✓ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes _____	No ✓	Depth (inches): _____
Water Table Present?	Yes _____	No ✓	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No ✓	Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: Plot 2

Tree Stratum (Plot size: 30 ft rad.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Pinus taeda	70	yes	FAC
2. Quercus nigra	15	no	FAC
3. Carpinus caroliniana	5	no	FAC
4. Acer rubrum	3	no	FAC
5.			
6.			
7.			
8.			
	93 = Total Cover		
50% of total cover: 46.5	20% of total cover: 18.6		
Sapling/Shrub Stratum (Plot size: 30 ft rad.)			
1. Ulmus rubra	5	yes	FAC
2. Carpinus caroliniana	3	yes	FAC
3. Nyssa sylvatica	iso	no	FAC
4.			
5.			
6.			
7.			
8.			
	8 = Total Cover		
50% of total cover: 4	20% of total cover: 1.6		
Herb Stratum (Plot size: 30 ft rad.)			
1. Sabal minor	3	yes	FACW
2. Chasmanthium sessiliflorum	3	yes	FAC
3. Carex blanda	1	no	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	7 = Total Cover		
50% of total cover: 3.5	20% of total cover: 1.4		
Woody Vine Stratum (Plot size: 30 ft rad.)			
1. Vitis rotundifolia	10	yes	FAC
2. Smilax hispida	1	no	FAC
3.			
4.			
5.			
	11 = Total Cover		
50% of total cover: 5.5	20% of total cover: 2.2		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A = NaN

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ✓ No ___

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

SOIL

Sampling Point: Plot 2

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10 YR 5/4	100					ZC	
3-6	10 YR 5/3	100					ZC	
6-18	10 YR 7/3	80	10 YR 7/2	18	D	M	ZC	
			7.5 YR 6/8	2	C	M	ZC	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: None seen

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: LEDC Industrial Complex West Track - 2 City/County: Walker/Livingston Parish Sampling Date: 12-04-2013

Applicant/Owner: Linvingston Economic Development Council State: LA Sampling Point: Plot 3

Investigator(s): J. Avant Section, Township, Range: SEC-28-TS-06-RE-04

Landform (hillslope, terrace, etc.): Hill slope Local relief (concave, convex, none): Convex Slope (%): 2-3

Subregion (LRR or MLRA): LRR P Lat: 30° 30' 7.912" N Long: 90° 48' 54.957" W Datum: NAD 1983

Soil Map Unit Name: Ouachita, Ochlockonee, and Guyton soils, frequently flooded NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

Plot taken on a hill slope between substation and wetland drain in a mature pine/hardwood forest

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes _____	No ✓	Depth (inches): _____
Water Table Present?	Yes _____	No ✓	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No ✓	Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: Plot 3

Tree Stratum (Plot size: 30 ft rad.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Pinus taeda	30	yes	FAC
2. Ulmus rubra	25	yes	FAC
3. Triadica sebifera	15	no	FAC
4. Quercus nigra	6	no	FAC
5. Liquidambar straciflua	3	no	FAC
6.			
7.			
8.			
	79 = Total Cover		
50% of total cover: 39.5	20% of total cover: 15.8		
Sapling/Shrub Stratum (Plot size: 30 ft rad.)			
1. Carpinus caroliniana	15	yes	FAC
2. Carya glabra	3	no	FACU
3.			
4.			
5.			
6.			
7.			
8.			
	18 = Total Cover		
50% of total cover: 9	20% of total cover: 3.6		
Herb Stratum (Plot size: 30 ft rad.)			
1. Chasmanthium sessiliflorum	2	yes	FAC
2. Arundinaria gigantea	iso	no	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	2 = Total Cover		
50% of total cover: 1	20% of total cover: 0.4		
Woody Vine Stratum (Plot size: 30 ft rad.)			
1. Vitis rotundifolia	7	yes	FAC
2.			
3.			
4.			
5.			
	7 = Total Cover		
50% of total cover: 3.5	20% of total cover: 1.4		

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% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A = NaN

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ✓ No ___

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

SOIL

Sampling Point: Plot 3

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10 YR 4/6	100					ZC	
3-18	7.5 YR 5/8	100					ZC	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: None seen

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: LEDC Industrial Complex West Track - 2 City/County: Walker/Livingston Parish Sampling Date: 12-04-2013

Applicant/Owner: Linvingston Economic Development Council State: LA Sampling Point: Plot 4

Investigator(s): J. Avant Section, Township, Range: SEC-28-TS-06-RE-04

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-1

Subregion (LRR or MLRA): LRR P Lat: 30° 30' 8.307" N Long: 90° 48' 54.991" W Datum: NAD 1983

Soil Map Unit Name: Ouachita, Ochlockonee, and Guyton soils, frequently flooded NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:
Plot taken in a backwater wetland area associated with the bayou

