Exhibit FF. Ruston Industrial Park Wetlands Delineation Report





Ruston Industrial Park Wetlands Delineation Report

Wetland Delineation and Determination

Ruston Industrial Park Site ± 150.00 ac.

Lincoln Parish, Louisiana

April 2017



Wetlands Delineation Questionna	Site Name: Ruston Industrial Park Site CSRS Project ID:						
Sec. 20 - Lincoln Pa	Austral Park Image: Display to the second to the secon						
Date: 04/26/2017	Zip Code: 39158						
Provider Name: Headwaters, Inc.	Name: J. Clay Cromwell						
Address: P.O. Box 2836	Phone: (601) 634-0097						
City: Ridgeland	Email: Clay@headwaters-inc.com						
State: Mississippi	Title: Vice-President						
Identify any bodies of water or wetlands on or abutting th	ne site and identify the authority with jurisdiction over them.						
Waterway/wetland 1 Forested Wetlands (PFO-1, PFO-2	Authority 1 USACE - Vicksburg District						
Waterway/wetland 2 Emergent Wetland (PEM-1)	Authority 2 USACE - Vicksburg District						
Waterway/wetland 3 Scrub - Shrub Wetland (PSS-1)	Authority 3 USACE - Vicksburg District						
Waterway/wetland 4 Perennial Streams (OW-7 & OW-8)	Authority 4 USACE - Vicksburg District						
Waterway/wetland 5 Intermittent Streams (OW-1 & OW-f Authority 5 USACE - Vicksburg District							
Waterway/wetland 6 Ephemeral Streams (OW-2, OW-3	Authority 6 USACE - Vicksburg District						
Do wetlands and/or other waterways exist on or near the	site? • Yes ONo						
If wetlands are present, has a Section 404 Permit Applica	tion been submitted? O Yes No 						
Has a Section 404 Permit Application been approved?	⊖Yes ⊙No						
If wetlands are present, have all wetlands on site been m							
	Submit Form						

TABLE OF CONTENTS

INTRODUCTION
METHODOLOGY2
SITE DESCRIPTION AND ECOLOGICAL PROGRESSION
FINDINGS AND CONCLUSIONS 10
APPENDIX I
APPENDIX II
APPENDIX III
APPENDIX IV
APPENDIX V

INTRODUCTION

Headwaters, Inc. was retained by the City of Ruston to complete a wetlands delineation and determination on the proposed City of Ruston Industrial Park Site containing approximately ±150.00 acres located just east of the City of Ruston, Lincoln Parish, Louisiana. In general, the subject property is located south of U.S. Interstate 20 & U.S. Highway 80 and north of Beacon Light Road. More specifically, the subject parcel is located north of Beacon Light Road and McDonald Avenue, which are along south property boundary, and south of the Kansas City Southern Railway Company (KCS) mainline, which forms the northern property limits. The property is more particularly described as being located in a portion of Section 20, Township 18 North, Range 2 West, Lincoln Parish, Louisiana. The subject property can also be located by the Global Positioning System (GPS) Coordinates: N32.530003 – W92.594624.

Headwaters, Inc. completed the wetland delineation and determination site reconnaissance on April 10, 2017. The project was completed using standard accepted procedures for wetland delineation and determination as established by the U.S. Army Corps of Engineers (USACE).

The following report contains:

- 1) Methodology used for actual wetland determination;
- 2) A site description, including the observed ecological processes occurring on site; and
- 3) Conclusions drawn from this study.

Appendices included are an integral and inseparable part of this report and are listed as I) copies of a general location map, portions of the U.S.G.S. *Ruston, Louisiana* Quadrangle Map, 1996 NASA NAPP Color Infrared Photograph and a copy of the U.S. Department of Agriculture-Farm Service Agency (USDA-FSA) National Agricultural Imagery Program (NAIP) 2015 photograph of the subject property; II) copies of the property site map showing the location of the wetland areas and "other waters of the United States", Global Positioning System (GPS) waypoint locations and wetland data point locations; III) completed copies of the U.S. Army Corps of Engineers Atlantic and Gulf Coastal Plain Region Wetland Determination Data Forms from the Regional Supplement to the Corps of Engineers Wetland Delineation Manual (Version 2.0) November 2010, including field notes; IV) a copy of the Lincoln Parish, Louisiana Soils Survey Map and related information; and V) Photographs of selected property features.

METHODOLOGY

The overall goal of this project was to complete a comprehensive property review and assessment of all appropriate wetland features associated within the boundaries of the property. The primary project scope was the delineation and determination of "other waters of the U.S." and wetland areas associated with the property. Upon request by the landowner, concurrence of the wetland determination by the Regulatory Program of the Vicksburg District, U.S. Army Corps of Engineers can be completed.

The initial phase of the project included assimilation of all available information related to the property that would help establish a historical perspective of the property and surrounding area as well as to highlight the physical attributes of the property, the primary drainage patterns and the physical location of the suspected wetland areas and "other waters of the U.S." present on the property. An integral component of this phase was the review of the 1996 NASA NAPP Color Infrared photographic coverage of the subject property and the USDA-FSA NAIP 2015 color photograph (Appendix I). Review of the U.S.G.S. topographic maps (Appendix I) and the Lincoln Parish, Louisiana soil survey maps (Appendix IV) were also included as a part of this phase, as well as interviews with persons knowledgeable of the subject property.

Once the key physical aspects of the property were identified, a field review and assessment was conducted to identify the habitat or land use types present. A primary focus of this initial field assessment was to verify the presence of the drainage patterns and other potential wetland areas identified from the aerial photographs and topographic maps covering the subject property.

Based upon observations made during the field review, the land use of the subject property can best be currently described as a predominantly forested habitat that has historically been utilized for timber production purposes. The central portion of the subject property was comprised of a cut-over habitat due to recent timber harvesting activities. The western portion of the site can be described as a predominantly mixed pine / bottomland hardwood forested habitat. The eastern portion of the site contained much more pine forested habitat, with portions of it appearing to be comprised of short rotation pine plantation habitat. Significant pine regeneration was observed in portions of the site east of the cut-over habitat. The initial field assessment revealed that the majority of the subject property is currently occupied by a palustrine forested upland (non-wetland) habitat comprised of a mixed pine / bottomland hardwood and pine forested habitat, as previously described. However, portions of the subject property within the depressional habitats and areas of lower elevation with little topographic relief exhibited the necessary requirements (hydrology, vegetation, and soils) to be considered as potentially jurisdictional wetland habitats under the current regulatory framework. The potentially jurisdictional wetland complexes observed within the subject property were comprised of forested, scrub-shrub, and emergent subclasses. In addition to the wetland habitats observed, several streams and storm water conveyance features were observed within the subject property. The primary drainage feature within the subject property is a perennial stream channel observed meandering along the northern property boundary within the western half of the subject property. This perennial stream is an unnamed tributary of Choudrant Creek, located to the east the subject property. In addition to the perennial stream channel, several secondary drainage features considered as intermittent and ephemeral stream channels were observed within the subject property. These stream channels provide a secondary source of storm water runoff from within the subject property. The natural topographic setting of the subject property conveys storm water generally to the north, northeast towards the unnamed tributary of Choudrant Creek via the secondary drainage features and overland sheet flow across the steep slopes of the landscape observed. The wetland habitats and the various stream channels observed within the limits of the subject property would be considered as "other waters of the U.S." and potentially jurisdictional under the currently regulatory framework of the Regulatory Division of the U.S. Army Corps of Engineers (USACE) – Vicksburg District. Coordination with the USACE – Vicksburg District would be required prior to the any adverse impacts from anticipated site development activities within the depicted potentially jurisdictional habitats.

Given the characteristics and general topographic setting of the western half of the subject property, systematic transect lines were employed in the field delineation methodology in the western portion of the site. Systematic transect lines throughout the western portions of the subject property were established as verification of the known and/or suspected wetland areas or "other waters of the United States" and to confirm the presence of the non-wetland habitat types transition lines. The eastern half of the subject property did not require systematic transects to be established due to the geographic positioning and layout of the habitats. Rather, the field delineation was established by surveying the areas within natural topographic features and areas of relatively little to no topographic relief, which are characteristically where jurisdictional habitats are observed in a landscape setting similar to the subject property at hand. A mapping system was employed whereby all the wetland habitats/boundaries and "other waters of the United States" were were mapped on a property site map utilizing the GPS waypoints. The specific location of these wetland habitats/boundaries and "other waters of the United States" were verified on the site topographic maps and the NAIP color photography.

Wetland delineation points were established using a systematic approach based upon spacing between points, observations of vegetative and topographic features, and transitions that were encountered in the field. The delineation points were spaced to insure adequate coverage of each of the predominant habitat types and the various habitat types within each of the predominant types. In some cases, as needed, wetland delineation points were randomly established at wetland/upland transitions that were encountered, or to prove out observed characteristics. Additionally, wetland delineation data points were also established to help validate the data within the non-wetland areas, and to aid in the field mapping of the wetland areas and "other waters of the United States". In addition, supplemental points were established between the delineation points to provide data on soils, vegetation and hydrology. A total of forty-eight (48) data points were identified throughout the project site.

At each delineation point, specific observations and determinations were made using accepted U.S. Army Corps of Engineers' techniques for the delineation of wetland habitats and/or boundaries [Environmental Laboratory, 1987, Corps of Engineers' *Wetlands Delineation Manual* (and Supplemental Guidance), Technical Report Y-87-1,

U.S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, Mississippi]. Soil samples were taken using either a soil probe or hand auger to a minimum depth of twelve (12) inches. Munsell Color Charts were used to reference soil matrix, mottle and hue. In addition, representative vegetative characteristics in the general locale of each point were identified and recorded. Hydrologic characteristics were noted at each plot location and a determination was made in the field as to whether or not the area was a non-wetland, wetland or "other waters" habitat. All observations were documented on the U.S. Army Corps of Engineers Atlantic and Gulf Coastal Plain Region Wetland Determination Data Forms from the referenced Regional Supplement to the Corps of Engineers Wetland Delineation Manual (Version 2.0) November 2010.

Site maps depicting the location of the suspected jurisdictional wetland areas, "other waters of the United States", upland habitats and/or land use types determined to be present on the property, as well as the location of the GPS/wetland delineation points is included as Appendix II. Copies of the corresponding data forms completed for each sample location are also included as Appendix III.

SITE DESCRIPTION AND ECOLOGICAL PROGRESSION

The proposed site, which has heretofore been described according to physical and geographic location, is hereinafter described according to wetland classification, disturbance patterns, wetland quality and soils. Descriptions will be in general terms, and without specific chronology.

WETLAND CLASSIFICATIONS: Wetlands are typically defined by plants, soils and frequency and duration of flooding. The term "system" is used to describe the broad complex of interrelated components that define the ecological limits of a particular ecosystem. The dominant type of suspected jurisdictional wetlands located on the subject property can best be described as a Palustrine System with a forested class/subclass. There were also subclass scrub / shrub and emergent wetland habitats observed within the subject property. Also, site reconnaissance activities revealed the presence two (2) perennial streams, two (2) intermittent streams, and five (5) segments of ephemeral streams. These habitats and streams are described in detail below.

Palustrine Forested Wetland Habitat (PFO) – The field reconnaissance revealed the presence of five (5) forested wetland habitats within the limits of the subject property. PFO-1, PFO-2, & PFO-3 were identified within the eastern half of the property, predominantly along the top-banks of the intermittent and ephemeral stream channels. Evidence supports that these habitats are recharged during heavy rain events and the flooding of the adjacent stream channels. Impediments within the natural drainage features also assist in increasing the hydrology within these forested wetland habitats. In addition to the forested wetland habitats observed within the eastern half of the site, PFO-4 & PFO-5 were identified within the western portion of the site. PFO-4 is a large wetland complex associated with the perennial stream floodplain and PFO-5 is a microhabitat along the top-bank of the perennial stream. PFO-4 is located between the upland (non-wetland) top-bank forested habitat and the ridge observed along the southern limits of the site. Both PFO-4 & PFO-5 are influenced from regular flooding events from the adjacent areas of higher elevation.

Hydrology indicators observed within the forested wetland habitats include inundation, saturation, high water table, water marks, water-stained leaves, sediment deposits, drift lines, crawfish burrows, drainage patterns, and oxidized rhizospheres along living roots. Vegetative components within the forested wetland habitats include: Green ash *(Fraxinus pennsylvanica)*, willow oak (*Quercus phellos*), water oak (*Quercus nigra*), loblolly pine (*Pinus taeda*), cherrybark oak (*Quercus pagoda*), American elm (*Ulmus americana*), sweetgum (*Liquidambar styraciflua*), shagbark hickory (*Carya ovata*), cow oak (*Quercus michauxii*), red maple (*Acer rubrum*), buttonbush (*Cephalanthus occidentalis*), black willow (*Salix nigra*), privet (*Ligustrum sinense*), Chinese tallowtree (*Triadica sebifera*), *Cyperus spp.*, dwarf palmetto (*Sabal minor*), lamp rush (*Juncus effusus*), *Polygonum spp.*, and switch cane (*Arundinaria tecta*), among others.

The soils matrix colors within the forested wetland habitats ranges from a 4/1(dark gray), 5/1, 6/1 (gray) to a 5/2 (grayish brown), 6/2 (light brownish gray) on the 10YR Munsell Soil Color chart. There is a soil mottle present at (~15% - 35%) with a soil mottle color

ranging from a 4/4, 4/6 (dark yellowish brown) to a 5/6, 5/8 (yellowish brown) on the 10YR chart to 5/6 (strong brown) on the 7.5YR chart. Redox concentrations and depleted matrix were observed within the soil profile within the top 12 inches. These forested wetland habitats (PFO-1, PFO-2, PFO-3, PFO-4, & PFO-5) are depicted on the wetland location exhibits included within Appendix II.

Palustrine Scrub - Shrub Wetland (PSS) - The field reconnaissance determined that a portion of the site was comprised of a scrub – shrub wetland habitat. PSS-1 was observed within the eastern portion of the site along the west side of an existing logging road. The logging road has impeded that natural flows in this area causing this are to become inundated. Scrub – shrub vegetative components were observed within and along fringe of the impounded area. Hydrology indicators within PSS-1 included inundation, saturation, drainage patterns, water-stained leaves, crawfish burrows, sediment & drift deposits, and oxidized rhizospheres along living roots. Vegetative components observed within this wetland habitat included black willow (Salix nigra), water oak (Quercus nigra), loblolly pine (Pinus taeda), willow oak (Quercus phellos), Chinese tallowtree (Triadica sebifera), buttonbush (Cephalanthus occidentialis), lamp rush (Juncus effusus), marsh flat sedge (Cyperus pseudovegetus), bushy blue stem (Andropogon virginicus), wool grass (Scirpus spp.)., Polygonum spp., and red vine (Brunnichia cirrhosa) among others. The soils observed within PSS-1 were similar in nature to those described above that were observed in the forested wetland habitat. This scrub - shrub wetland habitat (PSS-1) is depicted on the wetland location exhibits included within Appendix II.

Palustrine Emergent Wetland (PEM) – As previously mentioned, the central portion of the subject property contained a cut-over type habitat from the recent timber harvest activities. A portion of this cut-over habitat within northern portion of the site was identified as an emergent wetland habitat (PEM-1). PEM-1 contained the necessary characteristics to be considered as a potentially jurisdictional emergent wetland habitat. As with the forested wetland habitats in the western portion of the site, PEM-1 is influenced from potential flooding events from the adjacent perennial stream. Hydrology indicators observed within this emergent wetland habitat included inundation, saturation, sediment deposits, drift lines, crawfish burrows, drainage patterns, and oxidized rhizospheres along living roots. Herbaceous hydric vegetative components have reestablished since the timber harvest activities and include: lamp rush (Juncus effusus), *Carex spp.*, marsh flat sedge (*Cyperus pseudovegetus*), Chinese tallow tree regeneration (Triadica sebifera), sweetgum regeneration (Liquidambar styraciflua), butter cup (Ranunculus spp.), red maple regeneration (Acer rubrum), wool grass (Scirpus spp.), Polygonum spp., Aster spp., goldenrod (Solidago spp.), lizard's tail (Saururus cernuus), and red vine (Brunnichia cirrhosa) among others.

The soils matrix colors within the emergent wetland habitat ranges from a 4/1 (dark gray) to a 5/2 (grayish brown) on the 10YR Munsell Soil Color chart. There is a soil mottle present at (~15% - 35%) with a soil mottle color ranging from a 4/4, 4/6 (dark yellowish brown) to a 5/6, 5/8 (yellowish brown) on the 10YR chart. Redox concentrations and depleted matrix were observed within the soil profile within the top 12 inches. This emergent wetland habitat (PEM-1) is depicted on the wetland location exhibits included within Appendix II.

Perennial Stream – The field reconnaissance revealed the presence of two (2) segments of perennial streams (OW-7 & OW-8) meandering along the northern and western limits within the northwest portion of the subject property. Both perennial streams would be considered as unnamed tributaries of Choudrant Creek, which is located east of the subject property. OW-7 enters the property in the northwest corner and meanders within the northern limits of the site before flowing north under the KCS mainline. OW-7 is a natural, meandering perennial stream channel that does not appear to have undergone any major disturbances through the years. OW-8 enters the subject property in the southwest corner from the south and merges with OW-7 in the northwest portion of the site. OW-7 is a straight-lined perennial channel that appears to have undergone significant maintenance and drainage improvements over the past several years. A spoil bank from excavated material was observed along the top-bank of this channel. These channels provide the primary source of storm water relief for storm water within the subject property. The perennial streams may be characterized by well-defined stream channels with the overall lack of significant vegetative components within the channel. The perennial streams maintained an upland (non-wetland) forested top-bank habitat, which is typical for streams of this type. More specifically, this stream channel exhibits yearround flows or perennial flows throughout the year. The presence of the perennial stream within and adjacent to the site would be considered as "other waters of the United States". The locations and alignments of these perennial streams are depicted on the wetland location maps (Appendix II).

Intermittent Stream – Two (2) segments of unnamed tributaries considered as intermittent streams (OW-1 & OW-6) were identified meandering through the subject property. These tributaries provide the primary source of storm water runoff from within the portions of the site in which they were identified. The intermittent streams within the subject property convey storm water generally to the north and northeast. These streams may be characterized as well defined channels with the overall lack of any significant vegetative components within the stream channel. In some instances, hydrophytic vegetative components have established within the banks of the stream channel. This is due primarily from disturbances that have taken place on the site and insignificant interruptions with the channels disrupting the natural flows of the channels. The presence of the intermittent streams identified within the limits of the project site would be considered as "other waters of the United States." The locations and alignments of these intermittent streams are depicted on the wetland location maps (Appendix II).

Ephemeral Stream - Segments of five (5) ephemeral streams (OW-2, OW-3, OW-4, OW-5, & OW-9) were identified transecting portions of the property. These tributaries provide the secondary source of storm water runoff from within the subject property. These drainage features may be characterized by shallow stream banks with the overall lack of significant vegetative components within the channel. Some of these drainages were observed within a forested wetland top-bank habitat, while others were observed as maintaining an upland (non-wetland) forested habitat. The presence of the ephemeral streams identified within the limits of the project site would be considered as "other waters of the United States." The locations and alignments of these ephemeral streams are depicted on the wetland location maps (Appendix II).

Upland (Non-Wetland) Habitat - The remaining portions of the subject property are comprised of an upland (non-wetland) forested and cutover habitat that has historically been utilized for timber production and recreational hunting purposes. The upland forested habitats are comprised of mixed hardwood and pine species. Common vegetative components identified within the upland (non-wetland) portions of the subject property include loblolly pine (Pinus taeda), sweetgum (Liquidambar styraciflua), water oak (Quercus nigra), hickory (Carva spp.), white oak (Quercus alba), Eastern red cedar (Juniperus virginiana), cherrybark oak (Quercus pagoda), American beech (Fagus grandifolia), Eastern hophornbeam (Ostyra virginiana), southern red oak (Quercus falcata), winged elm (Ulmus alata), black cherry (Prunus serotina), Solidago spp., common privet (Ligustrum sinense), winged elm (Ulmus alata), Vaccinium spp., American beautyberry (Callicarpa americana), southern dewberry (Rubus trivialis), buckeye (Aesculus spp.), sassafras (Sassafras albidum), Smilax spp., poison ivy (Toxicodendron radicans), mayapple (Podophyllum peltatum), muscadine vine (Vitis rotundifolia), among others. These species, among others identified within the site, are commonly found within upland (non-wetland) conditions on similar landscapes.

The soil conditions observed within the project site ranged from a 4/4 (dark yellowish brown) to a 5/3 (brown), 5/4, 5/6 (yellowish-brown) on the 10YR page of the Munsell Soil Color Chart. Limited to no soil mottling was observed within the upland forested habitats. Given this, the soil conditions observed within these portions of the subject property would be considered upland (non-wetland) in nature.

Disturbance Patterns – The site currently exhibits a forested and cut-over habitat throughout the preponderance of the property that has been historically utilized for timber production purposes. Silvicultural activities within the site have created minor disturbances or alterations within the site's hydrology. However, no major site disturbances were observed, specifically within the potentially jurisdictional areas other than evidence of timber harvest activities. The overall aquatic functions, flow regime, and sediment / nutrient transport activities within the wetland habitats and stream channels have remained relatively undisturbed through the years.

Wetland Quality – While some quality wetland functions occur within the subject property, associated natural processes could seemingly contraindicate any description as a "flow through" wetland system. For the most part, the wetland functions on the property are related to the storm water flowing as sheet flow across the parcel from adjacent properties and frequent flooding events from the adjacent stream channels. Certainly, significant ground water recharge occurs within this site, and it is suspected that a certain amount of water quality enhancement, via filtration, also occurs. The subject property is not in a geographic location for primary aquifer recharge.

<u>Soils</u> – As evidenced by the topographic map and the USDA-NRCS Custom Soil Resource Report for Lincoln Parish, Louisiana, the subject property predominantly consists of a forested habitat. The soil types present within the subject property are Angie very fine sandy loam, Darley gravelly fine sandy loam, Darley-Sacul association, Guyton-Ouachita silt loams, and Sacul very fine sandy loam. These soil types are described in detail within that attached soil report.

Copies of the Lincoln Parish, Louisiana Soil Survey Maps and Custom Soil Resource Report covering the subject property are included in Appendix IV.

FINDINGS AND CONCLUSIONS

From the historic review and wetland assessment completed on the subject property, it is concluded that the property is generally representative of the geographic area in which it is located. The topography of the site is very similar in nature to the adjoining properties and the overall geographic area in which it is located. Based upon observations made during the field review, the land use of the subject property can best be currently described as a predominantly forested and cut-over habitat that was historically comprised of mixed hardwood and pine forest type utilized for timber production purposes.

The property is predominately occupied by a forested and cut-over upland (non-wetland) habitat type with smaller portions being contained within potentially jurisdictional wetland habitats with subclasses of forested, scrub – shrub, and emergent. In addition to the wetland habitats identified within the site, several stream channels and drainage features were observed within site. The significance of the forested wetlands on the subject property exists in a mixed pine / bottomland hardwood forested wetland habitat type. These wetland habitats, along with the identified stream channels would likely be considered jurisdictional under the current USACE regulatory framework.

The following is a breakdown of the different habitat types and approximate acreage and length of each that were found to be present on the subject property:

Forested Wetlands (PFO)	12.97 ac.
Scrub – Shrub Wetlands (PSS)	0.23 ac.
Emergent Wetlands (PEM)	2.95 ac.
Perennial Streams	3 ac. (3,989.44 lf)
Intermittent Streams	6 ac. (1,953.50 lf)
Ephemeral Streams0.1 "Other Waters of the U.S."	9 ac. (2,016.94 lf)
Upland (Non-Wetland) Habitat	131.47 ac.
TOTAL:	±150.00 Ac.

This listing does not depict the impacts anticipated by the development of the project. This listing only depicts the habitat types identified within the subject property and the acres they account for. Further coordination with the U.S. Army Corps of Engineers – Vicksburg District will be required prior to any site development activities within the potentially jurisdictional wetlands and "other waters of the U.S." to obtain the appropriate Section 404 wetland permit authorizations.