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ✓ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ✓ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✓ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes _____	No ✓	Depth (inches): _____
Water Table Present?	Yes _____	No ✓	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No ✓	Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: Plot 4

Tree Stratum (Plot size: 30 ft rad.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Triadica sebifera	25	yes	FAC
2. Nyssa aquatica	15	yes	OBL
3. Carya aquatica	3	no	OBL
4.			
5.			
6.			
7.			
8.			
	43 = Total Cover		
50% of total cover: 21.5	20% of total cover: 8.6		
Sapling/Shrub Stratum (Plot size: 30 ft rad.)			
1. Acer rubrum	25	yes	FAC
2. Fraxinus pensylvanica	15	yes	FACW
3. Ulmus rubra	10	no	FAC
4. Lonicera japonica	7	no	FAC
5. Triadica sebifera	5	no	FAC
6.			
7.			
8.			
	62 = Total Cover		
50% of total cover: 31	20% of total cover: 12.4		
Herb Stratum (Plot size: 30 ft rad.)			
1. Sabal minor	35	yes	FACW
2. Carex abscondita	10	yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	45 = Total Cover		
50% of total cover: 22.5	20% of total cover: 9		
Woody Vine Stratum (Plot size: 30 ft rad.)			
1. Vitis rotundifolia	7	yes	FAC
2.			
3.			
4.			
5.			
	7 = Total Cover		
50% of total cover: 3.5	20% of total cover: 1.4		

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% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A = NaN

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ✓ No ___

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

SOIL

Sampling Point: Plot 4

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	10 YR 5/2	100					ZC	
1-7	10 YR 6/2	98	7.5 YR 4/6	2	C	PL	ZC	
7-18	10 YR 7/1	90	5 YR 5/8	10	C	PL	C	Clay with silt

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: LEDC Industrial Complex West Track - 2 City/County: Walker/Livingston Parish Sampling Date: 12-04-2013

Applicant/Owner: Linvingston Economic Development Council State: LA Sampling Point: Plot 5

Investigator(s): J. Avant Section, Township, Range: SEC-28-TS-06-RE-04

Landform (hillslope, terrace, etc.): Flatwood Local relief (concave, convex, none): Concave Slope (%): 0-1

Subregion (LRR or MLRA): LRR P Lat: 30° 30' 10.866" N Long: 90° 48' 46.731" W Datum: NAD 1983

Soil Map Unit Name: Ouachita, Ochlockonee, and Guyton soils, frequently flooded NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

Plot 5 was taken in a flat area utilized for timber production in the past leading to micro topography and a wet/nonwet mosaic.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ✓ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ✓ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes _____	No ✓	Depth (inches): _____
Water Table Present?	Yes _____	No ✓	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No ✓	Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: Plot 5

Tree Stratum (Plot size: 30 ft rad.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Pinus taeda	55	yes	FAC
2. Triadica sebifera	3	no	FAC
3. Quercus nigra	3	no	FAC
4.			
5.			
6.			
7.			
8.			
	61 = Total Cover		
50% of total cover: 30.5	20% of total cover: 12.2		
Sapling/Shrub Stratum (Plot size: 30 ft rad.)			
1. Carpinus caroliniana	15	yes	FAC
2. Liquidambar straciflua	7	yes	FAC
3. Acer rubrum	2	no	FAC
4.			
5.			
6.			
7.			
8.			
	24 = Total Cover		
50% of total cover: 12	20% of total cover: 4.8		
Herb Stratum (Plot size: 30 ft rad.)			
1. Oplismenus hirtellus	10	yes	FAC
2. Quercus nigra	7	yes	FAC
3. Carex blanda	2	no	FAC
4. Viburnum dentatum	1	no	FAC
5. Rhynchospora compressa	iso	no	OBL
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	20 = Total Cover		
50% of total cover: 10	20% of total cover: 4		
Woody Vine Stratum (Plot size: 30 ft rad.)			
1. Smilax hispida	2	yes	FAC
2.			
3.			
4.			
5.			
	2 = Total Cover		
50% of total cover: 1	20% of total cover: 0.4		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A = NaN

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ✓ No ___

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

SOIL

Sampling Point: Plot 5

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	10 YR 6/3	100					ZC	
4-9	10 YR 7/2	100					ZC	
9-18	10 YR 7/2	97	5 YR 5/6	3	C	PL	ZC	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ✓ **No** _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: LEDC Industrial Complex West Track - 2 City/County: Walker/Livingston Parish Sampling Date: 12-04-2013

Applicant/Owner: Linvingston Economic Development Council State: LA Sampling Point: Plot 6

Investigator(s): J. Avant Section, Township, Range: SEC-28-TS-06-RE-04

Landform (hillslope, terrace, etc.): Flatwoods Local relief (concave, convex, none): Convex Slope (%): 0-1