APPENDIX I

- General Location Map

- U.S.G.S. *Ruston, Louisiana* Quadrangle Map

- USDA NAIP 2015 Color Photography











APPENDIX II

- Site Map Depicting Wetland Areas, GPS Waypoints, and Wetland Delineation Data Point Locations









APPENDIX III

- U.S. Army Corps of Engineers Atlantic and Gulf Coastal Plain Region Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Ruston Industrial Park	City/County: Linc	oln Parish	Sampling Date: 4/10/17		
Applicant/Owner: City of Ruston		State: LA	Sampling Point: 2-UP		
	Section, Township				
			x Slope (%): 5-10		
Subregion (LRR or MLRA): LRR P	Lat: 32.532302	long: -92.591043	Datum: WGS 84		
Soil Map Unit Name: Darley-Sacul association		NWI class	ification:		
Are climatic / hydrologic conditions on the site typical for					
Are Vegetation \underline{N} , Soil \underline{N} , or Hydrology \underline{N}					
Are Vegetation N, Soil N, or Hydrology N					
SUMMARY OF FINDINGS – Attach site ma					
Hydrophytic Vegetation Present? Yes	No X No X within a W				
Hydric Soil Present? Yes Wetland Hydrology Present? Yes	NO X within a W	etland? Yes	<u>No X</u>		
Remarks:					
Sampling point was taken within an u subject property.	ipland topographic dra	w along the north	ern boundary of the		
HYDROLOGY					
Wetland Hydrology Indicators:		Secondary Inc	licators (minimum of two required)		
Primary Indicators (minimum of one is required; check	all that apply)		oil Cracks (B6)		
	atic Fauna (B13)		Vegetated Concave Surface (B8)		
High Water Table (A2)		Patterns (B10)			
Saturation (A3)	n Lines (B16)				
Water Marks (B1) Oxidized Rhizospheres along Living Roots (C3) Dry-Season Water Table (C2)					
	ence of Reduced Iron (C4)		Burrows (C8)		
	ent Iron Reduction in Tilled Soils (N Visible on Aerial Imagery (C9)		
	Muck Surface (C7) r (Explain in Remarks)		nic Position (D2) quitard (D3)		
Inundation Visible on Aerial Imagery (B7)		=	ral Test (D5)		
Water-Stained Leaves (B9)		=	n moss (D8) (LRR T, U)		
Field Observations:					
Surface Water Present? Yes No X					
Water Table Present? Yes No X			X		
Saturation Present? Yes No X (includes capillary fringe)	Depth (inches): <u>>12"</u>	Wetland Hydrology Pres	sent? Yes <u>No X</u>		
Describe Recorded Data (stream gauge, monitoring we	ell, aerial photos, previous inspec	tions), if available:			
Remarks:					
no signs of hydrology					
The signs of frydrology					

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

Sampling Point: 2-UP

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: 1/10 acre)		Species?	Status	Number of Dominant Species	
1. Pinus taeda	25	Yes	FAC	That Are OBL, FACW, or FAC: 3 (A	A)
2. Liquidambar styraciflua	20	Yes	FAC	Total Number of Dominant	
3. Ostrya virginiana	10	No	FACU	Species Across All Strata: 6 (E	B)
4. Ulmus americana	5	No	FAC		
5. Prunus serotina	5	No	FACU	Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A	A/B)
6				、	,
7				Prevalence Index worksheet:	
8				Total % Cover of: Multiply by:	
		= Total Cov	er	OBL species x 1 =	
50% of total cover: <u>32.5</u>		total cover:		FACW species 0 x 2 = 0	
Sapling/Shrub Stratum (Plot size: 1/10 acre)				FAC species 65 x 3 = 195	
Ligustrum sinense	15	Yes	FAC	FACU species 55 x 4 = 220	
2. Prunus serotina	10	Yes	FACU	UPL species $0 x 5 = 0$	
3. Ulmus alata	5	No	FACU	Column Totals: <u>120</u> (A) <u>415</u>	(B)
4. Carya spp.	5	No	FACU		. ,
				Prevalence Index = $B/A = \frac{3.46}{1000}$	
5				Hydrophytic Vegetation Indicators:	
6			<u> </u>	1 - Rapid Test for Hydrophytic Vegetation	
7				2 - Dominance Test is >50%	
8				$\boxed{1}$ 3 - Prevalence Index is $\leq 3.0^{1}$	
		= Total Cov	er	Problematic Hydrophytic Vegetation ¹ (Explain)	
50% of total cover: <u>17.5</u>	20% of	total cover:	7		
Herb Stratum (Plot size: 1/10 acre)				¹ Indicators of hydric soil and wetland hydrology mus	ot
1. Podophyllum peltatum	15	Yes	FACU	be present, unless disturbed or problematic.	รเ
2. Parthenocissus quinquefolia	5	Yes	FACU	Definitions of Four Vegetation Strata:	
				Deminions of Four Vegetation officia.	
3				Tree – Woody plants, excluding vines, 3 in. (7.6 cm	
4				more in diameter at breast height (DBH), regardless height.	s of
5				noight.	
6				Sapling/Shrub – Woody plants, excluding vines, le	ess
7				than 3 in. DBH and greater than 3.28 ft (1 m) tall.	
8			<u> </u>	Herb - All herbaceous (non-woody) plants, regardle	ess
9				of size, and woody plants less than 3.28 ft tall.	
10				Woody vine – All woody vines greater than 3.28 ft	in
11				height.	
12					
	20	= Total Cov	er		
50% of total cover: ¹⁰					
Woody Vine Stratum (Plot size:)					
1					
2					
3					
4					
5				Hydrophytic	
		= Total Cov	er	VegetationPresent?YesNo \times	
50% of total cover:	20% of	total cover:			
Remarks: (If observed, list morphological adaptations belo	w).			•	

S	Ο	I	L

	ription: (Describe	e to the deptl			icator o	or confirm	the absence of	indicators.)
Depth (inches)	Matrix Color (moist)	%	Redo Color (moist)	x Features % 1		Loc ²	Texture	Remarks
0-5	4/4 10YR	100			турс		Silty loam	Remarks
5-12	5/6 10YR	100					Silty loam	
5-12	5/0 1011	100						
		plation PM-I	Reduced Matrix, MS		and Cra			L=Pore Lining, M=Matrix.
			RRs, unless other					or Problematic Hydric Soils ³ :
Histosol			Polyvalue Be			RR S. T. L		ck (A9) (LRR O)
	pipedon (A2)		Thin Dark Su					ck (A10) (LRR S)
Black Hi	stic (A3)		Loamy Muck					Vertic (F18) (outside MLRA 150A,B)
	n Sulfide (A4)		Loamy Gleye)			t Floodplain Soils (F19) (LRR P, S, T)
	Layers (A5)	. .	Depleted Ma	()				us Bright Loamy Soils (F20)
	Bodies (A6) (LRR I cky Mineral (A7) (L		Redox Dark	· · ·	7)			153B) ent Material (TF2)
	esence (A8) (LRR		Redox Depre		')			allow Dark Surface (TF12)
	ck (A9) (LRR P, T)		Marl (F10) (L	· · ·				xplain in Remarks)
·	Below Dark Surfa	ce (A11)	Depleted Ocl	hric (F11) (M	LRA 15	1)		
	ark Surface (A12)		Iron-Mangan					ors of hydrophytic vegetation and
	airie Redox (A16) (lucky Mineral (S1) (• •	Umbric Surfa			U)		nd hydrology must be present, s disturbed or problematic.
	lleyed Matrix (S4)	(LKK 0, 3)	Reduced Ver)A. 150B)		s disturbed of problematic.
	edox (S5)		Piedmont Flo					
	Matrix (S6)						A 149A, 153C, 1	53D)
	face (S7) (LRR P,	-					-	
	ayer (if observed)):						
Type:			<u> </u>					
Depth (ind	ches):						Hydric Soil P	resent? Yes <u>No X</u>
Remarks: N	o hydric soil (characte	ristics observ	ed withir	n the	ton 12'	" of the soil	profile
I N	o fiyune son	character			i uic		of the soli	prome
1								
1								

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Ruston Industrial Park	City/County: Lince	oln Parish	Sampling D	oate: 4/10/17
Applicant/Owner: City of Ruston	City/County: Linco	State. LA	A Sampling P	oint 3-PFO
Investigator(s): Headwaters, Inc.				
	Local relief (conca			Slope (%): 0-2
Subregion (LRR or MLRA): LRR P Lat: _3	32.532111	Long: -92.5873	92	Datum: WGS 84
Soil Map Unit Name: Guyton-Ouachita silt loams		Long NWI		
Are climatic / hydrologic conditions on the site typical for this time				
				X
Are Vegetation $\underline{N}_{}$, Soil $\underline{N}_{}$, or Hydrology $\underline{N}_{}$ signific Are Vegetation $\underline{N}_{}$, Soil $\underline{N}_{}$, or Hydrology $\underline{N}_{}$ natura				
Are Vegetation <u>19</u> , Soil <u>19</u> , or Hydrology <u>19</u> natura	lly problematic?	(If needed, explain an	iy answers in Remark	(S.)
SUMMARY OF FINDINGS – Attach site map show	wing sampling poi	nt locations, tra	nsects, importa	nt features, etc.
Hydrophytic Vegetation Present? Yes X No				
Hydric Soil Present? Yes X No		pled Area etland? Y	. X	
Wetland Hydrology Present? Yes X No		etland? Y	es <u>// No </u>	
Remarks:	I			
Sampling point was taken within a forested	wetland habitat	in the northea	st corner of th	e subject
property.				-
HYDROLOGY				
Wetland Hydrology Indicators:		_	ary Indicators (minimu	im of two required)
Primary Indicators (minimum of one is required; check all that ap			ace Soil Cracks (B6)	
Surface Water (A1)	. ,		rsely Vegetated Cond	cave Surface (B8)
	s (B15) (LRR U) Ifide Odor (C1)		nage Patterns (B10) s Trim Lines (B16)	
	zospheres along Living R	_	Season Water Table	(C2)
	Reduced Iron (C4)		vfish Burrows (C8)	(02)
	Reduction in Tilled Soils (uration Visible on Aer	ial Imagery (C9)
Algal Mat or Crust (B4)			morphic Position (D2	
	n in Remarks)	Sha	llow Aquitard (D3)	
Inundation Visible on Aerial Imagery (B7)		🗹 FAC	-Neutral Test (D5)	
✓ Water-Stained Leaves (B9)		Sph	agnum moss (D8) (L l	RR T, U)
Field Observations:	nono			
Surface Water Present? Yes No X Depth (in				
Water Table Present? Yes <u>No X</u> Depth (in			X	
Saturation Present? Yes X No Depth (in (includes capillary fringe)	iches):	Wetland Hydrolog	y Present? Yes $\frac{X}{2}$	No
Describe Recorded Data (stream gauge, monitoring well, aerial	photos, previous inspec	tions), if available:		
Remarks:				

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

Sampling Point: 3-PFO

Tree Stratum (Plot size: 1/10 acre) $\frac{9}{2}$ Cover Species? Status Number of Dominant Species α (A) 1. Unus caroliniana 10 No FAC Total Xre OBL, FACW, or FAC: 8 (B) 2. Unus caroliniana 10 No FAC Total Xre OBL, FACW, or FAC: 100% (A/B) 3. Umus caroliniana 10 No FAC Total Xre OBL, FACW, or FAC: 100% (A/B) 6.
2. Liquidambar siyraciflua 15 Yes FAC 3. Umus americana 10 No FAC 4. Carpinus caroliniana 10 No FAC 5. — — — Total Number of Dominant Species 8 7. — — — — — — [0]////////////////////////////////////
9. Umus americana 10 No FAC 4. Carpinus caroliniana 10 No FAC 5. 10 No FAC 6.
4. Carpinus caroliniana 10 No FAC Proceent of Dominant Species [07] 5.
5.
6.
7.
Multiply by: Multiply by: Solve of total cover: 35 Total Cover A corrubrum 10 Yes FACW PACW species x 2 = FAC species x 1 = PACW 10 Yes FACW PACW 10 Yes FAC Quercus phelios x 5 = Column Totals: (A) A corrubrum 10 Yes FAC Quercus phelios x 5 = Column Totals: (A) A corrubrum 10 Yes FAC Quercus phelios x 5 = Column Totals: (A) Prevalence Index = $5/A$ B Prevalence Index = $5/A$ Prevalence Index = $5/A$ Prevalence Index = $5/A$
70 = Total Cover 50% of total cover: 35 20% of total cover: 14 70 = Total Cover 20% of total cover: 44 FACW species 1. Quercus phellos 15 2. Acer rubrum 10 3. Quercus nigra 10 4. Ligustrum sinense 5 5. No 6. — 7. — 50% of total cover: 20 20% of total cover: 8 40 = Total Cover 50% of total cover: 20 20% of total cover: 8 40 = Total Cover 50% of total cover: 20 20% of total cover: 8 11 + Provalence Index is \$3.0 ¹ 12 — 14 15 Yes FACW 15 Yes 16 Yes 7. — 10. — 110 — 12 — 13. — 14. — 15 Yes 7. — 16. —
50% of total cover: 35 20% of total cover: 14 Sapling/Shrub Stratum (Plot size: 1/10 acre) 15 Yes FACW species
Saping/Shrub Stratum (Plot size: 1/10 acre) 15 Yes FAC 1. Quercus phellos 15 Yes FAC 2. Acer rubrum 10 Yes FAC 3. Quercus nigra 10 Yes FAC 4. Ligustrum sinense 5 No FAC 5. — — — 6. — — — 7. — — — 9. = Total Cover 20% of total cover: 8 — 10. Yes FACW Problematic Hydrophytic Vegetation Indicators: 11. Arundinaria tecta 15 Yes FACW 2. — — — — 3. — — — — 3. — — — — 1. Arudinaria tecta 15 Yes FACW Peroblematic Hydrophytic Vegetation Index is 3.0 ° — — 2. — — — — 3. — — — — 2. — —
Segment of the street in t
10 Yes FAC 2. Acer ubrum 10 Yes FAC 3. Quercus nigra 10 Yes FAC 4. Ligustrum sinense 5 No FAC 5. No FAC 6.
2.
3.
S.
6.
7.
8. 40 = Total Cover 50% of total cover: 20% of total cover: 8 Herb Stratum (Plot size: 1/10 acre 15 Yes FACW 1. Arundinaria tecta 15 Yes FACW 2.
40 = Total Cover 50% of total cover: 20 20% of total cover: 8 Herb Stratum (Plot size: 1/10 acre) 15 Yes 1. Arundinaria tecta 15 Yes 2.
50% of total cover: 20 20% of total cover: 8 Herb Stratum (Plot size: 1/10 acre) 15 Yes FACW 1. Arundinaria tecta 15 Yes FACW 2.
50% of total cover: 20 20% of total cover: 8 Herb Stratum (Plot size: 1/10 acre) 15 Yes 1. Arundinaria tecta 15 Yes 2.
1. Arundinaria tecta 15 Yes FACW be present, unless disturbed or problematic. 2.
1. Arundinaria tecta 15 Yes FACW be present, unless disturbed or problematic. 2.
3.
3.
4.
5.
6.
7.
8.
9.
10.
11.
12. 15 = Total Cover 50% of total cover: 7.5 20% of total cover: 3 20% of total cover: 3 Woody Vine Stratum (Plot size:) 5 1. Smilax rotundifolia 5 Yes
50% of total cover: 7.5 20% of total cover: 3 Woody Vine Stratum (Plot size:) 1. Smilax rotundifolia 5 Yes FAC
Woody Vine Stratum (Plot size:) 1. Smilax rotundifolia 5 Yes
Woody Vine Stratum (Plot size:) 1. Smilax rotundifolia 5 Yes
1. Smilax rotundifolia 5 Yes FAC
2. Vitis rotundifolia 5 Yes FAC
3.
4
5 Hydrophytic 10 = Total Cover Vegetation
50% of total cover: <u>5</u> 20% of total cover: <u>2</u> Present? Yes <u>X</u> No
Remarks: (If observed, list morphological adaptations below).

Profile Desc Depth	ription: (Describe Matrix	to the de	oth needed to docu	ment the i ox Feature		or confirm	the absence	of indicators.)
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks
0-5	5/3 10YR	100					Silt loam	
5-12	5/2 10YR	80	5/6 7.5YR	20	С	PL	Silt loam	
						·		
						·		
						·		
		_						
¹ Type: C=Ce	oncentration, D=Der	bletion, RM	Reduced Matrix, M	S=Masked	d Sand G	ains.	² Location:	PL=Pore Lining, M=Matrix.
			I LRRs, unless othe					for Problematic Hydric Soils ³ :
Histosol	(A1)		Polyvalue Be	elow Surfa	ce (S8) (I	_RR S, T, U	J) 🔲 1 cm N	Muck (A9) (LRR O)
Histic Ep	pipedon (A2)		Thin Dark S	urface (S9)) (LRR S,	T, U)	2 cm N	Muck (A10) (LRR S)
🔲 Black Hi			Loamy Muck			R O)		ced Vertic (F18) (outside MLRA 150A,B)
	n Sulfide (A4)		Loamy Gley		F2)			ont Floodplain Soils (F19) (LRR P, S, T)
	d Layers (A5)		✓ Depleted Ma					alous Bright Loamy Soils (F20)
	Bodies (A6) (LRR F		Redox Dark		,			RA 153B)
	icky Mineral (A7) (L				· · ·			arent Material (TF2)
	esence (A8) (LRR l))	✓ Redox Depr Marl (F10) (I		8)			Shallow Dark Surface (TF12) (Explain in Remarks)
	ick (A9) (LRR P, T) d Below Dark Surfac	ο (Δ11)		,	(MIRA 1	51)		(Explain in Remarks)
	ark Surface (A12)		Iron-Mangar	, ,	•		T) ³ India	cators of hydrophytic vegetation and
	rairie Redox (A16) (MLRA 150			. ,	• • •		tland hydrology must be present,
	lucky Mineral (S1) (ess disturbed or problematic.
	Bleyed Matrix (S4)		Reduced Ve					·
Sandy R	edox (S5)		Piedmont Fl	oodplain S	oils (F19)	(MLRA 14	9A)	
	Matrix (S6)		Anomalous I	Bright Loai	my Soils ((F20) (MLR	A 149A, 153C	c, 153D)
	rface (S7) (LRR P,						1	
Restrictive I	_ayer (if observed)	:						
Туре:								N/
Depth (in	ches):						Hydric Soil	Present? Yes X No
Remarks:							•	

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Ruston Industrial Park	City/County: Linco	oln Parish	_ Sampling Date: 4/10/17
Applicant/Owner: City of Ruston		State: LA	
		, Range: Section 20, T 18	
5 ()			Slope (%): <u>5-10</u>
Subregion (LRR or MLRA): LRR P Lat:	32.531013	Long: -92.587465	UGS 84
Soil Map Unit Name: Guyton-Ouachita silt loams		Long NWI classif	
Are climatic / hydrologic conditions on the site typical for this time			
Are vegetation $\underline{N}_{}$, Soil $\underline{N}_{}$, or Hydrology $\underline{N}_{}$ significant the site typical for this time the set of t			present? Yes X No
Are Vegetation \underline{N} , Soil \underline{N} , or Hydrology \underline{N} natura			
SUMMARY OF FINDINGS – Attach site map sho			
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes No X Wetland Hydrology Present? Yes No X Remarks: Yes X	Is the Sam	•	<u>No X</u>
Sampling point was taken on the upland to portion of the subject property.	p bank of an inte	ermittent stream ch	annel in the northeast
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary India	cators (minimum of two required)
Primary Indicators (minimum of one is required; check all that a	pply)	Surface So	il Cracks (B6)
Surface Water (A1)	a (B13)	□ Sparsely V	egetated Concave Surface (B8)
High Water Table (A2)	s (B15) (LRR U)	🔲 Drainage P	atterns (B10)
Saturation (A3)	lfide Odor (C1)	Moss Trim	Lines (B16)
Water Marks (B1)	zospheres along Living R	oots (C3) 🔲 Dry-Seasor	n Water Table (C2)
Sediment Deposits (B2)	Reduced Iron (C4)	🔟 Crayfish Bu	urrows (C8)
Drift Deposits (B3)	Reduction in Tilled Soils (C6)	Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	urface (C7)	Geomorphi	c Position (D2)
	n in Remarks)	Shallow Aq	uitard (D3)
Inundation Visible on Aerial Imagery (B7)		=	al Test (D5)
Water-Stained Leaves (B9)		🔟 Sphagnum	moss (D8) (LRR T, U)
Field Observations:			
Surface Water Present? Yes No X Depth (ir	,		
Water Table Present? Yes No X Depth (ir			
Saturation Present? Yes <u>No X</u> Depth (ir (includes capillary fringe)	nches): <u>>12"</u>	Wetland Hydrology Prese	ent? Yes No $\frac{X}{X}$
Describe Recorded Data (stream gauge, monitoring well, aerial	photos, previous inspect	ions), if available:	
Remarks:			
No signs of hydrology			

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

Sampling Point: 4-UP

	Absolute	Dominant	Indicator	Dominance Test worksheet:		
Tree Stratum (Plot size: 1/10 acre)		Species?		Number of Dominant Species		
1. Liquidambar styraciflua	25	Yes	FAC	That Are OBL, FACW, or FAC: 5 (A)		
2. Quercus alba	20	Yes	FACU	Total Number of Dominant		
3. Carpinus caroliniana	10	No	FAC	Species Across All Strata: <u>8</u> (B)		
4. Quercus nigra	10	No	FAC			
5. Quercus pagoda	5	No	FACW	Percent of Dominant Species That Are OBL, FACW, or FAC: 63% (A/E	3)	
6. Prunus serotina	5	No	FACU		.,	
7				Prevalence Index worksheet:		
8				Total % Cover of:Multiply by:		
	75	= Total Cov	er	OBL species x 1 =		
50% of total cover: 27.5		total cover:		FACW species x 2 =		
Sapling/Shrub Stratum (Plot size: 1/10 acre)				FAC species x 3 =		
Ligustrum sinense	15	Yes	FAC	FACU species x 4 =		
2. Ulmus alata	15	Yes	FACU	UPL species x 5 =		
3. Ilex opaca	5	No	FAC	Column Totals: (A) (B)	,	
4. Acer rubrum	5	No	FAC			
				Prevalence Index = B/A =		
5				Hydrophytic Vegetation Indicators:		
6				1 - Rapid Test for Hydrophytic Vegetation		
7						
8			<u> </u>	\Box 3 - Prevalence Index is $\leq 3.0^1$		
		= Total Cov		Problematic Hydrophytic Vegetation ¹ (Explain)		
50% of total cover: <u>20</u>	20% of	total cover:	8			
Herb Stratum (Plot size: 1/10 acre)				¹ Indicators of hydric soil and wetland hydrology must		
1. Arundinaria tecta	15	Yes	FACW	be present, unless disturbed or problematic.		
2. Podophyllum peltatum	10	Yes	FACU	Definitions of Four Vegetation Strata:		
3				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) c)r	
4				more in diameter at breast height (DBH), regardless o		
5				height.		
6				Sapling/Shrub – Woody plants, excluding vines, less		
7				than 3 in. DBH and greater than 3.28 ft (1 m) tall.		
8				Herb – All herbaceous (non-woody) plants, regardless	_	
9				of size, and woody plants less than 3.28 ft tall.	,	
10						
11			·	Woody vine – All woody vines greater than 3.28 ft in height.		
12.				inoight.		
	25	= Total Cov	or			
50% of total cover: 12.5		total cover:				
Woody Vine Stratum (Plot size:)	20 /0 01					
1. Smilax rotundifolia	10	Yes	FAC			
2. Vitis rotundifolia	5	Yes	FAC			
3						
4			·			
5				Hydrophytic		
7.5	15 = Total Cover			Vegetation Present? Yes ^X No		
50% of total cover: 7.5	50% of total cover: $\frac{7.5}{20\%}$ 20% of total cover: $\frac{3}{100}$					
Remarks: (If observed, list morphological adaptations belo	w).					

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth	Matrix		Redo	x Features					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remar	ks
0-12	4/6 10YR	100					Silty loam		
1							21 11 11	D 1.1.1. N N	
	oncentration, D=Dep					ains.		=Pore Lining, M=N	
	Indicators: (Applie	cable to all L					_	Problematic Hyd	ric Solis":
Histosol	. ,		Polyvalue Be					(A9) (LRR O)	
	pipedon (A2)		Thin Dark Su					(A10) (LRR S)	
	stic (A3)		Loamy Muck			l O)			de MLRA 150A,B)
	en Sulfide (A4)		Loamy Gleye		F2)				⁻ 19) (LRR P, S, T)
	d Layers (A5)		Depleted Ma					s Bright Loamy Sc	vils (F20)
Organic	Bodies (A6) (LRR F	P, T, U)	Redox Dark	Surface (F	6)		(MLRA 1		
	ucky Mineral (A7) (L		Depleted Da					t Material (TF2)	
	esence (A8) (LRR l		Redox Depre		8)			ow Dark Surface (TF12)
	uck (A9) (LRR P, T)		Marl (F10) (L				U Other (Exp	lain in Remarks)	
	d Below Dark Surfac	ce (A11)	Depleted Oc						
	ark Surface (A12)		Iron-Mangan		· / •			s of hydrophytic v	-
	rairie Redox (A16) (, U)		l hydrology must b	
	/lucky Mineral (S1) (LRR O, S)	Delta Ochric					disturbed or proble	ematic.
	Bleyed Matrix (S4)		Reduced Ve						
Sandy F	Redox (S5)		Piedmont Flo						
	l Matrix (S6)		Anomalous I	Bright Loar	ny Soils (F20) (MLF	RA 149A, 153C, 15	3D)	
	rface (S7) (LRR P,								
Restrictive	Layer (if observed)	:							
Type:									
Depth (in	ches):						Hydric Soil Pre	sent? Yes	No X
Remarks:									
N	o hydric soil o	character	istics observ	ed with	nin the	top 12			
						•			

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Ruston Industrial Park	City/County: Linco	Sampling Date: <u>4/10/17</u>					
Applicant/Owner: City of Ruston			Sampling Point: 6-UP				
			Slope (%): <u>5-10</u>				
Subregion (LRR or MLRA): LRR P La	. 32.530099	-92.588810	D Datum: WGS 84				
Soll Map Unit Name: Darley-Sacul association			lassification:				
Are climatic / hydrologic conditions on the site typical for this t							
Are climatic / hydrologic conditions on the site typical for this f Are Vegetation \underline{N} , Soil \underline{N} , or Hydrology \underline{N} sig			nces" present? Yes X No				
Are Vegetation N, Soil N, or Hydrology N na	turally problematic? (If needed, explain any	answers in Remarks.)				
SUMMARY OF FINDINGS – Attach site map s							
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes No No Wetland Hydrology Present? Yes No No Remarks: Yes No No	X Is the Sam X within a We		s No <u>X</u>				
Sampling point was taken within a natura	al topographic draw	/ within the eas	tern portion of the site.				
HYDROLOGY							
Wetland Hydrology Indicators:		Secondary	/ Indicators (minimum of two required)				
Primary Indicators (minimum of one is required; check all the	at apply)	Surfac	ce Soil Cracks (B6)				
	Surface Water (A1)						
	osits (B15) (LRR U)		Drainage Patterns (B10)				
	Hydrogen Sulfide Odor (C1)						
	Rhizospheres along Living R		Dry-Season Water Table (C2)				
	of Reduced Iron (C4)	= '	Crayfish Burrows (C8)				
	on Reduction in Tilled Soils (Saturation Visible on Aerial Imagery (C9)				
	k Surface (C7) plain in Remarks)	_	Geomorphic Position (D2) Shallow Aquitard (D3)				
Inundation Visible on Aerial Imagery (B7)	=	FAC-Neutral Test (D5)					
Water-Stained Leaves (B9)		=	gnum moss (D8) (LRR T, U)				
Field Observations:							
Surface Water Present? Yes No X Dept	h (inches): none						
Water Table Present? Yes No X Dept	h (inches): <u>>12"</u>						
Saturation Present? Yes No X Dept		Wetland Hydrology I	Vetland Hydrology Present? Yes No $\frac{X}{2}$				
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, as	rial photos, previous inspect	ions) if available:					
beschbe Recorded Data (stream gauge, monitoring well, ac							
Remarks:							
Sampling Point: 6-UP

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: 1/10 acre)	% Cover	Species?	Status	Number of Dominant Species	
1. Liquidambar styraciflua	25	Yes	FAC		(A)
2. Quercus nigra	20	Yes	FAC	Total Number of Dominant	
3. Acer rubrum	10	No	FAC	0	(B)
4. Carpinus caroliniana	10	No	FAC		· /
5. Carya spp.	5	No	FACU	Percent of Dominant Species	(A/D)
6				That Are OBL, FACW, or FAC: 67%	(A/B)
7				Prevalence Index worksheet:	
				Total % Cover of: Multiply by:	
8	70	Total Car		OBL species x 1 =	
500/ // 35		= Total Cov		FACW species x 2 =	
50% of total cover: <u>35</u>	20% of	total cover		FAC species x 3 =	
Sapling/Shrub Stratum (Plot size: 1/10 acre)	15	Vaa	FAC	FACU species x 4 =	
1. Ligustrum sinense	15	Yes	FAC	UPL species x 5 =	
2. Prunus serotina	15	Yes	FACU		
3. Ulmus alata	10	Yes	FACU	Column Totals: (A)	(D)
4. Carya spp.	5	No	FACU	Prevalence Index = B/A =	
5				Hydrophytic Vegetation Indicators:	
6				1 - Rapid Test for Hydrophytic Vegetation	
7				\checkmark 2 - Dominance Test is >50%	
8					
	45	= Total Cov	er	3 - Prevalence Index is ≤3.0 ¹	
50% of total cover: 22.5				Problematic Hydrophytic Vegetation ¹ (Explain))
Herb Stratum (Plot size: 1/10 acre)	2070.01				
Callicarpa americana	15	Yes	FACU	¹ Indicators of hydric soil and wetland hydrology mu	ust
2. Arundinaria tecta	10	Yes	FACW	be present, unless disturbed or problematic.	
				Definitions of Four Vegetation Strata:	
3				Tree – Woody plants, excluding vines, 3 in. (7.6 cr	n) or
4				more in diameter at breast height (DBH), regardles	ss of
5				height.	
6				Sapling/Shrub – Woody plants, excluding vines, I	ess
7				than 3 in. DBH and greater than 3.28 ft (1 m) tall.	
8				Herb – All herbaceous (non-woody) plants, regard	اععط
9				of size, and woody plants less than 3.28 ft tall.	1000
10					
11.				Woody vine – All woody vines greater than 3.28 ft height.	tin
12.				in original	
12	25	= Total Cov	or		
50% of total cover: 12.5		total cover			
	20% 0	total cover			
<u>Woody Vine Stratum</u> (Plot size:) 1. Vitis rotundifolia	5	Yes	FAC		
	5				
2. Smilax rotundifolia		Yes	FAC		
3	. <u> </u>				
4					
5				Hydrophytic	
	10	= Total Cov	er	Vegetation	
50% of total cover: <u>5</u>	20% of	total cover	2	Present? Yes <u>×</u> No	
Remarks: (If observed, list morphological adaptations belo					

		to the depth		ent the indicator or confirm	n the absence o	of indicators.)
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Features % Type ¹ Loc ²	Texture	Remarks
<u>(incries)</u> 0-12	4/6 10YR	100		<u>% Type Loc</u>	Silty loam	Remarks
0-12	4/0 1011		· _		Only Ioann	
			· ·			
				Masked Sand Grains.		PL=Pore Lining, M=Matrix.
		cable to all L	RRs, unless otherw			or Problematic Hydric Soils ³ :
Histosol	(A1) bipedon (A2)			w Surface (S8) (LRR S, T, L ace (S9) (LRR S, T, U)		uck (A9) (LRR O) uck (A10) (LRR S)
Black Hi	,			Mineral (F1) (LRR O)		d Vertic (F18) (outside MLRA 150A,B)
	n Sulfide (A4)		Loamy Gleyed			nt Floodplain Soils (F19) (LRR P, S, T)
	d Layers (A5)		Depleted Matri			ous Bright Loamy Soils (F20)
	Bodies (A6) (LRR I	P, T, U)	Redox Dark Su	()		A 153B)
	icky Mineral (A7) (L		Depleted Dark	Surface (F7)		rent Material (TF2)
Muck Pr	esence (A8) (LRR	J)	Redox Depress	sions (F8)	U Very Sh	allow Dark Surface (TF12)
	ick (A9) (LRR P, T)		Marl (F10) (LR		U Other (E	Explain in Remarks)
	Below Dark Surfa	ce (A11)		ic (F11) (MLRA 151)		
	ark Surface (A12)			e Masses (F12) (LRR O, P,		tors of hydrophytic vegetation and
	rairie Redox (A16) (lucky Mineral (S1) (• •		e (F13) (LRR P, T, U)		and hydrology must be present, ss disturbed or problematic.
	Bleyed Matrix (S4)	LKK 0, 3)		517) (MLRA 151) c (F18) (MLRA 150A, 150B)		ss disturbed of problematic.
	edox (S5)			dplain Soils (F19) (MLRA 14		
	Matrix (S6)			ght Loamy Soils (F20) (MLR		153D)
	rface (S7) (LRR P,	S, T, U)	_		, ,	,
Restrictive I	_ayer (if observed):				
Туре:						
Depth (ind	ches):				Hydric Soil F	Present? Yes <u>No \times</u>
Remarks:						
N	o hydric soll	character	istics observe	d within the top 12	" of the soil	l profile.
1						
1						

Project/Site: Ruston Industrial Park	City/County: Lincoln	Parish	Sampling Date: 4/10/17
Applicant/Owner: City of Ruston	City/County: Lincoln	State: LA	Sampling Point: 8-PFO
	Section, Township, Ra		
			Slope (%): 0-2
Subregion (LRR or MLRA): LRR P Lat: 3	2.529638	-92.589376	0iope (70) Datum: WGS 84
Soll Map Unit Name: Darley-Sacul association			Datum
Are climatic / hydrologic conditions on the site typical for this time		NWI classifi	
Are Vegetation <u>N</u> , Soil <u>N</u> , or Hydrology <u>N</u> signific	antly disturbed? Are	"Normal Circumstances"	present? Yes <u>//</u> No
Are Vegetation <u>N</u> , Soil <u>N</u> , or Hydrology <u>N</u> natural	ly problematic? (If ne	eeded, explain any answe	ers in Remarks.)
SUMMARY OF FINDINGS – Attach site map show	ving sampling point I	locations, transects	s, important features, etc.
Hydrophytic Vegetation Present? Yes X No			
Hydric Soil Present? Yes X No			
Wetland Hydrology Present? Yes X No		nd? Yes X	No
Remarks:	I		
Sampling point was taken within a forested	wetland fringe to a	an ephemeral stre	eam channel in the
eastern portion of the subject property.	C C	·	
HYDROLOGY			
Wetland Hydrology Indicators:		_	ators (minimum of two required)
Primary Indicators (minimum of one is required; check all that ap			Cracks (B6)
Surface Water (A1)	()		getated Concave Surface (B8)
High Water Table (A2) Saturation (A3) Hydrogen Sult	(B15) (LRR U)	Drainage Pa	
	ospheres along Living Roots	s (C3) Dry-Season	Water Table (C2)
	educed Iron (C4)	Crayfish Bu	
	eduction in Tilled Soils (C6)		isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)			Position (D2)
Iron Deposits (B5)	in Remarks)	Shallow Aqu	litard (D3)
Inundation Visible on Aerial Imagery (B7)		FAC-Neutra	I Test (D5)
✓ Water-Stained Leaves (B9)		Sphagnum r	moss (D8) (LRR T, U)
Field Observations:	1.2" in pools		
Surface Water Present? Yes <u>x</u> No Depth (in	ches): 1-2 III pools		
Water Table Present? Yes <u>No X</u> Depth (in			X
Saturation Present? Yes X No Depth (in (includes capillary fringe)	ches): <u>Surface</u> We	etland Hydrology Prese	nt? Yes <u>^</u> No
Describe Recorded Data (stream gauge, monitoring well, aerial	photos, previous inspections	s), if available:	
Remarks:			

Sampling Point: 8-PFO

4/40	Absolute	Dominant		Dominance Test worksheet:	
Tree Stratum (Plot size: 1/10 acre)		Species?		Number of Dominant Species	
1. Quercus nigra	25	Yes	FAC	That Are OBL, FACW, or FAC: <u>5</u> (A)	
2. Ulmus americana	15	Yes	FAC	Total Number of Dominant	
3. Quercus phellos	10	No	FACW	Species Across All Strata: <u>5</u> (B)	
4. Liquidambar styraciflua	10	No	FAC	Percent of Dominant Species	
5. Salix nigra	5	No	OBL	That Are OBL, FACW, or FAC: 100% (A/E	3)
6				Prevalence Index worksheet:	
7			<u> </u>	Total % Cover of: Multiply by:	
8			<u> </u>	OBL species x1 =	
		= Total Cov			
50% of total cover: <u>32.5</u>	20% of	total cover:	13	FACW species x 2 =	
Sapling/Shrub Stratum (Plot size: 1/10 acre)				FAC species x 3 = FACULARAGINA x 4	
1. Ligustrum sinense	20	Yes	FAC	FACU species x 4 =	
2. Quercus phellos	10	Yes	FACW	UPL species x 5 = Output Tatala (A)	
3. Salix nigra	5	No	OBL	Column Totals: (A) (B)
4				Prevalence Index = B/A =	
5				Hydrophytic Vegetation Indicators:	
6				1 - Rapid Test for Hydrophytic Vegetation	
7				$\boxed{2}$ 2 - Dominance Test is >50%	
8				\square 3 - Prevalence Index is $\leq 3.0^1$	
	35	= Total Cov	er	Problematic Hydrophytic Vegetation ¹ (Explain)	
50% of total cover: <u>17.5</u>					
Herb Stratum (Plot size: 1/10 acre)				¹ Indicators of hydric soil and wetland hydrology must	
1. Arundinaria tecta	20	Yes	FACW	be present, unless disturbed or problematic.	
2				Definitions of Four Vegetation Strata:	
3				Tree March plants such diagonized 2 in (7.0 pm)	
4				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless of	
5				height.	
6				Sapling/Shrub – Woody plants, excluding vines, less	
7				than 3 in. DBH and greater than 3.28 ft (1 m) tall.	
8					-
9				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	5
10					
11.				Woody vine – All woody vines greater than 3.28 ft in height.	
12.				linght.	
12	20	= Total Cov	or		
50% of total cover: 10					
	20 /8 01				
Woody Vine Stratum (Plot size:)					
1					
2					
3					
4					
5				Hydrophytic	
		= Total Cov		Vegetation Present? Yes X No	
50% of total cover:		total cover:			
Remarks: (If observed, list morphological adaptations belo	w).]

Profile Desc	ription: (Describe	to the dep	th needed to docur	nent the i	ndicator	or confirm	the absence	of indicators.)
Depth	Matrix		Redo	x Feature	s 1	12	T	Description
<u>(inches)</u> 0-12	Color (moist) 5/1 10YR	<u>%</u> 85	Color (moist) 4/6 7.5YR	<u>%</u> 15	<u>Type¹</u> C	Loc ² PL	Texture Sandy loam	Remarks
	5/11011	00	4/07.511	15	0	· <u> </u>		
		·				·		
		·				·		
¹ Type: C=Co	oncentration, D=Dep	letion. RM=	Reduced Matrix. MS	S=Masked	I Sand G	ains.	² Location:	PL=Pore Lining, M=Matrix.
	Indicators: (Applic							o for Problematic Hydric Soils ³ :
Histosol	(A1)		Polyvalue Be					Muck (A9) (LRR O)
	pipedon (A2)		Thin Dark Su					Muck (A10) (LRR S)
Black Hi	. ,		Loamy Muck			૨Ο)		ced Vertic (F18) (outside MLRA 150A,B)
	en Sulfide (A4) d Layers (A5)		Loamy Gleye		F2)			ont Floodplain Soils (F19) (LRR P, S, T) alous Bright Loamy Soils (F20)
	Bodies (A6) (LRR P	τ.υ)	Depleted Ma		6)			RA 153B)
	icky Mineral (A7) (LF		=		,			arent Material (TF2)
	esence (A8) (LRR U		Redox Depre		. ,			Shallow Dark Surface (TF12)
1 cm Mu	ick (A9) (LRR P, T)		<u> </u>				Other	(Explain in Remarks)
	d Below Dark Surface	e (A11)	Depleted Ocl					
	ark Surface (A12)		Iron-Mangan		• •	• • •		cators of hydrophytic vegetation and
	rairie Redox (A16) (N lucky Mineral (S1) (L		 Umbric Surfa Delta Ochric 					tland hydrology must be present, ess disturbed or problematic.
	Bleyed Matrix (S4)	(0, 0)	Reduced Ver					cos disturbed of problematic.
	Redox (S5)		Piedmont Flo					
Stripped	Matrix (S6)		Anomalous E	right Loar	my Soils	(F20) (MLR	A 149A, 153C	c, 153D)
	rface (S7) (LRR P, S	-					1	
	Layer (if observed):							
Туре:								- · · · · ·
Depth (ind	ches):						Hydric Soil	Present? Yes X No
Remarks:								

Project/Site: Ruston Industrial Park	City/County: Lincoln Parish		Sampling Date: 4/10/17
Applicant/Owner: City of Ruston	City/County: Lincoln Parish	_{state} . LA	Sampling Point: 12-PFO
Investigator(s): Headwaters, Inc.	Section, Township, Range: Se	ection 20, T 18 N	I, R 2 W
	Local relief (concave, convex, n		
Subregion (LRR or MLRA): LRR P Lat:	32.529977	2.589748	0.0pt (70) Dotum: WGS 84
Soll Map Unit Name: Darley-Sacul association			
	Y		
Are climatic / hydrologic conditions on the site typical for this time			
Are Vegetation N, Soil N, or Hydrology N, signifi			
Are Vegetation <u>N</u> , Soil <u>N</u> , or Hydrology <u>N</u> natura	Illy problematic? (If needed, ex	xplain any answers	s in Remarks.)
SUMMARY OF FINDINGS – Attach site map sho	wing sampling point location	ns, transects,	important features, etc.
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area		
Hydric Soil Present? Yes X No		Yes X	No
Wetland Hydrology Present? Yes X No No Remarks:			
	wotland babitat in the ar	octorn portio	n of the cite along
Sampling point was taken within a forested		astern portio	n or the site along
the top-bank of an ephemeral stream char	nel.		
HYDROLOGY			
		Sacandan/ Indicat	ors (minimum of two required)
Wetland Hydrology Indicators:		—	
Primary Indicators (minimum of one is required; check all that a		Surface Soil C	()
	()		etated Concave Surface (B8)
	s (B15) (LRR U) Ifide Odor (C1)	Drainage Patt	
	zospheres along Living Roots (C3)	Moss Trim Lin	Vater Table (C2)
		Crayfish Burro	
	Reduction in Tilled Soils (C6)		ible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Geomorphic F	
	in in Remarks)	Shallow Aquit	
Inundation Visible on Aerial Imagery (B7)	,	FAC-Neutral	
Water-Stained Leaves (B9)		=	oss (D8) (LRR T, U)
Field Observations:			
Surface Water Present? Yes X No Depth (i	nches): 1-3" in pools		
Water Table Present? Yes No X Depth (i	nches): <u>>12"</u>		
Saturation Present? Yes X No Depth (i	nches): Surface Wetland Hy	ydrology Present	? Yes X No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aeria	photos previous inspections) if avail	able:	
Remarks:			

, , , , , , , , , , , , , , , , , , ,	Absolute	Dominant	Indicator	Dominance Test worksheet:		
Tree Stratum (Plot size: 1/10 acre)		Species?		Number of Dominant Species		
1. Liquidambar styraciflua	25	Yes	FAC		(A)	
2. Triadica sebifera	15	Yes	FAC		(, , ,	
3. Acer rubrum	10	No	FAC	Total Number of Dominant		
4. Ulmus americana	10	No	FAC	Species Across All Strata: 9	(B)	
				Percent of Dominant Species		
5. Salix nigra	5	No	OBL	That Are OBL, FACW, or FAC: 100%	(A/B)	
6. Pinus taeda	5	No	FAC	Prevalence Index worksheet:		
7						
8				Total % Cover of: Multiply by:		
	70	= Total Cov	ver	OBL species x 1 =		
50% of total cover: 35	20% of	total cover	14	FACW species x 2 =	.	
Sapling/Shrub Stratum (Plot size: 1/10 acre)				FAC species x 3 =	.	
1. Triadica sebifera	15	Yes	FAC	FACU species x 4 =	.	
2. Ligustrum sinense	10	Yes	FAC	UPL species x 5 =	.	
3. Salix nigra	10	Yes	OBL	Column Totals: (A)		
4				Prevalence Index = B/A =	_	
5				Hydrophytic Vegetation Indicators:		
6				1 - Rapid Test for Hydrophytic Vegetation		
7				$\boxed{2}$ - Dominance Test is >50%		
8				\square 3 - Prevalence Index is $\leq 3.0^{1}$		
	35	= Total Cov	/er		、 、	
50% of total cover: 17.5				Problematic Hydrophytic Vegetation ¹ (Explain)	
	20 % 01		· <u> </u>			
Herb Stratum (Plot size: 1/10 acre)	25	Vaa		¹ Indicators of hydric soil and wetland hydrology m	ust	
1. Carex spp.	25	Yes	FACW	be present, unless disturbed or problematic.		
2. Cyperus pseudovegetus	10	Yes	FACW	Definitions of Four Vegetation Strata:		
3. Persicaria hydropiperoides	10	Yes	OBL	Tree – Woody plants, excluding vines, 3 in. (7.6 c	m) or	
4. Juncus effusus	5	No	OBL	more in diameter at breast height (DBH), regardle		
5. Triadica sebifera	5	No	FAC	height.		
6				Sapling/Shrub – Woody plants, excluding vines,	000	
7				than 3 in. DBH and greater than 3.28 ft (1 m) tall.	033	
8						
				Herb – All herbaceous (non-woody) plants, regard of size, and woody plants less than 3.28 ft tall.	lless	
9						
10				Woody vine - All woody vines greater than 3.28 f	t in	
11				height.		
12						
	55	= Total Cov	ver			
50% of total cover: 27.5	20% of	total cover	11			
Woody Vine Stratum (Plot size:)						
1. Smilax rotundifolia	10	Yes	FAC			
2						
3						
4		·				
5	40	·		Hydrophytic		
		= Total Cov		Vegetation Present? Yes X No No		
50% of total cover: <u>5</u>	20% of	total cover	2			
Remarks: (If observed, list morphological adaptations belo	w).			•		
· · · · · ·						

Profile Desc	ription: (Describe	to the dep	th needed to docur	nent the	indicator	or confirm	the absence	of indicators.)	
Depth	Matrix			x Feature		. 2			
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type'		<u>Texture</u>	Remarks	
0-12	5/1 10YR	85	5/6 7.5YR	15	С	PL	Silt loam		
						·			
						. <u> </u>			
		·			<u> </u>	·			
						·			
		·				·			
¹ Type: C=Co	oncentration, D=Dep	letion. RM=	Reduced Matrix. M	S=Masked	d Sand Gr	ains.	² Location:	PL=Pore Lining, M=Matrix.	
	ndicators: (Applic							for Problematic Hydric Soils ³ :	
Histosol	(A1)		Polyvalue Be	low Surfa	ice (S8) (I	_RR S, T, U	J) 🛄 1 cm M	Muck (A9) (LRR O)	
Histic Ep	pipedon (A2)		🔲 Thin Dark Su					Muck (A10) (LRR S)	
Black Hi			Loamy Muck			R O)		ced Vertic (F18) (outside MLRA 150	
	n Sulfide (A4)		Loamy Gleye		(F2)			nont Floodplain Soils (F19) (LRR P, S	5, T)
	l Layers (A5) Bodies (A6) (LRR P	т н)	✓ Depleted Ma Redox Dark		=6)			alous Bright Loamy Soils (F20) RA 153B)	
	icky Mineral (A7) (LF		Depleted Dark					arent Material (TF2)	
	esence (A8) (LRR U		Redox Depre		. ,			Shallow Dark Surface (TF12)	
<u> </u>	ick (A9) (LRR P, T)		<u> </u>	.RR U)			Other	(Explain in Remarks)	
	Below Dark Surfac	e (A11)	Depleted Oc				 3		
	ark Surface (A12)		Iron-Mangan					cators of hydrophytic vegetation and tland hydrology must be present,	
	airie Redox (A16) (N lucky Mineral (S1) (I		 Umbric Surfa Delta Ochric 			, 0)		ess disturbed or problematic.	
	ileyed Matrix (S4)		Reduced Ver			50A, 150B)			
	edox (S5)		Piedmont Flo						
	Matrix (S6)		Anomalous E	Bright Loa	my Soils ((F20) (MLR	A 149A, 153C	c, 153D)	
	rface (S7) (LRR P, S	-					1		
	_ayer (if observed):								
Type:).						Undria Call	Present? Yes \times No	
	ches):						Hydric Soil	Present? Yes X No	
Remarks:									