Subregion (LRR or MLRA): LRR P Lat: 30° 30' 9.031" N Long: 90° 48' 45.982" W Datum: NAD 1983

Soil Map Unit Name: Ouachita, Ochlockonee, and Guyton soils, frequently flooded NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

Plot 6 was taken in a convex mound in an area utilized for timber production in the past leading to micro topography and a wet/nonwet mosaic. The entire area is a mature pine/hardwood forest.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✓ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes _____	No ✓	Depth (inches): _____
Water Table Present?	Yes _____	No ✓	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No ✓	Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: Plot 6

Tree Stratum (Plot size: 30 ft rad.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Pinus taeda	60	yes	FAC
2. Triadica sebifera	10	no	FAC
3. Pinus glabra	7	no	FACW
4. Acer rubrum	2	no	FAC
5.			
6.			
7.			
8.			
	79 = Total Cover		
50% of total cover: 39.5	20% of total cover: 15.8		
Sapling/Shrub Stratum (Plot size: 30 ft rad.)			
1. Ulmus rubra	25	yes	FAC
2. Acer rubrum	15	yes	FAC
3. Quercus nigra	2	no	FAC
4. Liquidambar straciflua	2	no	FAC
5.			
6.			
7.			
8.			
	44 = Total Cover		
50% of total cover: 22	20% of total cover: 8.8		
Herb Stratum (Plot size: 30 ft rad.)			
1. Sabal minor	7	yes	FACW
2. Pinus glabra	3	yes	FACW
3. Chasmanthium sessiliflorum	1	no	FAC
4. Osmunda regalis	iso	no	OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	11 = Total Cover		
50% of total cover: 5.5	20% of total cover: 2.2		
Woody Vine Stratum (Plot size: 30 ft rad.)			
1. Campsis radicans	3	yes	FAC
2.			
3.			
4.			
5.			
	3 = Total Cover		
50% of total cover: 1.5	20% of total cover: 0.6		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A = NaN

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ✓ No ___

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

SOIL

Sampling Point: Plot 6

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10 YR 7/2	100					ZC	
6-8	10 YR 7/2	99	7.5 YR 5/8	1	C	PL	ZC	
8-18	10 YR 7/1	97	7.5 YR 5/8	3	C	PL	ZC	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Compaction of silt

Depth (inches): 16-18

Hydric Soil Present? Yes ✓ No ___

Remarks:

Appendix B

PHOTOGRAPHS

Photograph 1. Soil Profile Observed at Plot 1

Photograph 2. Overview of the Habitat Observed at Plot 1, Facing North

Photograph 3. Overview of the Habitat Observed at Plot 1, Facing East

Photograph 4. Overview of the Habitat Observed at Plot 1, Facing South

Photograph 5. Overview of the Habitat Observed at Plot 1, Facing West

Photograph 6. Soil Profile Observed at Plot 2

Photograph 7. Overview of the Habitat Observed at Plot 2, Facing North

Photograph 8. Overview of the Habitat Observed at Plot 2, Facing East

Photograph 9. Overview of the Habitat Observed at Plot 2, Facing South

Photograph 10. Overview of the Habitat Observed at Plot 2, Facing West

Photograph 11. Soil Profile Observed at Plot 3

Photograph 12. Overview of the Habitat Observed at Plot 3, Facing North

Photograph 13. Overview of the Habitat Observed at Plot 3, Facing East

Photograph 14. Overview of the Habitat Observed at Plot 3, Facing South

Photograph 15. Overview of the Habitat Observed at Plot 3, Facing West

Photograph 16. Soil Profile Observed at Plot 4

Photograph 17. Overview of the Habitat Observed at Plot 4, Facing North

Photograph 18. Overview of the Habitat Observed at Plot 4, Facing East

Photograph 19. Overview of the Habitat Observed at Plot 4, Facing South

Photograph 20. Overview of the Habitat Observed at Plot 4, Facing West

Photograph 21. Soil Profile Observed at Plot 5

Photograph 22. Overview of the Habitat Observed at Plot 5, Facing North

Photograph 23. Overview of the Habitat Observed at Plot 5, Facing East

Photograph 24. Overview of the Habitat Observed at Plot 5, Facing South

Photograph 25. Overview of the Habitat Observed at Plot 5, Facing West

Photograph 26. Soil Profile Observed at Plot 6

Photograph 27. Overview of the Habitat Observed at Plot 6, Facing North

Photograph 28. Overview of the Habitat Observed at Plot 6, Facing East

Photograph 29 Overview of the Habitat Observed at Plot 6, Facing South

Photograph 30. Overview of the Habitat Observed at Plot 6, Facing West

Photograph 31. Overview of the Habitat Observed Around Bayou, Facing Across

Photograph 32. Overview of the Habitat Observed Around Bayou, Facing Up Stream

Photograph 33. Overview of the Habitat Observed Around Bayou, Facing Down Stream