Project/Site: Ruston Industrial Park	City/County: Lincoln Paris	sh	Sampling Date: 4/10/17
Applicant/Owner: City of Ruston	City/County: Lincoln Paris	State [.] LA	Sampling Point. 15-PSS
	Section, Township, Range:		
Depression			0.0
Landform (hillslope, terrace, etc.): Depression Subregion (LRR or MLRA): LRR P Lat: Soil Map Unit Name: Darley-Sacul association	32.529115	92.591695	Olope (70) Datum: WGS 84
Darley-Sacul association	Long	•	
	Y		ation:
Are climatic / hydrologic conditions on the site typical for this til			
Are Vegetation N, Soil N, or Hydrology N sigr	ificantly disturbed? Are "Norr	mal Circumstances" p	resent? Yes <u>^</u> No
Are Vegetation <u>N</u> , Soil <u>N</u> , or Hydrology <u>N</u> natu	rally problematic? (If needed	d, explain any answer	s in Remarks.)
SUMMARY OF FINDINGS – Attach site map sh	owing sampling point loca	tions, transects	important features, etc.
Hydrophytic Vegetation Present? Yes X No			
Hydric Soil Present? Yes X No_		Yes X	No
Wetland Hydrology Present? Yes X No Remarks:			
	ebrub wotland danracai	on that has had	on impoded by a
Sampling point was taken within a scrub-	shrub wettand depressio	on that has bee	en impeded by a
previously utilized logging road.			
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indica	tors (minimum of two required)
Primary Indicators (minimum of one is required; check all tha		Surface Soil	
			etated Concave Surface (B8)
	sits (B15) (LRR U)	Drainage Pat	
	Sulfide Odor (C1)	Moss Trim Li	
	hizospheres along Living Roots (C3		Vater Table (C2)
	of Reduced Iron (C4)	Crayfish Burr	
	Reduction in Tilled Soils (C6)		sible on Aerial Imagery (C9)
	Surface (C7)	Geomorphic	
	lain in Remarks)	Shallow Aqui	tard (D3)
Inundation Visible on Aerial Imagery (B7)		FAC-Neutral	Test (D5)
✓ Water-Stained Leaves (B9)		🔲 Sphagnum m	oss (D8) (LRR T, U)
Field Observations:	0.1		
Surface Water Present? Yes X No Depth			
Water Table Present? Yes No X Depth			X
Saturation Present? Yes X No Depth (includes capillary fringe)	(inches): Surface Wetlan	d Hydrology Presen	t? Yes <u>×</u> No
Describe Recorded Data (stream gauge, monitoring well, aer	al photos, previous inspections), if a	available:	
Remarks:			

Sampling Point: 15-PSS

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: 1/10 acre)	% Cover	Species?	Status	Number of Dominant Species	
1				That Are OBL, FACW, or FAC: 5 (A	.)
2				Total Number of Dominant	
3				Species Across All Strata: <u>5</u> (B	5)
4					,
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A	/B)
				That Ale OBE, FACW, OF FAC. (A	иD)
6				Prevalence Index worksheet:	
7				Total % Cover of: Multiply by:	
8				OBL species x 1 =	
		= Total Cov		FACW species x 2 =	
50% of total cover:	20% of	total cover:		FAC species x 3 =	
Sapling/Shrub Stratum (Plot size: 1/10 acre)					
1. Salix nigra	20	Yes	OBL	FACU species x 4 =	
2. Liquidambar styraciflua	10	Yes	FAC	UPL species x 5 =	
3. Acer rubrum	10	Yes	FAC	Column Totals: (A) (B)
4				Prevalence Index = B/A =	
5					
				Hydrophytic Vegetation Indicators:	
6				1 - Rapid Test for Hydrophytic Vegetation	
7	·			2 - Dominance Test is >50%	
8				3 - Prevalence Index is ≤3.0 ¹	
		= Total Cov		Problematic Hydrophytic Vegetation ¹ (Explain)	
50% of total cover: 20	20% of	total cover:	8		
Herb Stratum (Plot size: 1/10 acre)				¹ Indicators of hydric soil and wetland hydrology mus	t
1. Persicaria hydropiperoides	25	Yes	OBL	be present, unless disturbed or problematic.	
2. Juncus effusus	15	Yes	OBL	Definitions of Four Vegetation Strata:	
3. Carex spp.	10	No	FACW		
4. Saccharum giganteum	10	No	FACW	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) more in diameter at breast height (DBH), regardless	
	·			height.	0
5					
6				Sapling/Shrub – Woody plants, excluding vines, les	SS
7				than 3 in. DBH and greater than 3.28 ft (1 m) tall.	
8	·			Herb - All herbaceous (non-woody) plants, regardle	ss
9				of size, and woody plants less than 3.28 ft tall.	
10				Woody vine – All woody vines greater than 3.28 ft in	n
11				height.	
12.					
	60	= Total Cov	or		
50% of total cover: 30					
	20% 01	total cover.			
Woody Vine Stratum (Plot size:)					
1					
2					
3					
4					
5				Hydrophytic	
		= Total Cov		Vegetation	
50% of total cover:				Present? Yes $\frac{\chi}{}$ No	
Remarks: (If observed, list morphological adaptations belo	ow).				

Profile Desc	ription: (Describe	to the dept	h needed to docun	nent the	indicator	or confirm	n the absence	of indicators.)
Depth	Matrix		Redo	x Feature	s			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-12	5/1 10YR	90	4/6 7.5YR	10	С	PL	Silt loam	
					-			
				·				
					- <u></u>			
				·				
	oncentration, D=Dep					ains.		PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators: (Applic	able to all I	RRs, unless other	wise not	ed.)		Indicators	for Problematic Hydric Soils ³ :
Histosol	(A1)		Polyvalue Be	low Surfa	ace (S8) (L		U) 1 cm M	1uck (A9) (LRR O)
Histic Ep	oipedon (A2)		Thin Dark Su	rface (S9) (LRR S,	T, U)		/luck (A10) (LRR S)
Black Hi	stic (A3)		Loamy Muck	y Mineral	(F1) (LRF	R O)	Reduce	ed Vertic (F18) (outside MLRA 150A,B)
	n Sulfide (A4)		Loamy Gleye		(F2)			ont Floodplain Soils (F19) (LRR P, S, T)
	l Layers (A5)		Depleted Mat					alous Bright Loamy Soils (F20)
	Bodies (A6) (LRR P		Redox Dark S		,		· ·	RA 153B)
	icky Mineral (A7) (Li		Depleted Dar		• •			arent Material (TF2)
	esence (A8) (LRR U))	Redox Depre	•	-8)			hallow Dark Surface (TF12)
	ick (A9) (LRR P, T)	- () ()	Marl (F10) (L			54)	U Other ((Explain in Remarks)
	d Below Dark Surfac ark Surface (A12)	e (A11)	Depleted Och				T) ³ India	ators of hydrophytic vegetation and
	rairie Redox (A12)							land hydrology must be present,
	lucky Mineral (S1) (I		Delta Ochric			, 0)		ess disturbed or problematic.
	ileyed Matrix (S4)	Litit 0, 0)	Reduced Ver			50A. 150B		
	edox (S5)		Piedmont Flo					
	Matrix (S6)						RA 149A, 153C,	, 153D)
	rface (S7) (LRR P, S	S, T, U)	—	0	,			
	_ayer (if observed)							
Type:								
, · · · ·	ches):						Hydric Soil	Present? Yes X No
Remarks:								···
Remarks.								

Project/Site: Ruston Industrial Park	City/County: Linco	oln Parish	_ Sampling Date: 4/10/17
Applicant/Owner: City of Ruston		State: LA	
	Section, Township		
Landform (hillslope, terrace, etc.): top-bank	Local relief (conca	ve. convex. none); convex	Slope (%): 5-10
Subregion (LRR or MLRA): LRR P	Lat: 32.531693	long: -92.598027	Datum: WGS 84
Soil Map Unit Name: Guyton-Ouachita silt loams		NWI classif	
Are climatic / hydrologic conditions on the site typical for			
Are vegetation $\underline{N}_{}$, Soil $\underline{N}_{}$, or Hydrology $\underline{N}_{}$			
Are vegetation, soil, or Hydrology Are Vegetation, Soil _N, or Hydrology			
SUMMARY OF FINDINGS – Attach site m		nt locations, transect	s, important features, etc.
Hydrophytic Vegetation Present? Yes X	No Is the Sam	pled Area	
Hydric Soil Present? Yes	$- \frac{No}{X}$ within a We		No X
Wetland Hydrology Present? Yes	_ No <u>X</u>		
Remarks:			
Sampling point was taken on the up	and top bank of a pere	nnial stream chanr	nel in the western
portion of the subject property.			
HYDROLOGY		O see stand and a di	
Wetland Hydrology Indicators:			cators (minimum of two required)
Primary Indicators (minimum of one is required; check			il Cracks (B6)
	uatic Fauna (B13)		egetated Concave Surface (B8)
	rl Deposits (B15) (LRR U) drogen Sulfide Odor (C1)		atterns (B10)
	dized Rhizospheres along Living R		Lines (B16) n Water Table (C2)
	sence of Reduced Iron (C4)	Crayfish Bu	
	cent Iron Reduction in Tilled Soils (Visible on Aerial Imagery (C9)
	n Muck Surface (C7)		c Position (D2)
Iron Deposits (B5)	er (Explain in Remarks)	Shallow Aq	uitard (D3)
Inundation Visible on Aerial Imagery (B7)		FAC-Neutra	al Test (D5)
Water-Stained Leaves (B9)		📃 Sphagnum	moss (D8) (LRR T, U)
Field Observations:			
	Depth (inches): none		
	Depth (inches): >12"		X
Saturation Present? Yes <u>No X</u> (includes capillary fringe)	Depth (inches): <u>>12</u> "	Wetland Hydrology Prese	ent? Yes No $\frac{X}{2}$
Describe Recorded Data (stream gauge, monitoring w	vell, aerial photos, previous inspect	ions), if available:	
Remarks:			
No signs of hydrology.			

Sampling Point: 18-UP

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 1/10 acre)	% Cover	Species?		Number of Dominant Species
_{1.} Quercus nigra	30	Yes	FAC	That Are OBL, FACW, or FAC: (A)
2. Pinus taeda	15	Yes	FAC	
3. Ulmus americana	10	No	FAC	Total Number of Dominant Species Across All Strata: <u>7</u> (B)
4. Carpinus caroliniana	10	No	FAC	
5. Liquidambar styraciflua	10	No	FAC	Percent of Dominant Species
6. Prunus serotina	5	No	FACU	That Are OBL, FACW, or FAC: <u>86%</u> (A/B)
			17100	Prevalence Index worksheet:
7				Total % Cover of:Multiply by:
8				OBL species x 1 =
		= Total Cov		FACW species x 2 =
	20% of	total cover:	16	FAC species x 3 =
Sapling/Shrub Stratum (Plot size: 1/10 acre)				
1. Ligustrum sinense	20	Yes	FAC	FACU species x 4 =
2. Carpinus caroliniana	10	Yes	FAC	UPL species x 5 =
3. Ilex opaca	5	No	FAC	Column Totals: (A) (B)
4. Prunus serotina	5	No	FACU	Dravelance Index D/A
5				Prevalence Index = B/A =
				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
8				$\boxed{}$ 3 - Prevalence Index is $\leq 3.0^1$
		= Total Cov		Problematic Hydrophytic Vegetation ¹ (Explain)
50% of total cover: 20	20% of	total cover	8	
Herb Stratum (Plot size: 1/10 acre)				¹ Indicators of hydric soil and wetland hydrology must
1. <u>Arundinaria tecta</u>	15	Yes	FACW	be present, unless disturbed or problematic.
2. Callicarpa americana	15	Yes	FACU	Definitions of Four Vegetation Strata:
3. Parthenocissus quinquefolia	5	No	FACU	
4 Toxicodendron radicans	5	No	FAC	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
				height.
5				
6				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
7				
8				Herb – All herbaceous (non-woody) plants, regardless
9				of size, and woody plants less than 3.28 ft tall.
10				Woody vine – All woody vines greater than 3.28 ft in
11				height.
12				
	40	= Total Cov	er	
50% of total cover: 20	20% of	total cover	8	
Woody Vine Stratum (Plot size:)				
1. Vitis rotundifolia	10	Yes	FAC	
2				
3				
4				
5				Hydrophytic
	10	= Total Cov	er	Vegetation
50% of total cover: 5	20% of	total cover	2	Present? Yes X No
Remarks: (If observed, list morphological adaptations bel	ow).			
	,			

Profile Desc	cription: (Describe	e to the depth	needed to docu	ment the ir	ndicator	or confirm	the absence of in	dicators.)	
Depth	Matrix		Red	ox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remark	S
0-12	6/4 10YR	100					Sandy loam		
							·		
							·		
							<u> </u>		
							·		
17					0		² l	Dens Lisien M.M.	- 1-1
	oncentration, D=De Indicators: (Appli					ains.		Pore Lining, M=M Problematic Hydr	
							_	-	10 30115 .
Histosol	. ,		Polyvalue B					(A9) (LRR O)	
	pipedon (A2) istic (A3)		Thin Dark S					(A10) (LRR S)	le MLRA 150A,B)
	en Sulfide (A4)		Loamy Gley			(0)		loodplain Soils (F	
	d Layers (A5)		Depleted Ma		<i>ב</i>)			Bright Loamy Soi	
	Bodies (A6) (LRR I	P. T. U)	Redox Dark	()	6)		(MLRA 1	• ·	
	ucky Mineral (A7) (L		Depleted Da					Material (TF2)	
	esence (A8) (LRR		Redox Depr		. ,		Very Shallo	w Dark Surface (1	F12)
🔲 1 cm Mu	uck (A9) (LRR P, T)		Marl (F10) (LRR U)			Other (Expl	ain in Remarks)	
Deplete	d Below Dark Surfa	ce (A11)	Depleted Oc	. , .	•				
	ark Surface (A12)		Iron-Mangar		. , .			s of hydrophytic ve	-
	rairie Redox (A16)					', U)		hydrology must be	
	/lucky Mineral (S1)	(LRR O, S)	Delta Ochric					isturbed or proble	matic.
	Bleyed Matrix (S4)								
	Redox (S5) I Matrix (S6)		Piedmont Fl				9A) A 149A, 153C, 153	וח	
	rface (S7) (LRR P,	S T II)		Bright Luan	ly Solis (A 149A, 133C, 133	0)	
	Layer (if observed								
Type:									
Depth (in	ches):						Hydric Soil Pres	sent? Yes	No_X
Remarks:	cnes).						Tryunc Son Tres		
	No hydric soil	characte	ristics obser	ved wit	hin tor	o 12" of	the soil profi	e.	

Project/Site: Ruston Industrial Park	City/County: Linco	oln Parish	Sampling Date: 4/10/17
Applicant/Owner: City of Ruston	City/County: Linco	State: LA	Sampling Point: 19-UP
	Section, Township		
top-bank		CONVex	01 (9() 5-10
Subregion (LRR or MLRA). LRR P	Lat. 32.531555	long92.602651	Datum: WGS 84
Subregion (LRR or MLRA): LRR P Soil Map Unit Name: Guyton-Ouachita silt loams		NWI classi	fication:
Are climatic / hydrologic conditions on the site typical for			
Are Vegetation $\underline{N}_{}$, Soil $\underline{N}_{}$, or Hydrology $\underline{N}_{}$			
Are Vegetation <u>N</u> , Soil <u>N</u> , or Hydrology <u>N</u>			
SUMMARY OF FINDINGS – Attach site ma			
		· · ·	•
Hydrophytic Vegetation Present? Yes X	No Is the Sam		
Hydric Soil Present? Yes Wetland Hydrology Present? Yes	No Is the Sam No X No X No X	etland? Yes	No <u>×</u>
Remarks:			
Sampling point was taken on the upla portion of the subject property.			ier in the western
HYDROLOGY			
Wetland Hydrology Indicators:		<u>Secondary Indi</u>	cators (minimum of two required)
Primary Indicators (minimum of one is required; check	all that apply)	Surface So	oil Cracks (B6)
	atic Fauna (B13)	Sparsely V	egetated Concave Surface (B8)
	Deposits (B15) (LRR U)		Patterns (B10)
	rogen Sulfide Odor (C1)		Lines (B16)
	lized Rhizospheres along Living R		n Water Table (C2)
	sence of Reduced Iron (C4)	= '	urrows (C8)
	ent Iron Reduction in Tilled Soils (Muck Surface (C7)		Visible on Aerial Imagery (C9)
	er (Explain in Remarks)		ic Position (D2) juitard (D3)
Inundation Visible on Aerial Imagery (B7)		=	al Test (D5)
Water-Stained Leaves (B9)		=	moss (D8) (LRR T, U)
Field Observations:			
Surface Water Present? Yes No X	Depth (inches): none		
Water Table Present? Yes No X			
Saturation Present? Yes No X		Wetland Hydrology Pres	ent? Yes <u>No X</u>
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring w	ell aerial photos, previous inspect	ions) if available	
besonder recorded bala (chealin gaage, monitoring w			
Remarks:			
no signs of hydrology.			

Sampling Point: 19-UP

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: 1/10 acre)	% Cover	Species?	Status	Number of Dominant Species	
1. Quercus nigra	25	Yes	FAC	That Are OBL, FACW, or FAC: (A)	
2. Quercus pagoda	15	Yes	FACW	Total Number of Dominant	
3. Liquidambar styraciflua	15	Yes	FAC	Species Across All Strata: <u>6</u> (B)	
4. Prunus serotina	10	No	FACU		
5. Carpinus caroliniana	5	No	FAC	Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/R	R)
6. Carya spp.	5	No	FACU		2)
7. Cercis canadensis	5	No	UPL	Prevalence Index worksheet:	
8.				Total % Cover of: Multiply by:	
···	80	= Total Cov	or	OBL species x 1 =	
50% of total cover: 40		total cover:		FACW species x 2 =	
Sapling/Shrub Stratum (Plot size: 1/10 acre)	2070.01			FAC species x 3 =	
1. Prunus serotina	15	Yes	FACU	FACU species x 4 =	
2. Ulmus alata	10	Yes	FACU	UPL species x 5 =	
				Column Totals: (A) (B	8
3. Acer rubrum	5	No	FAC		,
4. Carya spp.	5	No	FACU	Prevalence Index = B/A =	
5				Hydrophytic Vegetation Indicators:	
6				1 - Rapid Test for Hydrophytic Vegetation	
7				2 - Dominance Test is >50%	
8				\square 3 - Prevalence Index is $\leq 3.0^1$	
		= Total Cov	er	Problematic Hydrophytic Vegetation ¹ (Explain)	
50% of total cover: 17.5	20% of	total cover	7		
Herb Stratum (Plot size: 1/10 acre)				1	
				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
1					
2				Definitions of Four Vegetation Strata:	
3				Tree - Woody plants, excluding vines, 3 in. (7.6 cm) of	
4				more in diameter at breast height (DBH), regardless of	of
5	·			height.	
6	·			Sapling/Shrub - Woody plants, excluding vines, less	\$
7				than 3 in. DBH and greater than 3.28 ft (1 m) tall.	
8				Herb – All herbaceous (non-woody) plants, regardles	s
9				of size, and woody plants less than 3.28 ft tall.	
10				Woody vine – All woody vines greater than 3.28 ft in	
11				height.	
12.					
		= Total Cov	er		
50% of total cover:	20% of	total cover:			
Woody Vine Stratum (Plot size:)					
1. Smilax rotundifolia	10	Yes	FAC		
2					
3					
4					
5				Hydrophytic	
		= Total Cov		Vegetation Present? Yes ^x No	
50% of total cover: 5	20% of	total cover	2	Present? Yes <u>×</u> No	
Remarks: (If observed, list morphological adaptations belo				1	

Profile Desc	ription: (Describe	to the depth	needed to docu	nent the n	ndicator or o	contirm	the absence	of indicator	rs.)	
Depth	Matrix			x Features						
(inches)	Color (moist)	%	Color (moist)	%	Type ¹ L		Texture		Remarks	<u>; </u>
0-12	5/4 10YR	100					Sandy loam			
					<u> </u>	<u> </u>				
					<u> </u>					
17			a de la colona de la colona da de				21			
	oncentration, D=Dep Indicators: (Applic					5.		PL=Pore Lir for Problem		
						ст II				00115 .
Histosol	oipedon (A2)		Polyvalue Be					luck (A9) (Ll luck (A10) (l		
Black Hi	,		Loamy Muck					· · ·		e MLRA 150A,B)
	n Sulfide (A4)		Loamy Gleye			,				9) (LRR P, S, T)
	d Layers (A5)		Depleted Ma		_/			llous Bright L		
	Bodies (A6) (LRR F	P, T, U)	Redox Dark		6)			RA 153B)	,	
	icky Mineral (A7) (L		Depleted Da					arent Materia	al (TF2)	
Muck Pr	esence (A8) (LRR l	J)	Redox Depre	essions (F8	5)		L Very S	hallow Dark	Surface (TF	=12)
	ick (A9) (LRR P, T)		Marl (F10) (L	.RR U)			U Other (Explain in R	lemarks)	
	d Below Dark Surfac	ce (A11)	Depleted Oc	. , .			2			
	ark Surface (A12)		Iron-Mangan					ators of hydi		
	rairie Redox (A16) ()		land hydrolo		
	lucky Mineral (S1) (LRR O, S)	Delta Ochric			4500)		ess disturbed	d or problem	natic.
	Bleyed Matrix (S4) Redox (S5)		Reduced Ve							
	Matrix (S6)						эд) А 149А, 153С,	153D)		
	. ,	ят н			iy 0013 (1 20		A 143A, 1330,	1550)		
LET DAIK SU										
	rface (S7) (LRR P, S									
Restrictive I	_ayer (if observed)									
Restrictive I	_ayer (if observed)						Hydric Soil	Present?	Yes	No X
Restrictive I Type: Depth (inc	_ayer (if observed)						Hydric Soil	Present?	Yes	No
Restrictive I Type: Depth (ind Remarks:	_ayer (if observed)	:		ed with	in the to	ס 12"	-		Yes	No_ <u>X</u>
Restrictive I Type: Depth (ind Remarks:	_ayer (if observed)	:	 stics observ	ed with	in the top	p 12"	-		Yes	No <u>X</u>
Restrictive I Type: Depth (ind Remarks:	_ayer (if observed)	:	 stics observ	ed with	in the top	p 12"	-		Yes	No
Restrictive I Type: Depth (ind Remarks:	_ayer (if observed)	:	 stics observ	ed with	in the top	p 12"	-		Yes	NoX
Restrictive I Type: Depth (ind Remarks:	_ayer (if observed)	:	stics observ	ed with	in the top	p 12"	-		Yes	No <u>X</u>
Restrictive I Type: Depth (ind Remarks:	_ayer (if observed)	:	stics observ	ed with	in the top	p 12"	-		Yes	No <u>X</u>
Restrictive I Type: Depth (ind Remarks:	_ayer (if observed)	:	 stics observ	ed with	in the top	p 12"	-		Yes	No <u>X</u>
Restrictive I Type: Depth (ind Remarks:	_ayer (if observed)	:	 stics observ	ed with	in the top	p 12"	-		Yes	No <u>X</u>
Restrictive I Type: Depth (ind Remarks:	_ayer (if observed)	:	stics observ	ed with	in the top	p 12"	-		Yes	No
Restrictive I Type: Depth (ind Remarks:	_ayer (if observed)	:	stics observ	ed with	in the top	p 12"	-		Yes	<u>No X</u>
Restrictive I Type: Depth (ind Remarks:	_ayer (if observed)	:	stics observ	ed with	in the top	p 12"	-		Yes	No <u>X</u>
Restrictive I Type: Depth (ind Remarks:	_ayer (if observed)	:	stics observ	ed with	in the top	p 12"	-		Yes	No_ <u>X</u>
Restrictive I Type: Depth (ind Remarks:	_ayer (if observed)	:	stics observ	ed with	in the top	p 12"	-		Yes	No_ <u>X</u>
Restrictive I Type: Depth (ind Remarks:	_ayer (if observed)	:	stics observ	ed with	in the top	p 12"	-		Yes	No_ <u>X</u>
Restrictive I Type: Depth (ind Remarks:	_ayer (if observed)	:	stics observ	ed with	in the to	p 12"	-		Yes	No_ <u>X</u>
Restrictive I Type: Depth (ind Remarks:	_ayer (if observed)	:	stics observ	ed with	in the to	p 12"	-		Yes	<u>No X</u>
Restrictive I Type: Depth (ind Remarks:	_ayer (if observed)	:	stics observ	ed with	in the top	p 12"	-		Yes	No_ <u>X</u>
Restrictive I Type: Depth (ind Remarks:	_ayer (if observed)	:	stics observ	ed with	in the top	p 12"	-		Yes	No_ <u>X</u>
Restrictive I Type: Depth (ind Remarks:	_ayer (if observed)	:	stics observ	ed with	in the top	p 12"	-		Yes	No_ <u>X</u>
Restrictive I Type: Depth (ind Remarks:	_ayer (if observed)	:	stics observ	ed with	in the top	p 12"	-		Yes	NoX
Restrictive I Type: Depth (ind Remarks:	_ayer (if observed)	:	stics observ	ed with	in the to	p 12"	-		Yes	<u>No X</u>
Restrictive I Type: Depth (ind Remarks:	_ayer (if observed)	:	stics observ	ed with	in the top	p 12"	-		Yes	<u>No X</u>
Restrictive I Type: Depth (ind Remarks:	_ayer (if observed)	:	stics observ	ed with	in the top	p 12"	-		Yes	No_ <u>X</u>

Project/Site: Ruston Industrial Park	City/County: Lincoln Parish	Sampling Date: 4/10/17
Applicant/Owner: City of Ruston	· · ·	Sampling Date: 4/10/17 tate: LA Sampling Point: 24-PFO
	Section, Township, Range: Se	
Landform (hillslope, terrace, etc.): Flat		
Subregion (LRR or MLRA): LRR P	t 32.531090 Long -9	2.601653 Datum: WGS 84
Soil Map Unit Name: Guyton-Ouachita silt loams		NWI classification:
Are climatic / hydrologic conditions on the site typical for this t		
Are vegetation $\underline{N}_{,}$, Soil $\underline{N}_{,}$, or Hydrology $\underline{N}_{,}$ sig		
Are vegetation \underline{N} , soil \underline{N} , or Hydrology \underline{N} nai		
SUMMARY OF FINDINGS – Attach site map s		ns, transects, important leatures, etc.
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No	Is the Sampled Area	
Hydric Soil Present? Yes X No	within a Wetland?	Yes X No
Wetland Hydrology Present? Yes X No Remarks:		
Sampling point was taken within a forest property. this data sheet reflects the fore		
HYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all the	at apply)	Surface Soil Cracks (B6)
Surface Water (A1)	auna (B13)	Sparsely Vegetated Concave Surface (B8)
	osits (B15) (LRR U)	Drainage Patterns (B10)
	Sulfide Odor (C1)	Moss Trim Lines (B16)
	Rhizospheres along Living Roots (C3)	Dry-Season Water Table (C2)
	of Reduced Iron (C4) on Reduction in Tilled Soils (C6)	✓ Crayfish Burrows (C8) ✓ Saturation Visible on Aerial Imagery (C9)
	k Surface (C7)	Geomorphic Position (D2)
	plain in Remarks)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)		FAC-Neutral Test (D5)
✓ Water-Stained Leaves (B9)		Sphagnum moss (D8) (LRR T, U)
Field Observations:	2020	
Surface Water Present? Yes No X Dept		
Water Table Present? Yes <u>No X</u> Dept		Y Y
Saturation Present? Yes X No Depti (includes capillary fringe)	h (inches): <u>6-6</u> Wetland H	vdrology Present? Yes X No
Describe Recorded Data (stream gauge, monitoring well, ae	erial photos, previous inspections), if avail	able:
Remarks:		

Sampling	Point:	24-PFO
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	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: 1/10 acre)		Species?		Number of Dominant Species	
1. Liquidambar styraciflua	25	Yes	FAC		(A)
2. Acer rubrum	15	Yes	FAC		(<i>)</i>
3. Quercus nigra	15	Yes	FAC	Total Number of Dominant Species Across All Strata: 6	(B)
4. Pinus taeda	5	No	FAC		(D)
5. Quercus pagoda	5	No	FACW	Percent of Dominant Species	
6. Carpinus caroliniana	5	No	FAC	That Are OBL, FACW, or FAC: 83%	(A/B)
				Prevalence Index worksheet:	
7				Total % Cover of: Multiply by:	
8	70			OBL species x 1 =	-
		= Total Cov		FACW species x 2 =	
	20% of	total cover	14		
Sapling/Shrub Stratum (Plot size: 1/10 acre)				FAC species x 3 =	
1. Ligustrum sinense	20	Yes	FAC	FACU species x 4 =	
2. Quercus phellos	10	Yes	FACW	UPL species x 5 =	
3. Ulmus americana	5	No	FAC	Column Totals: (A)	(B)
4				Dravelance Index D/A	
				Prevalence Index = B/A =	-
5				Hydrophytic Vegetation Indicators:	
6				1 - Rapid Test for Hydrophytic Vegetation	
7				2 - Dominance Test is >50%	
8				$\boxed{}$ 3 - Prevalence Index is $\leq 3.0^1$	
		= Total Cov		Problematic Hydrophytic Vegetation ¹ (Explain)
50% of total cover: 17.5	20% of	total cover	7		
Herb Stratum (Plot size: 1/10 acre)				¹ Indicators of hydric soil and wetland hydrology m	ust
1. Callicarpa americana	5	Yes	FACU	be present, unless disturbed or problematic.	
2				Definitions of Four Vegetation Strata:	
3.					
				Tree – Woody plants, excluding vines, 3 in. (7.6 cl	
4				more in diameter at breast height (DBH), regardle height.	55 01
5					
6				Sapling/Shrub – Woody plants, excluding vines, l	less
7				than 3 in. DBH and greater than 3.28 ft (1 m) tall.	
8	. <u> </u>			Herb – All herbaceous (non-woody) plants, regard	lless
9				of size, and woody plants less than 3.28 ft tall.	
10				Woody vine – All woody vines greater than 3.28 f	t in
11				height.	
12.				, , , , , , , , , , , , , , , , , , ,	
	5	= Total Cov	er		
50% of total cover: 2.5					
	20 % 01		· <u> </u>		
Woody Vine Stratum (Plot size:)					
1					
2	. <u> </u>				
3					
4					
5				Hydrophytic	
		= Total Cov		Vegetation	
50% of total cover:				Present? Yes X No	
			·		
Remarks: (If observed, list morphological adaptations belo	w).				

Profile Desc	ription: (Describe	to the dep	th needed to docun	nent the	indicator	or confirm	n the absence	of indicators.)
Depth	Matrix			x Feature		2		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-4	4/4 10YR	100				·	Silt loam	
4-12	6/2 10YR	80	4/6 10YR	20	С	PL	Silt loam	
					_			
		·		·		·		
				·		·		
						·		
1								
			Reduced Matrix, MS			ains.		PL=Pore Lining, M=Matrix.
		able to all	LRRs, unless other					for Problematic Hydric Soils ³ :
Histosol	. ,		Polyvalue Be				· 🗖	Auck (A9) (LRR O)
	pipedon (A2)		Thin Dark Su					Auck (A10) (LRR S)
Black Hi			Loamy Mucky			(O)		ed Vertic (F18) (outside MLRA 150A,B)
	n Sulfide (A4) I Layers (A5)		Loamy Gleye ✓ Depleted Mat		(FZ)			ont Floodplain Soils (F19) (LRR P, S, T) alous Bright Loamy Soils (F20)
	Bodies (A6) (LRR P	тт	Redox Dark S		F6)			RA 153B)
	icky Mineral (A7) (LF							arent Material (TF2)
	esence (A8) (LRR U		Redox Depre					hallow Dark Surface (TF12)
	ick (A9) (LRR P, T))	Marl (F10) (L		0)			(Explain in Remarks)
	Below Dark Surfac	e (A11)	Depleted Och		(MLRA 1	51)		
	ark Surface (A12)		Iron-Mangane				, T) ³ Indic	ators of hydrophytic vegetation and
Coast P	rairie Redox (A16) (I	MLRA 150	A) 🔲 Umbric Surfa	ce (F13)	(LRR P, 1	「, U)	wet	land hydrology must be present,
Sandy M	lucky Mineral (S1) (I	_RR O, S)	Delta Ochric	(F17) (M	LRA 151)		unle	ess disturbed or problematic.
	ileyed Matrix (S4)		Reduced Ver	. ,	•			
	edox (S5)		Piedmont Flo	•	• • •	•		
	Matrix (S6)		Anomalous B	right Loa	my Soils ((F20) (MLR	RA 149A, 153C	, 153D)
	rface (S7) (LRR P, S						1	
_	_ayer (if observed):							
Туре:								×
Depth (ind	ches):						Hydric Soil	Present? Yes <u>X</u> No
Remarks:								

Project/Site: Ruston Industrial Park	City/County: Linco	oln Parish	Sampling Date: 4/10/17
Applicant/Owner: City of Ruston		State: LA	
	Section, Township		
Landform (hillslope, terrace, etc.): flat	Local relief (conca	ve, convex, none): none	Slope (%): 0-2
Subregion (LRR or MLRA): LRR P	Lat: 32.531162	long: -92.601578	Datum: WGS 84
Soil Map Unit Name: Guyton-Ouachita silt loams		NWI classit	
Are climatic / hydrologic conditions on the site typical			
Are Vegetation <u>N</u> , Soil <u>N</u> , or Hydrology <u>N</u>			
Are Vegetation N, Soil N, or Hydrology N			
SUMMARY OF FINDINGS – Attach site r			
Hydrophytic Vegetation Present? Yes X Hydric Soil Present? Yes Wetland Hydrology Present? Yes Remarks: Yes	No Is the Sam No X No X No X		<u>No X</u>
in the western portion of the subjec	t property.		
Wetland Hydrology Indicators:			cators (minimum of two required)
Primary Indicators (minimum of one is required; chee			il Cracks (B6)
	quatic Fauna (B13)		egetated Concave Surface (B8)
	arl Deposits (B15) (LRR U) /drogen Sulfide Odor (C1)		atterns (B10) Lines (B16)
	kidized Rhizospheres along Living R		n Water Table (C2)
	esence of Reduced Iron (C4)	Crayfish Bu	
	ecent Iron Reduction in Tilled Soils (= '	Visible on Aerial Imagery (C9)
	in Muck Surface (C7)		c Position (D2)
Iron Deposits (B5)	her (Explain in Remarks)	Shallow Aq	uitard (D3)
Inundation Visible on Aerial Imagery (B7)		FAC-Neutra	al Test (D5)
Water-Stained Leaves (B9)		📃 Sphagnum	moss (D8) (LRR T, U)
Field Observations:			
	_ Depth (inches): none		
	_ Depth (inches): <u>>12"</u>		×
Saturation Present? Yes <u>No X</u> (includes capillary fringe)	_ Depth (inches): <u>>12"</u>	Wetland Hydrology Prese	ent? Yes <u>No X</u>
Describe Recorded Data (stream gauge, monitoring	well, aerial photos, previous inspect	ions), if available:	
Remarks:			
no signs of hydrology			
ne eigne ei nyareregy			

Sampling Point: 25-UP

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: 1/10 acre)	% Cover	Species?	Status	Number of Dominant Species	
1. Quercus nigra	25	Yes	FAC	·	(A)
2. Quercus pagoda	10	Yes	FACW	Total Number of Dominant	
3. Prunus serotina	10	Yes	FACU		(B)
4. Quercus alba	10	Yes	FACU		· /
5. Acer rubrum	5	No	FAC	Percent of Dominant Species That Are OBL, FACW, or FAC: 56%	(A/B)
6. Liquidambar styraciflua	5	No	FAC		(7,0)
7. Carpinus caroliniana	5	No	FAC	Prevalence Index worksheet:	
8. Carya spp.	5	No	FACU	Total % Cover of: Multiply by:	
0	75	= Total Cov		OBL species x 1 =	
50% of total cover: <u>37.5</u>		total cover:		FACW species x 2 =	
Sapling/Shrub Stratum (Plot size: 1/10 acre)	20 % 01			FAC species x 3 =	
1. Quercus nigra	20	Yes	FAC	FACU species x 4 =	
2. Ulmus alata	5	No	FACU	UPL species x 5 =	
				Column Totals: (A)	
3. Carpinus caroliniana	5	No	FAC		(0)
4				Prevalence Index = B/A =	
5				Hydrophytic Vegetation Indicators:	
6				1 - Rapid Test for Hydrophytic Vegetation	
7				2 - Dominance Test is >50%	
8				$\boxed{1}$ 3 - Prevalence Index is $\leq 3.0^1$	
	30	= Total Cov	ver	Problematic Hydrophytic Vegetation ¹ (Explain)
50% of total cover: <u>15</u>	20% of	total cover:	6		,
Herb Stratum (Plot size: 1/10 acre)				¹ Indicators of hydric soil and wetland hydrology mu	t
1. Callicarpa americana	15	Yes	FACU	be present, unless disturbed or problematic.	มรเ
2. Podophyllum peltatum	10	Yes	FACU	Definitions of Four Vegetation Strata:	
				Seminoris of Four Vegetation offata.	
3				Tree – Woody plants, excluding vines, 3 in. (7.6 cr	
4				more in diameter at breast height (DBH), regardles height.	ss of
5					
6				Sapling/Shrub – Woody plants, excluding vines, I	ess
7				than 3 in. DBH and greater than 3.28 ft (1 m) tall.	
8				Herb - All herbaceous (non-woody) plants, regard	lless
9				of size, and woody plants less than 3.28 ft tall.	
10				Woody vine – All woody vines greater than 3.28 f	t in
11				height.	
12					
	25	= Total Cov	ver		
50% of total cover: 12.5	20% of	total cover	5		
Woody Vine Stratum (Plot size:)					
1. Smilax rotundifolia	5	Yes	FAC		
2. Vitis rotundifolia	5	Yes	FAC		
3					
4					
5					
5	4.0	Tatal Car		Hydrophytic Vegetation	
500/ - () - () - 5		= Total Cov		Present? Yes X No	
50% of total cover: 5		total cover:	<u> </u>		
Remarks: (If observed, list morphological adaptations belo	w).				
1					

	inplion. (Describe	to the depth	needed to docu	ment the mulca	tor or confirm	n the absence	of Indicators.)	
Depth	Matrix		Rede	ox Features				
(inches)	Color (moist)	%	Color (moist)	%Typ		Texture	Rema	irks
0-12	4/4 10YR	100				Silt loam		
17						21	DL David Linitary Mul	N - (
	oncentration, D=Dep Indicators: (Applie				Grains.		PL=Pore Lining, M=I	
						_	-	
Histosol	pipedon (A2)			elow Surface (S8 urface (S9) (LRR			1uck (A9) (LRR O) 1uck (A10) (LRR S)	
Black Hi	,			ky Mineral (F1) (I			ed Vertic (F18) (outs	ide MI RA 150A B)
	en Sulfide (A4)			ed Matrix (F2)			ont Floodplain Soils (
	d Layers (A5)		Depleted Ma				alous Bright Loamy S	
	Bodies (A6) (LRR F	P, T, U)		Surface (F6)			RA 153B)	
	icky Mineral (A7) (L		Depleted Da	ark Surface (F7)			arent Material (TF2)	
Muck Pr	esence (A8) (LRR I	J)	Redox Depr	essions (F8)		Uery S	hallow Dark Surface	(TF12)
🔲 1 cm Mu	ick (A9) (LRR P, T)		Marl (F10) (Other ((Explain in Remarks)	
	d Below Dark Surfac	ce (A11)		chric (F11) (MLR		0		
	ark Surface (A12)			nese Masses (F1			ators of hydrophytic	•
	rairie Redox (A16) (ace (F13) (LRR I			land hydrology must	
	lucky Mineral (S1) (LRR O, S)		(F17) (MLRA 1			ess disturbed or prob	lematic.
	Bleyed Matrix (S4) Redox (S5)			ertic (F18) (MLR<i>I</i> oodplain Soils (F				
	Matrix (S6)			Bright Loamy So			153D)	
	rface (S7) (LRR P, 3	S. T. U)		Bright Loanly Co			, 1002)	
		-				1		
Restrictive I	Layer (if observed)):						
_	Layer (if observed)):						
Туре:):				Hydric Soil	Present? Yes	No X
Type: Depth (inc):				Hydric Soil	Present? Yes	No <u>X</u>
Type: Depth (ind Remarks:	ches):			ved within to	op 12" of t	_		<u>No X</u>
Type: Depth (ind Remarks:			 stics observ	ved within to	op 12" of t	_		<u>No X</u>
Type: Depth (ind Remarks:	ches):		 stics observ	ved within to	op 12" of t	_		<u>No X</u>
Type: Depth (ind Remarks:	ches):		 stics observ	ved within to	op 12" of t	_		<u>No X</u>
Type: Depth (ind Remarks:	ches):		stics observ	ved within to	op 12" of t	_		<u>No X</u>
Type: Depth (ind Remarks:	ches):		 stics observ	ved within to	op 12" of t	_		<u>No X</u>
Type: Depth (ind Remarks:	ches):		 stics observ	ved within to	op 12" of t	_		<u>No X</u>
Type: Depth (ind Remarks:	ches):		 stics observ	ved within to	op 12" of t	_		<u>No X</u>
Type: Depth (ind Remarks:	ches):		 stics observ	ed within to	op 12" of t	_		<u>No X</u>
Type: Depth (ind Remarks:	ches):		 stics observ	ed within to	op 12" of t	_		<u>No X</u>
Type: Depth (ind Remarks:	ches):		 stics observ	ved within to	op 12" of t	_		<u>No X</u>
Type: Depth (ind Remarks:	ches):		stics observ	ved within to	op 12" of t	_		<u>No X</u>
Type: Depth (ind Remarks:	ches):		 stics observ	red within to	op 12" of t	_		<u>No X</u>
Type: Depth (ind Remarks:	ches):		stics observ	red within to	op 12" of t	_		<u>No X</u>
Type: Depth (ind Remarks:	ches):		 stics observ	ed within to	op 12" of t	_		<u>No X</u>
Type: Depth (ind Remarks:	ches):		stics observ	ed within to	op 12" of t	_		<u>No X</u>
Type: Depth (ind Remarks:	ches):		stics observ	ved within to	op 12" of t	_		<u>No X</u>
Type: Depth (ind Remarks:	ches):		stics observ	ved within to	op 12" of t	_		<u>No X</u>
Type: Depth (ind Remarks:	ches):		stics observ	red within to	op 12" of t	_		<u>No X</u>
Type: Depth (ind Remarks:	ches):		stics observ	red within to	op 12" of t	_		<u>No X</u>
Type: Depth (ind Remarks:	ches):		stics observ	ed within to	op 12" of t	_		<u>No X</u>
Type: Depth (ind Remarks:	ches):		stics observ	ed within to	op 12" of t	_		<u>No X</u>

Project/Site: Ruston Industrial Park	City/County: Linco	In Parish	Sampling Date: 4/10/17
Applicant/Owner: City of Ruston		State: LA	Sampling Point: 31-UP
		Range: Section 20, T 1	
			Slope (%): 2-5
Subregion (LRR or MLRA): LRR P Lat: 3	2.530085	long: -92.599257	Datum [.] WGS 84
Soil Map Unit Name: Guyton-Ouachita silt loams		NWI class	ification:
Are climatic / hydrologic conditions on the site typical for this time			
Are Vegetation $\underline{N}_{}$, Soil $\underline{N}_{}$, or Hydrology $\underline{N}_{}$ signific			
Are Vegetation, Soil, or Hydrology signific Are Vegetation, Soil _N, or Hydrology natural			
SUMMARY OF FINDINGS – Attach site map show	ving sampling poin	t locations, transec	ts, important features, etc.
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No X Wetland Hydrology Present? Yes No X	Is the Samp	led Area	
Hydric Soil Present? Yes No X	within a We		No X
Remarks:			
Sampling point was taken within a forested	upland habitat a	long the transition	line in the western
portion of the subject property.			
HYDROLOGY		Cocondon (Ind	instars (minimum of two required)
Wetland Hydrology Indicators:			icators (minimum of two required)
Primary Indicators (minimum of one is required; check all that ap			bil Cracks (B6) /egetated Concave Surface (B8)
	a (B15) (B15) (LRR U)		Patterns (B10)
	fide Odor (C1)		Lines (B16)
	cospheres along Living Ro		on Water Table (C2)
	Reduced Iron (C4)		urrows (C8)
Drift Deposits (B3)	eduction in Tilled Soils (C	6) 🗌 Saturation	Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	. ,	_	ic Position (D2)
Iron Deposits (B5)	ı in Remarks)		quitard (D3)
Inundation Visible on Aerial Imagery (B7)		=	ral Test (D5)
Water-Stained Leaves (B9) Field Observations:		<u> </u>	n moss (D8) (LRR T, U)
Surface Water Present? Yes No X Depth (in	ches). none		
Water Table Present?Yes No $\frac{X}{2}$ Depth (in			
Saturation Present? Yes No X Depth (in		Wetland Hydrology Pres	ent? Yes No_X
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial	photos, previous inspection	ons), if available:	
Remarks:			
no signs of hydrology.			

Sampling Point: 31-UP

Tree Stratum (Plot size: 1/10 acre)% Cover Species?Status FACNumber of Dominant Species4 (A1. Quercus nigra15YesFACTotal Number of Dominant Species4 (A2. Quercus pagoda15YesFACUTotal Number of Dominant Species7 (B3. Quercus alba15YesFACUPercent of Dominant Species7 (B4. Pinus taeda10NoFACPercent of Dominant Species57% (A5. Liquidambar styraciflua10NoFACPercent of Dominant Species57% (A6. Carpinus caroliniana5NoFACPrevalence Index worksheet:57% (A7. Carya spp.5NoFACUTotal % Cover of:Multiply by:8.50% of total cover: 42.520% of total cover: 17FAC Speciesx 1 =50% of total cover: 42.520% of total cover: 17FAC Speciesx 2 =50% of total cover: 42.520% of total cover: 17FAC Speciesx 3 =1. Ligustrum sinense20YesFACFACU speciesx 4 =)
2. Quercus pagoda 15 Yes FACW 3. Quercus alba 15 Yes FACU 4. Pinus taeda 10 No FAC 5. Liquidambar styraciflua 10 No FAC 6. Carpinus caroliniana 5 No FAC 7. Carya spp. 5 No FAC 8.)
3. Quercus alba 15 Yes FACU Total Number of Dominant 4. Pinus taeda 10 No FAC Species Across All Strata: 7 (B 5. Liquidambar styraciflua 10 No FAC Percent of Dominant Species 57% (A 6. Carpinus caroliniana 5 No FAC FAC Percent of Dominant Species 57% (A 7. Carya spp. 5 No FAC Prevalence Index worksheet: 57% (A 8.	,
3. Quercus alba 15 Yes FACU Species Across All Strata: 7 (B 4. Pinus taeda 10 No FAC Percent of Dominant Species 57% (A 5. Liquidambar styraciflua 10 No FAC Percent of Dominant Species 57% (A 6. Carpinus caroliniana 5 No FAC FAC Prevalence Index worksheet: 57% (A 7. Carya spp. 5 No FAC FACU Prevalence Index worksheet: 57% (A 8.	,
5. Liquidambar styraciflua 10 No FAC Percent of Dominant Species That Are OBL, FACW, or FAC: 57% (A. 6. Carpinus caroliniana 5 No FAC Prevalence Index worksheet: 57% (A. 7. Carya spp. 5 No FAC Prevalence Index worksheet: 57% (A. 8. 5 No FAC FAC Prevalence Index worksheet: 50% (A. 8. 5 Total % Cover of: Multiply by: 0BL species x 1 = 50% (A. 50% of total cover: 42.5 20% of total cover: 17 FAC species x 2 = 54 50% of total cover: 1/10 acre 0 Yes FAC FAC species x 3 = 54 1. Ligustrum sinense 20 Yes FAC FACU species x 4 = 56	'В)
5. Liquidambar styracifida 10 No FAC That Are OBL, FACW, or FAC: 57% (A 6. Carpinus caroliniana 5 No FAC FAC That Are OBL, FACW, or FAC: 57% (A 7. Carya spp. 5 No FAC Prevalence Index worksheet: (A) 8.	′B)
6. Carpinus caroliniana 5 No FAC 7. Carya spp. 5 No FACU Prevalence Index worksheet: 8.	
7. Carya spp. 3 No FACO 8.	
8. 85 = Total Cover OBL species x 1 = 50% of total cover: 42.5 20% of total cover: 17 FACW species x 2 = Sapling/Shrub Stratum (Plot size: 1/10 acre) FAC FACU species x 3 = 1. Ligustrum sinense 20 Yes FAC FACU species x 4 =	
85 = Total Cover OBL species x 1 = 50% of total cover: 42.5 20% of total cover: 17 FACW species x 2 = Sapling/Shrub Stratum (Plot size: 1/10 acre) FAC FACU species x 3 = 1. Ligustrum sinense 20 Yes FAC FACU species x 4 =	
Sapling/Shrub Stratum (Plot size: 1/10 acre) 20 Yes FAC FAC species x 3 = 1. Ligustrum sinense 20 Yes FAC FAC species x 4 =	
Sapling/Shrub Stratum (Plot size: 1/10 acre) FAC species x 3 = 1. Ligustrum sinense 20 Yes FAC FACU species x 4 =	
1. Ligustrum sinense 20 Yes FAC FACU species x 4 =	
2. Acer rubrum 10 Yes FAC UPL species x 5 =	
2.	3)
Prunus seratina	
5 Hydrophytic Vegetation Indicators:	
6 1 - Rapid Test for Hydrophytic Vegetation	
7 2 - Dominance Test is >50%	
8	
$\frac{45}{1000} = \text{Total Cover}$ Problematic Hydrophytic Vegetation ¹ (Explain)	
50% of total cover: <u>22.5</u> 20% of total cover: <u>9</u>	
Herb Stratum (Plot size: 1/10 acre)	:
1. Callicarpa americana 15 Yes FACU be present, unless disturbed or problematic.	
2 Definitions of Four Vegetation Strata:	
3 Tree – Woody plants, excluding vines, 3 in. (7.6 cm)	or
4 more in diameter at breast height (DBH), regardless	
5 height.	
6 Sapling/Shrub – Woody plants, excluding vines, les	s
7 than 3 in. DBH and greater than 3.28 ft (1 m) tall.	
8 Herb – All herbaceous (non-woody) plants, regardle	e e
9 of size, and woody plants less than 3.28 ft tall.	55
10	
10. Woody vine – All woody vines greater than 3.28 ft ir 11. height.	1
12.	
15 = Total Cover	
50% of total cover: $\frac{7.5}{20\%}$ of total cover: $\frac{3}{20\%}$	
Woody Vine Stratum (Plot size:)	
1	
2	
3	
4	
5 Hydrophytic	
= Total Cover Vegetation Present? Yes X No	
50% of total cover: 20% of total cover:	
Remarks: (If observed, list morphological adaptations below).	

Profile Desc	cription: (Describe	e to the depth	needed to docu	ment the indica	ator or confir	m the absence of	f indicators.)	
Depth	Matrix			ox Features	4 0			
(inches)	Color (moist)	%	Color (moist)	<u>%</u> Typ	be ¹ Loc ²	Texture	Remark	(S
0-12	4/6 10YR	100				Silt loam		
1 T						² l a setient D	Dens Lining M.M.	
	oncentration, D=De Indicators: (Appli				d Grains.		PL=Pore Lining, M=M or Problematic Hydr	
						_	-	
Histosol	pipedon (A2)			elow Surface (Sa urface (S9) (LRF			ck (A9) (LRR O) ck (A10) (LRR S)	
	istic (A3)			ky Mineral (F1) (d Vertic (F18) (outsi	
	en Sulfide (A4)			ed Matrix (F2)			t Floodplain Soils (F	
	d Layers (A5)		Depleted M	. ,			ous Bright Loamy Soi	
	Bodies (A6) (LRR	P, T, U)		Surface (F6)			A 153B)	
	ucky Mineral (A7) (L		Depleted Da	ark Surface (F7)			ent Material (TF2)	
Muck Pi	resence (A8) (LRR	U)	Redox Depi	essions (F8)		U Very Sha	allow Dark Surface (TF12)
1 cm Mu	uck (A9) (LRR P, T)		Marl (F10) (U Other (E	xplain in Remarks)	
	d Below Dark Surfa	ce (A11)		chric (F11) (MLR		0		
	ark Surface (A12)			nese Masses (F			ors of hydrophytic ve	-
	rairie Redox (A16)			ace (F13) (LRR			nd hydrology must b	
	Aucky Mineral (S1)	(LRR 0, 5)		(F17) (MLRA 1			s disturbed or proble	ematic.
	Gleyed Matrix (S4) Redox (S5)			ertic (F18) (MLR oodplain Soils (F				
	Matrix (S6)			• •	, .	43A) RA 149A, 153C, 1	(53D)	
	Inface (S7) (LRR P,	S. T. U)		Diigin Loainy oc		11, 140, 1000, 1		
	Layer (if observed							
Type:		, ,						
Depth (in	ches):					Hydric Soil P	resent? Yes	NoX
Remarks:								
	o hydric soil (character	stics observ	ed within t	op 12" of	the soil prof	ile	
	5				'			

Project/Site: Ruston Industrial Park	City/County: Linco	oln Parish	Sampling Date: 4/10/17
Applicant/Owner: City of Ruston	City/County: Linco	State: LA	Sampling Point: 32-PFO
Investigator(s): Headwaters, Inc.	Section, Township	Range: Section 20, T 18	B N, R 2 W
			Slope (%): 0-2
Subregion (LRR or MLRA): LRR P	22.530128	-92.599030	Objet (70) Datum: WGS 84
Soll Map Unit Name: Guyton-Ouachita silt loams			
Are climatic / hydrologic conditions on the site typical for thi		NWI classi	
Are Vegetation N, Soil N, or Hydrology N, Soil N,			
Are Vegetation N, Soil N, or Hydrology N	naturally problematic? (If needed, explain any answ	vers in Remarks.)
SUMMARY OF FINDINGS – Attach site map	showing sampling poin	nt locations, transect	s, important features, etc.
Hydrophytic Vegetation Present? Yes X N Hydric Soil Present? Yes X N Wetland Hydrology Present? Yes X N	lo within a We		No
Remarks:			
Sampling point was taken within a fore transition line in the western portion of		0	- upland habitat
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indi	cators (minimum of two required)
Primary Indicators (minimum of one is required; check all	that apply)	Surface Sc	il Cracks (B6)
	Fauna (B13)	└── Sparsely V	egetated Concave Surface (B8)
	eposits (B15) (LRR U)		atterns (B10)
	en Sulfide Odor (C1)		Lines (B16)
	d Rhizospheres along Living R		n Water Table (C2)
	ce of Reduced Iron (C4)	<u>⊡</u> Crayfish Bu	
	Iron Reduction in Tilled Soils (Visible on Aerial Imagery (C9)
	uck Surface (C7) Explain in Remarks)	Shallow Ac	c Position (D2)
Inundation Visible on Aerial Imagery (B7)		✓ FAC-Neutr	
Water-Stained Leaves (B9)		=	moss (D8) (LRR T, U)
Field Observations:		<u> </u>	
Surface Water Present? Yes X No De	pth (inches): <u>1-3"</u>		
Water Table Present? Yes No X De			
Saturation Present? Yes X No De	pth (inches): Surface	Wetland Hydrology Prese	ent? Yes X No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well,	aerial photos, previous inspect	ions) if available:	
Describe Recorded Data (siteam gauge, monitoring weil,			
Remarks:			

	Absolute	Dominant	Indicator	Dominance Test worksheet:	-	
Tree Stratum (Plot size: 1/10 acre)		Species?	Status			
1. Liquidambar styraciflua	20	Yes	FAC	Number of Dominant Species That Are OBL, FACW, or FAC:	7	(A)
2. Acer rubrum	15	Yes	FAC	That Ale OBL, FACW, of FAC.		(A)
	·			Total Number of Dominant	_	
3. Ulmus americana	15	Yes	FAC	Species Across All Strata:	7	(B)
4. Carpinus caroliniana	10	No	FAC	Dereent of Deminent Species		
5. Salix nigra	5	No	OBL	Percent of Dominant Species That Are OBL, FACW, or FAC:	100%	(A/B)
6. Quercus pagoda	5	No	FACW			(,,,,,,)
	·			Prevalence Index worksheet:		
7	·			Total % Cover of:	Multiply by:	_
8	70			OBL species x 1		
	· · · · ·	= Total Cov		FACW species x 2		
	20% of	total cover:	14			
Sapling/Shrub Stratum (Plot size: 1/10 acre)				FAC species x 3		
1. Ligustrum sinense	20	Yes	FAC	FACU species x 4	l =	_
2. Acer rubrum	10	Yes	FAC	UPL species x 5	5 =	_
	·			Column Totals: (A)		(B)
3				、 ,		. ,
4	·			Prevalence Index = B/A =		_
5				Hydrophytic Vegetation Indicat	ors:	
6				1 - Rapid Test for Hydrophyti		
7				 ✓ 2 - Dominance Test is >50% 	ovegetation	
8		Tatal Oa		3 - Prevalence Index is $\leq 3.0^1$		
15		= Total Cov		Problematic Hydrophytic Veg	etation ¹ (Explai	n)
50% of total cover: <u>15</u>	20% of	total cover:	0			
Herb Stratum (Plot size: 1/10 acre)				¹ Indicators of hydric soil and wetla	and hvdrology r	nust
1. Saururus cernuus	25	Yes	OBL	be present, unless disturbed or pr		
2. Juncus effusus	10	Yes	OBL	Definitions of Four Vegetation	Strata:	
3				Tree – Woody plants, excluding v		
4				more in diameter at breast height	(DBH), regard	ess of
5	·			height.		
6				Sapling/Shrub - Woody plants, e	excluding vines	less
7	. <u></u>			than 3 in. DBH and greater than 3	3.28 ft (1 m) tall	
8					h) alanta yana	
9				Herb – All herbaceous (non-wood of size, and woody plants less that		diess
	·					
	·			Woody vine – All woody vines gr	eater than 3.28	ft in
11	·			height.		
12						
	35	= Total Cov	er			
50% of total cover: 17.5	20% of	total cover:	7			
Woody Vine Stratum (Plot size:)						
1						
2	·					
3						
4						
5				Hydrophytic		
		= Total Cov	er	Vegetation		
				Present? Yes $\frac{X}{X}$	No	
50% of total cover:		total cover.				
Remarks: (If observed, list morphological adaptations belo	ow).					

Profile Desc	ription: (Describe	to the dep	th needed to docur	nent the i	ndicator	or confirm	the absence	of indicato	rs.)	
Depth	Matrix			x Feature		1.0.2	Tautura		Demente	
<u>(inches)</u> 0-12	Color (moist) 5/1 10YR	<u>%</u> 85	Color (moist) 4/6 10YR	<u>%</u> 15	<u>Type</u> ¹ C	Loc ²	Texture Silt loam		Remarks	
	3/1101K	00	4/01011	15	0		Silt IOain			
		·				·				
		<u> </u>								
		·		- <u> </u>						
1 Type: C=C	oncentration, D=Dep	letion RM=	Reduced Matrix M	S=Masked	Sand G	ains	² Location:	PI =Pore Li	ining, M=Matrix	
	Indicators: (Applic					uno.			matic Hydric S	
Histosol			Polyvalue Be				J) 1 cm M	Muck (A9) (L	.RR O)	
Histic Ep	pipedon (A2)		Thin Dark Su				· 🗖	Muck (A10) (
Black Hi			Loamy Muck			R O)			18) (outside M	
	n Sulfide (A4)		Loamy Gleye		F2)				ain Soils (F19) (
	d Layers (A5) Bodies (A6) (LRR P	T 11)	 ✓ Depleted Ma Redox Dark 		(C)			alous Bright RA 153B)	Loamy Soils (F	20)
	icky Mineral (A7) (LRR P				,			arent Materi	al (TF2)	
	esence (A8) (LRR U		Redox Depre		· · ·				Surface (TF12)
	ick (A9) (LRR P, T)		Marl (F10) (L		,			(Explain in F		,
	d Below Dark Surfac	e (A11)	Depleted Oc	, ,	•		2			
	ark Surface (A12)		Iron-Mangan						Irophytic vegeta	
	rairie Redox (A16) (I lucky Mineral (S1) (I		A) Umbric Surfa Delta Ochric			, 0)			ogy must be pre d or problemation	
	Bleyed Matrix (S4)		Reduced Ver			50A. 150B)				0.
	edox (S5)		Piedmont Flo							
	Matrix (S6)		Anomalous E	Bright Loar	ny Soils (F20) (MLR	A 149A, 153C	, 153D)		
	rface (S7) (LRR P, S						1			
	_ayer (if observed)									
Туре:									X	
	ches):						Hydric Soil	Present?	Yes X	No
Remarks:										

Project/Site: Ruston Industrial Park	City/County: Linco	oln Parish	Sampling Date: 4/10/17
Applicant/Owner: City of Ruston		State: LA	Sampling Point: 35-UP
	Section, Township		
Landform (hillslope, terrace, etc.): flat	Local relief (conca	ve, convex, none): none	Slope (%): 2-5
Subregion (LRR or MLRA): LRR P	Lat: 32.531045	long: -92.597803	Datum: WGS 84
Soil Map Unit Name: Guyton-Ouachita silt loams		og NWI classif	fication:
Are climatic / hydrologic conditions on the site typical for			
Are Vegetation $\underline{N}_{}$, Soil $\underline{N}_{}$, or Hydrology $\underline{N}_{}$			
Are Vegetation <u>N</u> , Soil <u>N</u> , or Hydrology <u>N</u>	naturally problematic?	If needed, explain any answ	vers in Remarks.)
SUMMARY OF FINDINGS – Attach site m			
Hydrophytic Vegetation Present? Yes X Hydric Soil Present? Yes	No Is the Sam		<u>No X</u>
Wetland Hydrology Present? Yes Remarks:	NoX		
in the western portion of the subject	property.		
HYDROLOGY			
Wetland Hydrology Indicators:			cators (minimum of two required)
Primary Indicators (minimum of one is required; chec			il Cracks (B6)
	uatic Fauna (B13)		egetated Concave Surface (B8)
	rl Deposits (B15) (LRR U)		Patterns (B10)
	drogen Sulfide Odor (C1) idized Rhizospheres along Living R		Lines (B16)
	esence of Reduced Iron (C4)	Crayfish Bu	n Water Table (C2)
	cent Iron Reduction in Tilled Soils (= '	Visible on Aerial Imagery (C9)
	n Muck Surface (C7)		c Position (D2)
	ner (Explain in Remarks)		uitard (D3)
Inundation Visible on Aerial Imagery (B7)			al Test (D5)
Water-Stained Leaves (B9)		🔲 Sphagnum	moss (D8) (LRR T, U)
Field Observations:			
Surface Water Present? Yes No X	Depth (inches): <u>none</u>		
	_ Depth (inches): <u>>12"</u>		
Saturation Present? Yes <u>No X</u> (includes capillary fringe)	_ Depth (inches): <u>>12"</u>	Wetland Hydrology Prese	ent? Yes No $\frac{X}{2}$
Describe Recorded Data (stream gauge, monitoring v	well, aerial photos, previous inspect	ions), if available:	
Demonster			
Remarks:			
no signs of hydrology.			

Sampling Point: 35-UP

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
<u>Tree Stratum</u> (Plot size: <u>1/10 acre</u>)	% Cover	Species?		Number of Dominant Species	
1. Pinus taeda	35	Yes	FAC		(A)
2. Liquidambar styraciflua	15	Yes	FAC	Total Number of Dominant	
3. Quercus pagoda	10	No	FACW		(B)
4. Ulmus americana	10	No	FAC		· /
5. Carpinus caroliniana	5	No	FAC	Percent of Dominant Species	
6. Prunus serotina	5	No	FACU	That Are OBL, FACW, or FAC: 57%	(A/B)
	·			Prevalence Index worksheet:	
7	·			Total % Cover of: Multiply by:	_
8	80	Tatal Car		OBL species x 1 =	
500/ // // // //		= Total Cov		FACW species x 2 =	
	20% of	total cover	10	FAC species x 3 =	
Sapling/Shrub Stratum (Plot size: 1/10 acre)	45	Vee	FAOL	FACU species x 4 =	
1. Ulmus alata	15	Yes	FACU	UPL species x 5 =	-
2. Ligustrum sinense	15	Yes	FAC	· <u> </u>	-
3. Juniperus virginiana	10	Yes	FACU	Column Totals: (A)	(B)
4				Prevalence Index = B/A =	
5				Hydrophytic Vegetation Indicators:	
6					
7					
8.					
0		= Total Cov		\square 3 - Prevalence Index is $\leq 3.0^1$	
50% - (1-1-1				Problematic Hydrophytic Vegetation ¹ (Explain	1)
50% of total cover: <u>20</u>	20% of	total cover:	0		
Herb Stratum (Plot size: 1/10 acre)	00	Vee	FAOL	¹ Indicators of hydric soil and wetland hydrology m	ust
1. Callicarpa americana	20	Yes	FACU	be present, unless disturbed or problematic.	
2. Parthenocissus quinquefolia	5	No	FACU	Definitions of Four Vegetation Strata:	
3. Toxicodendron radicans	5	No	FAC	Tree – Woody plants, excluding vines, 3 in. (7.6 c	m) or
4				more in diameter at breast height (DBH), regardle	
5				height.	
6				Sapling/Shrub – Woody plants, excluding vines,	less
7				than 3 in. DBH and greater than 3.28 ft (1 m) tall.	
8					
				Herb – All herbaceous (non-woody) plants, regard of size, and woody plants less than 3.28 ft tall.	diess
9					
10				Woody vine – All woody vines greater than 3.28	ft in
11	·			height.	
12					
		= Total Cov			
50% of total cover: 15	20% of	total cover	6		
Woody Vine Stratum (Plot size:)					
1. Vitis rotundifolia	5	Yes	FAC		
2					
3					
4					
5.					
J	-	Tatal Car		Hydrophytic	
25		= Total Cov		Vegetation Present? Yes X No	
50% of total cover: 2.5		total cover:			
Remarks: (If observed, list morphological adaptations belo	ow).				

		to the depth	needed to document the indicator or confirm	n the absence	of indicators.)
Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist) % Type ¹ Loc ²	Texture	Remarks
0-12	5/4 10YR	100		Silt loam	
				·	
			educed Matrix, MS=Masked Sand Grains.		PL=Pore Lining, M=Matrix.
		cable to all Li	RRs, unless otherwise noted.)		for Problematic Hydric Soils ³ :
Histosol			Polyvalue Below Surface (S8) (LRR S, T, I	· 🗖	uck (A9) (LRR O)
	oipedon (A2) stic (A3)		☐ Thin Dark Surface (S9) (LRR S, T, U) ☐ Loamy Mucky Mineral (F1) (LRR O)		uck (A10) (LRR S) ed Vertic (F18) (outside MLRA 150A,B)
	n Sulfide (A4)		Loamy Gleyed Matrix (F2)		ont Floodplain Soils (F19) (LRR P, S, T)
Stratified	Layers (A5)		Depleted Matrix (F3)		lous Bright Loamy Soils (F20)
	Bodies (A6) (LRR I		Redox Dark Surface (F6)		A 153B)
	icky Mineral (A7) (L esence (A8) (LRR I		 Depleted Dark Surface (F7) Redox Depressions (F8) 		irent Material (TF2) nallow Dark Surface (TF12)
	ick (A9) (LRR P, T)	5)	Marl (F10) (LRR U)		Explain in Remarks)
	Below Dark Surface	ce (A11)	Depleted Ochric (F11) (MLRA 151)		
	ark Surface (A12)		Iron-Manganese Masses (F12) (LRR O, P		ators of hydrophytic vegetation and
	rairie Redox (A16) (lucky Mineral (S1) (and hydrology must be present, ss disturbed or problematic.
	Bleyed Matrix (S4)	LKK 0, 3)	Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B)		iss disturbed of problematic.
	edox (S5)		Piedmont Floodplain Soils (F19) (MLRA 14		
	Matrix (S6)		Anomalous Bright Loamy Soils (F20) (MLF	RA 149A, 153C,	153D)
	rface (S7) (LRR P, _ayer (if observed)			1	
Type:	_ayer (il observed)				
Depth (inc	chas).		_	Hydric Soil	Present? Yes <u>No X</u>
Remarks:					
	o hydric soil d	characteri	stics observed within top 12" of	the soil pro	ofile
	-			-	

Project/Site: Ruston Industria	al Park	City/County:	Lincoln Parish		Sampling Date: 4/10/17
Applicant/Owner: CSRS			Sta	_{ite:} LA	Sampling Point: 36-PFO
Investigator(s): Headwaters,	Inc.	Section, Tov			
Landform (hillslope, terrace, etc		Local relief (
		22.530932	Long: -92	.597835	Datum: WGS 84
Soil Map Unit Name: Guyton-	Ouachita silt loams				
					ition:
Are climatic / hydrologic condition					marks.) esent? Yes X No
Are Vegetation N, Soil N	or Hydrology N	naturally problematic?	(If needed, exp	lain anv answer	s in Remarks.)
					important features, etc.
Hydrophytic Vegetation Prese	nt? Voc X	No Is the			
Hydric Soil Present?		No	e Sampled Area	×	
Wetland Hydrology Present?		No withi	n a Wetland?	Yes <u>×</u>	No
Remarks:					
forested wetland hat	vitat conditions	to the south.			
HYDROLOGY					
Wetland Hydrology Indicato	rs:		Se	econdary Indicat	ors (minimum of two required)
Primary Indicators (minimum o	of one is required; che	ck all that apply)		Surface Soil C	Cracks (B6)
Surface Water (A1)		quatic Fauna (B13)		Sparsely Veg	etated Concave Surface (B8)
High Water Table (A2)		arl Deposits (B15) (LRR U)		Drainage Patt	
Saturation (A3)		ydrogen Sulfide Odor (C1)		Moss Trim Lir	(),
Water Marks (B1)		xidized Rhizospheres along Li		7	Vater Table (C2)
Sediment Deposits (B2)		resence of Reduced Iron (C4)			()
Drift Deposits (B3)		ecent Iron Reduction in Tilled	Soils (C6)		ible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		nin Muck Surface (C7) ther (Explain in Remarks)		Geomorphic F Shallow Aquit	
Inundation Visible on Aeri				FAC-Neutral	
Water-Stained Leaves (B			Ē	7	oss (D8) (LRR T, U)
Field Observations:	-,				
Surface Water Present?	Yes No X	Depth (inches): none			
Water Table Present?		Depth (inches): >12"			
Saturation Present?		Depth (inches):10-12"	Wetland Hyd	Irology Present	? Yes X No
(includes capillary fringe) Describe Recorded Data (stre	am gauge, monitoring	well, aerial photos, previous i	nspections), if availat	ole:	
·			. ,		
Remarks:					

Sampling Point: <u>36-PFO</u>

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: 1/10 acre)	% Cover	Species?	Status	Number of Dominant Species	
1. Quercus pagoda	25	Yes	FACW	' -	A)
2. Liquidambar styraciflua	20	Yes	FAC	Total Number of Deminent	
3. Carpinus caroliniana	10	No	FAC	Total Number of Dominant Species Across All Strata: 5 (B)
4. Ulmus americana	10	No	FAC		_ /
5. Quercus phellos	5	No	FACW	Percent of Dominant Species	
6. Pinus taeda	5	No	FAC	That Are OBL, FACW, or FAC: 100% (A/B)
				Prevalence Index worksheet:	
7				Total % Cover of:Multiply by:	
8				OBL species x 1 =	
		= Total Cov		FACW species x 2 =	
50% of total cover: <u>37.5</u>	20% of	total cover:	15	FAC species x 3 =	
Sapling/Shrub Stratum (Plot size: 1/10 acre)	00	Maria	540	FACU species x 4 =	
1. Ligustrum sinense	20	Yes	FAC	UPL species x 5 =	
2. Quercus phellos	10	Yes	FACW	· · · · · · · · · · · · · · · · · · ·	
3				Column Totals: (A)	(B)
4				Prevalence Index = B/A =	
5				Hydrophytic Vegetation Indicators:	
6					
7					
				2 - Dominance Test is >50%	
8		= Total Cov		3 - Prevalence Index is ≤3.0 ¹	
500/ - (1-1-1				Problematic Hydrophytic Vegetation ¹ (Explain)	
50% of total cover: <u>15</u>	20% 01	total cover:			
Herb Stratum (Plot size: 1/10 acre)				¹ Indicators of hydric soil and wetland hydrology mu	ist
1				be present, unless disturbed or problematic.	
2				Definitions of Four Vegetation Strata:	
3				Tree – Woody plants, excluding vines, 3 in. (7.6 cm	n) or
4				more in diameter at breast height (DBH), regardles	
5				height.	
6				Sapling/Shrub – Woody plants, excluding vines, le	222
7				than 3 in. DBH and greater than 3.28 ft (1 m) tall.	
8					
9				Herb – All herbaceous (non-woody) plants, regardl of size, and woody plants less than 3.28 ft tall.	less
10				Woody vine – All woody vines greater than 3.28 ft	in
11				height.	
12					
		= Total Cov			
50% of total cover:	20% of	total cover:			
Woody Vine Stratum (Plot size:)					
1. Vitis rotundifolia	10	Yes	FAC		
2					
3					
4					
5					
	10	= Total Cov		Hydrophytic Vegetation	
FOR aftertal array 5				Present? Yes \underline{X} No	
50% of total cover: 5		total cover:			
Remarks: (If observed, list morphological adaptations belo	w).				

Profile Desc	ription: (Describe	to the dept	h needed to docur	nent the i	ndicator	or confirm	the absence	e of indicators.)
Depth (inches)	Matrix Color (moist)	%	Redo Color (moist)	<u>x Features</u> %	<u>Type¹</u>	Loc ²	Texture	Remarks
<u>(incries)</u> 0-12	5/1 10YR	80	4/6 10YR	20	C	 PL	Silt loam	Remarks
	6,110111					<u> </u>		
		·		·				
		·		·				
¹ Type: C=Co	oncentration, D=Dep	letion, RM=	Reduced Matrix, MS	S=Masked	Sand Gr	ains.	² Location:	PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators: (Applic	able to all	LRRs, unless other	wise note	ed.)			for Problematic Hydric Soils ³ :
Histosol	()		Polyvalue Be				· _	Muck (A9) (LRR O)
	ipedon (A2)		Thin Dark Su					Muck (A10) (LRR S)
Black His	stic (A3) n Sulfide (A4)		Loamy Muck			R O)		ced Vertic (F18) (outside MLRA 150A,B) nont Floodplain Soils (F19) (LRR P, S, T)
	I Layers (A5)		Loamy Gleye		r <i>z)</i>			alous Bright Loamy Soils (F20)
	Bodies (A6) (LRR P	, T, U)	Redox Dark		6)			RA 153B)
	cky Mineral (A7) (LF		Depleted Da		,			arent Material (TF2)
	esence (A8) (LRR U)	Redox Depre		3)			Shallow Dark Surface (TF12)
	ck (A9) (LRR P, T)	- (0.4.4)	Marl (F10) (L			F 4\	U Other	(Explain in Remarks)
	I Below Dark Surfact Irk Surface (A12)	e (A11)	Depleted Ocl	, ,	•		T) ³ India	cators of hydrophytic vegetation and
	airie Redox (A12)	/LRA 150A					•	tland hydrology must be present,
	lucky Mineral (S1) (L		Delta Ochric			, -,		ess disturbed or problematic.
🔲 Sandy G	leyed Matrix (S4)		Reduced Ver	tic (F18) (MLRA 15	60A, 150B)		
	edox (S5)		Piedmont Flo					
	Matrix (S6) face (S7) (LRR P, S	- T IN	Anomalous E	Bright Loar	ny Soils (F20) (MLR	A 149A, 153C	;, 153D)
	ayer (if observed):							
Type:								
	ches):						Hydric Soil	Present? Yes X No
Remarks:								
Remarks.								

Project/Site: Ruston Industrial Park	City/County: Lincoln Parish Sampling Date: 4/10/17		
Applicant/Owner: City of Ruston		State: LA	Sampling Point: 36-UP
	Section, Township, Range: Section 20, T 18 N, R 2 W		
Landform (hillslope, terrace, etc.): flat	Local relief (concar	ve, convex, none): none	Slope (%): 2-5
Subregion (LRR or MLRA): LRR P	Lat: 32.530932	Long: -92.597835	Datum: WGS 84
Soil Map Unit Name: Guyton-Ouachita silt loams		NWI classif	ication:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)			
Are Vegetation \underline{N} , Soil \underline{N} , or Hydrology \underline{N} significantly disturbed? Are "Normal Circumstances" present? Yes \underline{X} No			
Are Vegetation N, Soil N, or Hydrology N			
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.			
Hydrophytic Vegetation Present? Yes X	No		
Hydric Soil Present? Yes	No X Is the Sam		No X
Wetland Hydrology Present? Yes	No X within a We	etiand? Yes	NO <u>/</u>
Remarks:			
This sampling point was taken along the wetland - upland transition line. This data sheet reflects the upland (non-wetland) forested habitat conditions to the north.			
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary India	cators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)			il Cracks (B6)
Surface Water (A1)) Aquatic Fauna (B13)		egetated Concave Surface (B8)
	rl Deposits (B15) (LRR U)		
	rdrogen Sulfide Odor (C1)		
	Oxidized Rhizospheres along Living Roots (C3)		n Water Table (C2)
	Presence of Reduced Iron (C4)		irrows (C8)
	ent Iron Reduction in Tilled Soils (Muck Surface (C7)		Visible on Aerial Imagery (C9)
	Muck Surface (C7) I Geomorphic Position (D2) r (Explain in Remarks) Shallow Aquitard (D3)		
Inundation Visible on Aerial Imagery (B7)			
Water-Stained Leaves (B9)		=	moss (D8) (LRR T, U)
Field Observations:			
Surface Water Present? Yes No X	Depth (inches): none		
Water Table Present? Yes No X			
Saturation Present? Yes No X	Depth (inches): <u>>12"</u>	Wetland Hydrology Prese	ent? Yes <u>No X</u>
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			
no signs of hydrology.			
VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: 36-UP

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: 1/10 acre)		Species?	<u>Status</u>	Number of Dominant Species	
1. Pinus taeda	20	Yes	FAC	That Are OBL, FACW, or FAC: 5 (A)
2. Quercus pagoda	20	Yes	FACW	Total Number of Dominant	
3. Liquidambar styraciflua	15	Yes	FAC		B)
4. Ulmus americana	10	No	FAC	Percent of Dominant Species	
5. Carpinus caroliniana	5	No	FAC		A/B)
6					-
7				Prevalence Index worksheet:	
8				Total % Cover of: Multiply by:	
		= Total Cov	er	OBL species x 1 =	
50% of total cover: <u>35</u>	20% of	total cover:	14	FACW species x 2 =	
Sapling/Shrub Stratum (Plot size: 1/10 acre)				FAC species x 3 =	
1. Ligustrum sinense	20	Yes	FAC	FACU species x 4 =	
2. Ulmus alata	10	Yes	FACU	UPL species x 5 =	
3. Juniperus virginiana	5	No	FACU	Column Totals: (A)	(B)
4					
				Prevalence Index = B/A =	
5				Hydrophytic Vegetation Indicators:	
6				1 - Rapid Test for Hydrophytic Vegetation	
7			·	2 - Dominance Test is >50%	
8				$\boxed{}$ 3 - Prevalence Index is $\leq 3.0^1$	
		= Total Cov		Problematic Hydrophytic Vegetation ¹ (Explain)	
50% of total cover: <u>17.5</u>	20% of	total cover:	/		
Herb Stratum (Plot size: 1/10 acre)				¹ Indicators of hydric soil and wetland hydrology mu	ist
1. Callicarpa americana	15	Yes	FACU	be present, unless disturbed or problematic.	
2. Parthenocissus quinquefolia	5	Yes	FACU	Definitions of Four Vegetation Strata:	
3				Tree – Woody plants, excluding vines, 3 in. (7.6 cn	a) or
4				more in diameter at breast height (DBH), regardles	
5				height.	
6				Sapling/Shrub – Woody plants, excluding vines, lo	222
7				than 3 in. DBH and greater than 3.28 ft (1 m) tall.	
8					
9				Herb – All herbaceous (non-woody) plants, regard of size, and woody plants less than 3.28 ft tall.	less
10				Woody vine – All woody vines greater than 3.28 ft	in
11			·	height.	
12	20				
10		= Total Cov			
	20% of	total cover:	4		
Woody Vine Stratum (Plot size:)	10	Max	540		
1. Vitis rotundifolia	10	Yes	FAC		
2					
3					
4					
5				Hydrophytic	
	10	= Total Cov	er	Vegetation	
50% of total cover: <u>5</u>	20% of	total cover:	2	Present? Yes <u>×</u> No	
Remarks: (If observed, list morphological adaptations belo					

SOIL

	ription: (Describe	to the dept			ator or confirm	n the absence	of indicators.)
Depth (inches)	Matrix Color (moist)	%	Color (moist)	ox Features % Typ	pe ¹ Loc ²	Texture	Remarks
<u>(incries)</u> 0-12	5/4 10YR	100		<u>/oiy</u>		Silt loam	Telliains
0.12	0/4 10110	100				Oncioani	
	oncentration, D=Dep				d Grains.		PL=Pore Lining, M=Matrix.
	Indicators: (Applic		_				for Problematic Hydric Soils ³ :
Histosol				elow Surface (S8 urface (S9) (LRF			uck (A9) (LRR O)
Black Hi	oipedon (A2) stic (A3)			ky Mineral (F1) (uck (A10) (LRR S) ed Vertic (F18) (outside MLRA 150A,B)
	en Sulfide (A4)		=	ed Matrix (F2)			ont Floodplain Soils (F19) (LRR P, S, T)
	d Layers (A5)		Depleted Ma				lous Bright Loamy Soils (F20)
	Bodies (A6) (LRR F		Redox Dark	Surface (F6)		(MLR	A 153B)
	icky Mineral (A7) (L			ark Surface (F7)			rent Material (TF2)
	esence (A8) (LRR l	J)		essions (F8)			nallow Dark Surface (TF12)
	ick (A9) (LRR P, T)	(() () ()	Marl (F10) (I		A 454)	U Other (I	Explain in Remarks)
	d Below Dark Surfac ark Surface (A12)	e (ATT)		chric (F11) (MLR nese Masses (F1		T) ³ Indica	ators of hydrophytic vegetation and
	rairie Redox (A12)	MLRA 150A	=	ace (F13) (LRR	, .		and hydrology must be present,
	lucky Mineral (S1) ((F17) (MLRA 1			ss disturbed or problematic.
	Bleyed Matrix (S4)			ertic (F18) (MLR			
Sandy R	ledox (S5)		Piedmont Fl	oodplain Soils (F	=19) (MLRA 1 -	49A)	
	Matrix (S6)		Anomalous	Bright Loamy Sc	oils (F20) (MLF	RA 149A, 153C,	153D)
	rface (S7) (LRR P,					1	
	Layer (if observed)	:					
Type:	-1						Present? Yes No X
Depth (in	cnes):					Hydric Soil	Present? Yes <u>No X</u>
Remarks: N	o hydric soil d	characte	ristics observ	ved within t	he top 12	" of the soi	l profiling
	e nyane een e						i proming.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Ruston Industrial Park	City/County:	oln Parish	Sampling Date: 4/10/17
Applicant/Owner: City of Ruston			Sampling Point: 37-PFO
	Section, Township		
	Local relief (conca		
Subregion (LRR or MLRA): LRR P	Lat: 32.530345	-92.597733	UGS 84
Soil Map Unit Name: Guyton-Ouachita silt loams	Lat	NWI class	ification:
Are climatic / hydrologic conditions on the site typical fo			
Are Vegetation <u>N</u> , Soil <u>N</u> , or Hydrology <u>N</u>	significantly disturbed?	Are "Normal Circumstances	s" present? Yes X No
Are Vegetation <u>N</u> , Soil <u>N</u> , or Hydrology <u>N</u>	naturally problematic?	(If needed, explain any ans	wers in Remarks.)
SUMMARY OF FINDINGS – Attach site m			
Hydrophytic Vegetation Present? Yes X	No Is the Sam	nled Area	
Hydric Soil Present? Yes X	No within a W		No
Wetland Hydrology Present? Yes X	_ No		
Sampling point was taken within a for property.	rested wetland habitat	in the western po	rtion of the subject
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Ind	licators (minimum of two required)
Primary Indicators (minimum of one is required; check	all that apply)		oil Cracks (B6)
	atic Fauna (B13)		Vegetated Concave Surface (B8)
	l Deposits (B15) (LRR U)	✓ Drainage	Patterns (B10)
	rogen Sulfide Odor (C1)	🛄 Moss Trin	n Lines (B16)
	dized Rhizospheres along Living R	Roots (C3)	on Water Table (C2)
	sence of Reduced Iron (C4)		Burrows (C8)
	ent Iron Reduction in Tilled Soils (N Visible on Aerial Imagery (C9)
	n Muck Surface (C7) er (Explain in Remarks)	_	nic Position (D2) quitard (D3)
Inundation Visible on Aerial Imagery (B7)			ral Test (D5)
Water-Stained Leaves (B9)		=	n moss (D8) (LRR T, U)
Field Observations:			
Surface Water Present? Yes X No	Depth (inches): 1-2" in pools		
Water Table Present? Yes No X			
Saturation Present? Yes X No	Depth (inches): <u>6-8</u> "	Wetland Hydrology Pres	sent? Yes X No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring w	ell, aerial photos, previous inspec	tions), if available:	
Demortor			
Remarks:			

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

Sampling Point: 37-PFO

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: 1/10 acre)	% Cover	Species?	Status	Number of Dominant Species	
1. Quercus pagoda	25	Yes	FACW		A)
2. Liquidambar styraciflua	15	Yes	FAC		
3. Ulmus americana	15	Yes	FAC	Total Number of Dominant Species Across All Strata: 6 (E	B)
4. Salix nigra	10	No	OBL		_,
5. Acer rubrum	5	No	FAC	Percent of Dominant Species	
6. Pinus taeda	5	No	FAC	That Are OBL, FACW, or FAC: 100% (A	A/B)
				Prevalence Index worksheet:	
7			·	Total % Cover of: Multiply by:	
8				OBL species x 1 =	
27.5		= Total Cov		FACW species x 2 =	
50% of total cover: <u>37.5</u>	20% of	total cover:	15	FAC species x 3 =	
Sapling/Shrub Stratum (Plot size: 1/10 acre)				FACU species x 0 = x 4 =	
1. Ligustrum sinense	20	Yes	FAC		
2. Acer rubrum	10	Yes	FAC	UPL species x 5 =	
3				Column Totals: (A)	(B)
4				Prevalence Index = B/A =	
5				Hydrophytic Vegetation Indicators:	
6					
7					
				2 - Dominance Test is >50%	
8		Tatal Car		3 - Prevalence Index is ≤3.0 ¹	
		= Total Cov		Problematic Hydrophytic Vegetation ¹ (Explain)	
50% of total cover: <u>15</u>	20% of	total cover:	0		
Herb Stratum (Plot size: 1/10 acre)			0.51	¹ Indicators of hydric soil and wetland hydrology must	st
1. Juncus effusus	15	Yes	OBL	be present, unless disturbed or problematic.	
2				Definitions of Four Vegetation Strata:	
3				Tree – Woody plants, excluding vines, 3 in. (7.6 cm	n) or
4				more in diameter at breast height (DBH), regardless	
5				height.	
6				Sapling/Shrub – Woody plants, excluding vines, le	222
7				than 3 in. DBH and greater than 3.28 ft (1 m) tall.	,00
8					
				Herb – All herbaceous (non-woody) plants, regardle of size, and woody plants less than 3.28 ft tall.	ess
9					
10				Woody vine – All woody vines greater than 3.28 ft	in
11				height.	
12			·		
		= Total Cov			
50% of total cover: 7.5	20% of	total cover:	3		
Woody Vine Stratum (Plot size:)					
1					
2					
3					
4					
5				Hydrophytic	
		= Total Cov		Vegetation Present? Yes X No	
50% of total cover:	20% of	total cover:			
Remarks: (If observed, list morphological adaptations belo	wv).				

SOIL

Profile Desc	ription: (Describe	to the dept	h needed to docur	nent the i	ndicator	or confirm	the absence	of indicators.)
Depth	Matrix			x Feature		. 2	_	
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type'		<u>Texture</u>	Remarks
0-12	4/1 10YR	85	5/8 10YR	15	С	PL	Silt loam	
		· ·						
		· ·						
						·		
						·		
	oncentration, D=Dep					ains.		PL=Pore Lining, M=Matrix.
	ndicators: (Applic	able to all I						s for Problematic Hydric Soils ³ :
Histosol	· · ·		Polyvalue Be		· · ·			Muck (A9) (LRR O) Muck (A10) (LRR S)
Black His	vipedon (A2)		Thin Dark Su					ced Vertic (F18) (outside MLRA 150A,B)
	n Sulfide (A4)		Loamy Gleye			(0)		nont Floodplain Soils (F19) (LRR P, S, T)
	Layers (A5)		Depleted Ma		/			alous Bright Loamy Soils (F20)
	Bodies (A6) (LRR P	, T, U)	Redox Dark		6)			RA 153B)
	cky Mineral (A7) (LF		Depleted Dar	k Surface	(F7)			arent Material (TF2)
	esence (A8) (LRR U)	Redox Depre		8)			Shallow Dark Surface (TF12)
	ck (A9) (LRR P, T)	- () 4 4)	Marl (F10) (L	,		54)	C Other	(Explain in Remarks)
	l Below Dark Surfac Irk Surface (A12)	e (A11)	Depleted Ocl				T) ³ India	cators of hydrophytic vegetation and
	airie Redox (A16) (N	/LRA 150A						tland hydrology must be present,
	lucky Mineral (S1) (L		Delta Ochric			, .,		ess disturbed or problematic.
	leyed Matrix (S4)		Reduced Ver			50A, 150B)		·
Sandy R	edox (S5)		Piedmont Flo	odplain S	oils (F19)	(MLRA 14	9A)	
	Matrix (S6)		Anomalous E	right Loar	ny Soils (F20) (MLR	A 149A, 153C	c, 153D)
	face (S7) (LRR P, S	-						
	ayer (if observed):							
Type:								Present? Yes X No
	ches):						Hydric Soil	Present? Yes X No
Remarks:								

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Ruston Industrial Pa	ırk	City/County: Linc	oln Parish	Sampling Date: 4/10/17
Applicant/Owner: City of Ruston			State: LA	Sampling Point: 40-PFO
Investigator(s): Headwaters, Inc.		Section, Townshi		
Landform (hillslope, terrace, etc.): F				Slope (%): <u>0-2</u>
Subregion (LRR or MLRA). LRR P	lat	32.530212	-92.596578	Datum: WGS 84
Soil Map Unit Name: Guyton-Ouad	chita silt loams		Long	ssification:
Are climatic / hydrologic conditions o				
Are vegetation $\underline{N}_{,}$, Soil $\underline{N}_{,}$				ces" present? Yes X No
SUMMARY OF FINDINGS –	Attach site map sh	owing sampling po	int locations, transe	ects, important features, etc.
Hydrophytic Vegetation Present?	Yes X No	la tha Car		
Hydric Soil Present?	Yes X No		npled Area /etland? Yes	X No
Wetland Hydrology Present?		within a w		NO
Remarks:				
				in the western half of the
site. This data sheet ref	lects the forested	wetland condition	is observed to the	e north of this waypoint.
HYDROLOGY				
Wetland Hydrology Indicators:			Secondary	ndicators (minimum of two required)
Primary Indicators (minimum of one	e is required: check all tha	t apply)		Soil Cracks (B6)
Surface Water (A1)	Aquatic Fa			y Vegetated Concave Surface (B8)
High Water Table (A2)		sits (B15) (LRR U)		e Patterns (B10)
Saturation (A3)		Sulfide Odor (C1)		rim Lines (B16)
Water Marks (B1)	<u> </u>	hizospheres along Living I	Roots (C3) 🔲 Dry-Sea	ason Water Table (C2)
Sediment Deposits (B2)	Presence of	of Reduced Iron (C4)	🗹 Crayfisł	n Burrows (C8)
Drift Deposits (B3)	Recent Iron	n Reduction in Tilled Soils	(C6) 🗌 Saturati	on Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	_	Surface (C7)	Geomo	rphic Position (D2)
Iron Deposits (B5)	、 、	lain in Remarks)		Aquitard (D3)
Inundation Visible on Aerial Im	agery (B7)		=	eutral Test (D5)
✓ Water-Stained Leaves (B9)			Sphagn	um moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes	SX No Depth	(inches): <u>1-2" in pools</u>		
	s No Depth s No _X Depth			
	s <u>X</u> No <u>No</u> Depth		Wetland Hydrology Pr	resent? Yes ^X No
(includes capillary fringe)				
Describe Recorded Data (stream g	auge, monitoring well, aer	ial photos, previous inspec	tions), if available:	
Remarks:				
Remarks:				

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

Sampling Point: 40-PFO

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: 1/10 acre)		Species?		Number of Dominant Species	
1. Liquidambar styraciflua	35	Yes	FAC	That Are OBL, FACW, or FAC: 7 (A	۹)
2. Acer rubrum	20	Yes	FAC	Total Number of Dominant	
3. Quercus phellos	10	No	FACW	Species Across All Strata: 7 (B	3)
4. Quercus pagoda	10	No	FACW		,
5. Triadica sebifera	5	No	FAC	Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (/	4/B)
6					ŕ
7				Prevalence Index worksheet:	
8				Total % Cover of: Multiply by:	
	80	= Total Cov	er	OBL species x 1 =	
50% of total cover: 40		total cover:		FACW species x 2 =	
Sapling/Shrub Stratum (Plot size: 1/10 acre)				FAC species x 3 =	
1. Quercus phellos	20	Yes	FACW	FACU species x 4 =	
2. Triadica sebifera	10	Yes	FAC	UPL species x 5 =	
3. Cephalanthus occidentalis	5	No	OBL	Column Totals: (A)	(B)
	<u> </u>		ODE		. ,
				Prevalence Index = B/A =	
5				Hydrophytic Vegetation Indicators:	
6	·			1 - Rapid Test for Hydrophytic Vegetation	
7					
8				3 - Prevalence Index is ≤3.0 ¹	
	35	= Total Cov	er	Problematic Hydrophytic Vegetation ¹ (Explain)	
50% of total cover: <u>17.5</u>	20% of	total cover:	7	<u> </u>	
Herb Stratum (Plot size: 1/10 acre)				¹ Indicators of hydric soil and wetland hydrology mus	et
1. Juncus effusus	20	Yes	OBL	be present, unless disturbed or problematic.	51
2. Saururus cernuus	10	Yes	OBL	Definitions of Four Vegetation Strata:	
3. Arundinaria tecta	5	No	FACW		
4. Persicaria hydropiperoides	5	No	OBL	Tree – Woody plants, excluding vines, 3 in. (7.6 cm more in diameter at breast height (DBH), regardless	
5. Woodwardia areolata	5	No	OBL	height.	5 01
6				Sapling/Shrub – Woody plants, excluding vines, le than 3 in. DBH and greater than 3.28 ft (1 m) tall.	ess
7					
8				Herb - All herbaceous (non-woody) plants, regardle	ess
9				of size, and woody plants less than 3.28 ft tall.	
10			<u> </u>	Woody vine – All woody vines greater than 3.28 ft	in
11				height.	
12					
	45	= Total Cov	er		
50% of total cover: 22.5	20% of	total cover:	9		
Woody Vine Stratum (Plot size:)					
1. Smilax rotundifolia	5	Yes	FAC		
2	·				
3					
4					
5	-			Hydrophytic	
2		= Total Cov		VegetationPresent?Yes \underline{X} No	
50% of total cover: 2		total cover:	<u> </u>		
Remarks: (If observed, list morphological adaptations belo	ow).				

SOIL

Profile Desc	ription: (Describe	to the dept	h needed to docum	nent the	indicator	or confirm	n the absence	of indicate	ors.)	
Depth	Matrix		Redo	x Feature	S					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
0-12	5/1 10YR	85	5/8 10YR	15	С	PL	Silt loam			
		·			·					
				·	·					
·				·	·					
							. <u></u>			
¹ Type: C=Co	oncentration, D=Dep	letion, RM=	Reduced Matrix, MS	S=Masked	d Sand Gr	ains.			ining, M=Mat	
Hydric Soil I	ndicators: (Applic	able to all l	RRs, unless other	wise not	ed.)		Indicators	for Proble	matic Hydric	Soils ³ :
Histosol	(A1)		Polyvalue Be	low Surfa	ice (S8) (L		ן) 1 cm M	luck (A9) (I	LRR O)	
Histic Ep	pipedon (A2)		Thin Dark Su	rface (S9) (LRR S,	T, U)	2 cm M	luck (A10)	(LRR S)	
🔲 Black Hi	stic (A3)		Loamy Muck	y Mineral	(F1) (LRF	R O)		ed Vertic (F	18) (outside	MLRA 150A,B)
Hydroge	n Sulfide (A4)		Loamy Gleye	d Matrix	(F2)		Piedmo	ont Floodpl	ain Soils (F19) (LRR P, S, T)
	l Layers (A5)		Depleted Mat	trix (F3)			L Anoma	lous Bright	t Loamy Soils	(F20)
	Bodies (A6) (LRR P		Redox Dark	Surface (F	=6)		· ·	RA 153B)		
	icky Mineral (A7) (Ll		Depleted Dar		. ,			arent Mater		
	esence (A8) (LRR L	J)	Redox Depre		8)				k Surface (TF	12)
	ick (A9) (LRR P, T)		Marl (F10) (L				U Other (Explain in	Remarks)	
	Below Dark Surfac	e (A11)	Depleted Och				 3			
	ark Surface (A12)		Iron-Mangan						drophytic vege	
	rairie Redox (A16) (I					, U)		•	logy must be p	
	lucky Mineral (S1) (l ileyed Matrix (S4)	LRR 0, 5)	Delta Ochric			0A 150D)		ess disturbe	ed or problema	atic.
	edox (S5)		Reduced Ver							
	Matrix (S6)						49A) RA 149A, 153C,	153D)		
	rface (S7) (LRR P, \$	ат II)		ngni Loa	iny Sons (A 143A, 1330,	1550)		
	_ayer (if observed)	-								
Type:		•								
	ches):						Hydric Soil	Procont?	Yes X	No
			<u> </u>				Hyune 301	Flesent	165	
Remarks:										

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Projectistie: Ruston City(County: Lincoln Parish Sampling Date: 4/10/17 Applicativomer: City of Ruston Sate: LA Sampling Point: 43-UP exerginary: HeadWaters, Inc. Section, Township, Range: Section 20, T18 N, R 2 W Sobregion (LRR or MLRA): LRR P Lat: 22.532109 Long: -62.596137 Datum: WGS 84 Sold Map Unit Name: Guyton-Ouachitis sill loams NWT classification: No No <th>Project/Site: Ruston Industrial Park</th> <th>City/County: Linco</th> <th>oln Parish</th> <th>Sampling Date: 4/10/17</th>	Project/Site: Ruston Industrial Park	City/County: Linco	oln Parish	Sampling Date: 4/10/17
nvestigator(s): Headwaters, Inc. Section 20, T 18 N, R 2 W .andform (hillslope, terrace, etc.): top-bank Local relief (concave, convex, none): Convex Slope (%): 2-8 Subregion (LRR or MLRA): LRR P Lot Long: -92.596137 Datum: WGS 84 Subregion (LRR or MLRA): LRR P Long: -92.596137 Datum: WGS 84 Subregion (LRR or MLRA): LRR Subregion (LRR or MLRA): NVI classification: NVI classification: We cleated in N Soil N or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No Mo SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No X Is the Sampled Area within a Wetland? Yes No X Wetland Hydrology Present? Yes No X Is the Sampled Area within a Wetland? Yes No X Wetland Hydrology Indicators: No X Is the Sampled Area within a Wetland? Yes No X Brings Like Kath Audic Fauna (B13) Sparsely Vegetated Concave Surface (B8) Dirth Cactors fininimum of two regulated flain apa Satis (Caltors fininimum of two re			State. LA	Sampling Point: 43-UP
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		well, aerial photos, previous inspect	ions), if available:	
no signs of hydrology.				
	no signs of hydrology.			

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

Sampling Point: 43-UP

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: 1/10 acre)	-	Species?		Number of Dominant Species	
1. Quercus nigra	30	Yes	FAC	That Are OBL, FACW, or FAC: <u>3</u> (A)	1
2. Carya spp.	20	Yes	FACU	Total Number of Dominant	
3. Liquidambar styraciflua	10	No	FAC	Species Across All Strata: 7 (B)	,
4. Quercus pagoda	10	No	FACW		
5. Prunus serotina	5	No	FACU	Percent of Dominant Species That Are OBL, FACW, or FAC: 43% (A/	(D)
6. Carpinus caroliniana	5	No	FAC		D)
7				Prevalence Index worksheet:	
				Total % Cover of: Multiply by:	
8	80	Tatal Car		OBL species 0 $x 1 = 0$	
		= Total Cov		FACW species 10 x 2 = 20	
	20% of	total cover:	10	FAC species 75 x 3 = 225	
Sapling/Shrub Stratum (Plot size: 1/10 acre)				FACU species $\frac{65}{x} \times 4 = \frac{260}{x}$	
1. Ligustrum sinense	20	Yes	FAC	$\begin{array}{c} 1 \text{ Act species} \\ \hline \\ \text{UPL species} \\ \hline \\ 0 \\ \text{x 5} = \\ \hline \\ 0 \\ \hline \end{array}$	
2. Ulmus alata	10	Yes	FACU	Column Totals: 150 (A) 505 (F	
3. Aesculus pavia	5	No	FACU	Column Totals: <u>150</u> (A) <u>505</u> (B	3)
4				Prevalence Index = $B/A = \frac{3.37}{1.37}$	
5				Hydrophytic Vegetation Indicators:	
6					
7				1 - Rapid Test for Hydrophytic Vegetation	
				\square 2 - Dominance Test is >50%	
8				3 - Prevalence Index is ≤3.0 ¹	
175		= Total Cov		Problematic Hydrophytic Vegetation ¹ (Explain)	
50% of total cover: <u>17.5</u>	20% of	total cover:	1		
Herb Stratum (Plot size: 1/10 acre)				¹ Indicators of hydric soil and wetland hydrology must	
1. Callicarpa americana	15	Yes	FACU	be present, unless disturbed or problematic.	
2. Aesculus pavia	10	Yes	FACU	Definitions of Four Vegetation Strata:	
3				Tree Weedy plants evoluting vince 2 in (7.6 cm)	
4				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) more in diameter at breast height (DBH), regardless of	
5				height.	0.
6				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.	S
7					
8				Herb - All herbaceous (non-woody) plants, regardles	SS
9				of size, and woody plants less than 3.28 ft tall.	
10				Woody vine – All woody vines greater than 3.28 ft in	ì
11				height.	
12					
	25	= Total Cov	er		
50% of total cover: 12.5	20% of	total cover:	5		
Woody Vine Stratum (Plot size:)					
1. Smilax rotundifolia	10	Yes	FAC		
2					
3					
4					
5				Hydrophytic	
	10	= Total Cov	er	Vegetation	
50% of total cover: <u>5</u>	20% of	total cover:	2	Present? Yes No $\frac{\chi}{\chi}$	
Remarks: (If observed, list morphological adaptations belo	w)				

SOIL

Profile Desc	ription: (Describe	to the depth	needed to docu	ment the inc	licator o	r confirm	the absence of i	ndicators.)
Depth	Matrix			x Features				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-12	4/6 10YR	100					Silt loam	
					·			
					·			
	oncentration, D=Dep					ins.		=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Applic	cable to all L	RRs, unless othe	rwise noted	.)		Indicators for	Problematic Hydric Soils ³ :
Histosol	(A1)		Polyvalue Be	elow Surface	(S8) (LF	R S, T, U)1 cm Mucl	(A9) (LRR O)
Histic Ep	pipedon (A2)		Thin Dark Su	urface (S9) (I	LRR S, T	', U)	2 cm Mucl	< (A10) (LRR S)
Black Hi	stic (A3)		Loamy Muck	y Mineral (F	1) (LRR	0)	Reduced V	/ertic (F18) (outside MLRA 150A,B)
Hydroge	n Sulfide (A4)		Loamy Gleye	ed Matrix (F2	2)		Piedmont	Floodplain Soils (F19) (LRR P, S, T)
	Layers (A5)		Depleted Ma		,			s Bright Loamy Soils (F20)
	Bodies (A6) (LRR F	P. T. U)	Redox Dark				(MLRA [·]	o
	icky Mineral (A7) (L		Depleted Da					nt Material (TF2)
	esence (A8) (LRR l		Redox Depre		.,			ow Dark Surface (TF12)
	ick (A9) (LRR P, T)	-)	Marl (F10) (L	. ,				blain in Remarks)
	d Below Dark Surfac	ο (Δ11)	Depleted Oc			1)		Jain in Remarks)
	ark Surface (A12)		Iron-Mangan				T) ³ Indicator	rs of hydrophytic vegetation and
	rairie Redox (A16) (MI PA 150A)						hydrology must be present,
	lucky Mineral (S1) (0)		disturbed or problematic.
		LKK 0, 3)	Delta Ochric			A 450D)	uniess	disturbed of problematic.
	Bleyed Matrix (S4)		Reduced Ve					
	edox (S5)		Piedmont Flo					2 2)
	Matrix (S6)		Anomalous I	Bright Loamy	Soils (F	20) (MLR/	A 149A, 153C, 15	3D)
	rface (S7) (LRR P,						1	
Restrictive I	_ayer (if observed)	:						
Туре:								
Depth (ind	ches):						Hydric Soil Pre	esent? Yes <u>No \times</u>
Remarks:	,						-	
N	o hydric soil d	character	istics observ	ed withi	n the t	op 12"	of the soil r	profile.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Ruston Industrial Park	City/County: Lincoln Parish	Sar	mpling Date: <u>4/10/17</u>
Applicant/Owner: City of Ruston		State: LA Sar	npling Point: 45-PEM
	Section, Township, Range: S	ection 20, T 18 N, F	2 W
Landform (hillslope, terrace, etc.): Flat	Local relief (concave, convex,	_{none):} none	Slope (%): 0-2
Subregion (LRR or MLRA): LRR P Lat: _3	2.531760 Long: -	92.595537	Datum: WGS 84
Soil Map Unit Name: Guyton-Ouachita silt loams			
Are climatic / hydrologic conditions on the site typical for this time			
Are Vegetation <u>N</u> , Soil <u>N</u> , or Hydrology <u>N</u> signific			
Are Vegetation N, Soil N, or Hydrology N natural			
SUMMARY OF FINDINGS – Attach site map show			
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes X No	within a Wetland?	Yes X	No
subject property. HYDROLOGY Wetland Hydrology Indicators:		Secondary Indicators	(minimum of two required)
Primary Indicators (minimum of one is required; check all that ar Surface Water (A1) Aquatic Fauna High Water Table (A2) Marl Deposits Saturation (A3) Hydrogen Sult Water Marks (B1) Oxidized Rhiz Sediment Deposits (B2) Presence of R Drift Deposits (B3) Recent Iron R Algal Mat or Crust (B4) Thin Muck Su Iron Deposits (B5) Other (Explain Water-Stained Leaves (B9) Water-Stained Leaves (B9)	a (B13) (B15) (LRR U) iide Odor (C1) ospheres along Living Roots (C3) educed Iron (C4) eduction in Tilled Soils (C6) rface (C7)	Surface Soil Crac Sparsely Vegetat Drainage Pattern Moss Trim Lines Dry-Season Wate Crayfish Burrows	cks (B6) ed Concave Surface (B8) s (B10) (B16) er Table (C2) (C8) e on Aerial Imagery (C9) tion (D2) (D3) t (D5)
Field Observations: Surface Water Present? Yes X No Depth (in Water Table Present? Yes No X Depth (in Saturation Present? Yes X No Depth (in (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial	ches): <u>>12"</u> ches): Surface Wetland H	Iydrology Present?	Yes X No
Remarks:			

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

Sampling Point: 45-PEM

4/40		Dominan		Dominance Test worksheet:	
Tree Stratum (Plot size: 1/10 acre)		Species		Number of Dominant Species	
1				That Are OBL, FACW, or FAC: _4(A)	
2				Total Number of Dominant	
3				Species Across All Strata: (B)	
4			·	Percent of Dominant Species	
5			·	That Are OBL, FACW, or FAC: 100% (A/B)	
6				Prevalence Index worksheet:	
7			·		
8				Total % Cover of: Multiply by:	
		= Total Co	ver	OBL species x 1 =	
50% of total cover:	20% of	total cove	r:	FACW species x 2 =	
Sapling/Shrub Stratum (Plot size: 1/10 acre)				FAC species x 3 =	
1				FACU species x 4 =	
2				UPL species x 5 =	
3				Column Totals: (A) (B)	
4				Descelar es la desc. D/A	
				Prevalence Index = B/A =	
5				Hydrophytic Vegetation Indicators:	
6					
7				2 - Dominance Test is >50%	
8				$\boxed{}$ 3 - Prevalence Index is $\leq 3.0^1$	
= Total Cover		ver	Problematic Hydrophytic Vegetation ¹ (Explain)		
50% of total cover:	20% of	total cove	r:		
Herb Stratum (Plot size: 1/10 acre)				¹ Indicators of hydric soil and wetland hydrology must	
1. Carex spp.	20	Yes	FACW	be present, unless disturbed or problematic.	
2. Juncus effusus	15	Yes	OBL	Definitions of Four Vegetation Strata:	
3. Cyperus pseudovegetus	10	Yes	FACW	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or	
4. Solidago spp.	10	Yes	FAC	more in diameter at breast height (DBH), regardless of	
5. Persicaria hydropiperoides	5	No	OBL	height.	
6. Triadica sebifera	5	No	FAC	Sapling/Shrub – Woody plants, excluding vines, less	
7. Liquidambar styraciflua	5	No	FAC	than 3 in. DBH and greater than 3.28 ft (1 m) tall.	
8. Saururus cernuus	5	No	OBL		
9. Scirpus cyperinus	5	No	OBL	Herb – All herbaceous (non-woody) plants, regardles of size, and woody plants less than 3.28 ft tall.	
			·		
10			·	Woody vine – All woody vines greater than 3.28 ft in	
11			·	height.	
12	~ ~		·		
10		= Total Co			
50% of total cover: 40	20% of	total cove	r: 10		
Woody Vine Stratum (Plot size:)					
1			·		
2					
3			. <u></u>		
4					
5				Hydrophytic	
		= Total Co		Vegetation	
50% of total cover:	20% of	total cove	r:	Present? Yes X No	
Remarks: (If observed, list morphological adaptations bel					
	ow).				

SOIL

Profile Desc	ription: (Describe	to the dept	h needed to docur	nent the i	ndicator	or confirm	the absence	of indicato	ors.)	
Depth	Matrix	0/		x Features		2	Tautura		Demente	
<u>(inches)</u> 0-12	Color (moist) 5/1 10YR	<u>%</u> 80	Color (moist) 4/6 10YR	<u>%</u> 20	<u>Type¹</u> C	Loc ²	Texture Silt loam		Remarks	
¹ Type: C=Cc Hydric Soil I Histosol Histic Ep Black Hii Hydroge Stratifiec Organic 5 cm Mu Muck Pri 1 cm Mu Depletec Thick Da Coast Pr Sandy M	oncentration, D=Dep ndicators: (Applic (A1) ipedon (A2) stic (A3) n Sulfide (A4) I Layers (A5) Bodies (A6) (LRR P cky Mineral (A7) (LI esence (A8) (LRR P, T) I Below Dark Surfac irk Surface (A12) airie Redox (A16) (I lucky Mineral (S1) (P, T, U) RR P, T, U) 2010 Content of the content of	Reduced Matrix, MS LRRs, unless other Polyvalue Be Thin Dark Su Loamy Muck Loamy Gleye Ø Depleted Mar Redox Dark S Depleted Dar Ø Redox Depre Marl (F10) (L Depleted Oct Iron-Mangan	S=Masked wise note low Surface rface (S9) y Mineral (d Matrix (I trix (F3) Surface (F k Surface (F k Surface (F RR U) nric (F11) ese Masse ce (F13) (Sand Gr ad.) ce (S8) (L (LRR S, (F1) (LRF F2) 6) (F7) 3) (MLRA 1 es (F12) (LRR P, T	ains. .RR S, T, U T, U) CO) 51) LRR O, P,		for Proble Muck (A9) (L Muck (A10) (ed Vertic (F ont Floodpla alous Bright RA 153B) arent Mater hallow Dark (Explain in F ators of hyd land hydrole	(LRR S) (18) (outside ain Soils (F19 Loamy Soils ial (TF2) k Surface (TF	MLRA 150A,B) (LRR P, S, T) (F20) (T2) etation and present,
Sandy R	leyed Matrix (S4) edox (S5) Matrix (S6)		Reduced Ver	odplain S	oils (F19)	(MLRA 14	9A) A 149A, 153C	, 153D)		
	face (S7) (LRR P, S						1			
Type:	ayer (if observed).	:								
	ches):						Hydric Soil	Present?	Yes X	No
Remarks:	,									

APPENDIX IV

- Custom Soil Resource Report for Lincoln Parish, Louisiana



United States Department of Agriculture



Natural Resources Conservation Service A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Lincoln Parish, Louisiana

CSRS, Inc. - Ruston Industrial Park



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/? cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

Preface	2
How Soil Surveys Are Made	
Soil Map	
Soil Map	9
Legend	10
Map Unit Legend	11
Map Unit Descriptions	11
Lincoln Parish, Louisiana	
AnB—Angie very fine sandy loam, 1 to 3 percent slopes	13
DrC—Darley gravelly fine sandy loam, 1 to 5 percent slopes	
DRF—Darley-Sacul association, 12 to 30 percent slopes	14
GyA—Guyton-Ouachita silt loams, frequently flooded	
ScC—Sacul very fine sandy loam, 1 to 5 percent slopes	18
SCE—Sacul very fine sandy loam, 5 to 12 percent slopes	19
Soil Information for All Uses	21
Suitabilities and Limitations for Use	
Land Classifications	21
Hydric Rating by Map Unit	21
References	27

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.



Γ

	MAP LEGEND	EGEND		MAP INFORMATION	
Area of In	Area of Interest (AOI) Area of Interest (AOI) Area of Interest (AOI)	 Spoil Area Stony Spot 	vrea Spot	The soil surveys that comprise your AOI were mapped at 1:24,000.	
Soils	Soil Map Unit Polygons		Very Stony Spot	Warning: Soil Map may not be valid at this scale.	
} =	Soil Map Unit Lines Soil Map Unit Points	Q Other		Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil	
Special	Special Point Features	Water Features	Special Line Features	line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.	
	Borrow Pit Clav Snot	Transportation	Streams and Canals on	Please rely on the bar scale on each map sheet for map	7
€ ⇔	Closed Depression	H Rails	Rails Interetate Hinhwave	measurements.	
× ×	Gravel Pit	US Routes	utes	Source of Map: Natural Resources Conservation Service Web Soil Survey URL:	
0 0 0	Gravelly Spot	Major	Major Roads	Coordinate System: Web Mercator (EPSG:3857)	
0	Landfill	Local Roads	Zoads	Maps from the Web Soil Survey are based on the Web Mercator	
V	Lava Flow	Background		projection, which preserves direction and shape but distorts distance and area A projection that preserves area such as the	
417	Marsh or swamp	Aerial	Aerial Photography	Albers equal-area conic projection, should be used if more	
«	Mine or Quarry			accurate calculations of distance or area are required.	
٢	Miscellaneous Water			This product is generated from the USDA-NRCS certified data as	
0	Perennial Water			or the version date(s) instea below.	
>	Rock Outcrop			_	
+	Saline Spot			Survey Area Data: Version 6, Sep 26, 2010	
0 0 0 0	Sandy Spot			Soil map units are labeled (as space allows) for map scales	
Ŵ	Severely Eroded Spot			1:50,000 or larger.	
\$	Sinkhole			Date(s) aerial images were photographed: Jun 3, 2011—Jun 11,	
~	Slide or Slip			2011	
£	Sodic Spot			The orthophoto or other base map on which the soil lines were	
				compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident	

Lincoln Parish, Louisiana (LA061)						
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI			
AnB	Angie very fine sandy loam, 1 to 3 percent slopes	15.1	9.6%			
DrC	Darley gravelly fine sandy loam, 1 to 5 percent slopes	31.7	20.2%			
DRF	Darley-Sacul association, 12 to 30 percent slopes	38.5	24.6%			
GyA	Guyton-Ouachita silt loams, frequently flooded	56.8	36.3%			
ScC	Sacul very fine sandy loam, 1 to 5 percent slopes	0.4	0.3%			
SCE	Sacul very fine sandy loam, 5 to 12 percent slopes	14.1	9.0%			
Totals for Area of Interest		156.7	100.0%			

Map Unit Legend

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not

mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Lincoln Parish, Louisiana

AnB—Angie very fine sandy loam, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: m58w Elevation: 150 to 600 feet Mean annual precipitation: 47 to 63 inches Mean annual air temperature: 52 to 75 degrees F Frost-free period: 210 to 265 days Farmland classification: All areas are prime farmland

Map Unit Composition

Angie and similar soils: 100 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Angie

Setting

Landform: Interfluves, interfluves Down-slope shape: Convex Across-slope shape: Linear Parent material: Loamy marine deposits and/or clayey marine deposits

Typical profile

H1 - 0 to 12 inches: very fine sandy loam *H2 - 12 to 70 inches:* silty clay

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 36 to 60 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: High (about 11.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 2e Hydrologic Soil Group: C Ecological site: Clayey Upland (F133BY003TX) Hydric soil rating: No

DrC—Darley gravelly fine sandy loam, 1 to 5 percent slopes

Map Unit Setting

National map unit symbol: m596 *Elevation:* 200 to 450 feet

Mean annual precipitation: 47 to 63 inches Mean annual air temperature: 52 to 75 degrees F Frost-free period: 210 to 265 days Farmland classification: All areas are prime farmland

Map Unit Composition

Darley and similar soils: 100 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Darley

Setting

Landform: Interfluves Landform position (two-dimensional): Shoulder, summit Down-slope shape: Convex Parent material: Iron-rich clayey fluviomarine deposits

Typical profile

H1 - 0 to 11 inches: gravelly fine sandy loam
H2 - 11 to 29 inches: sandy clay
H3 - 29 to 53 inches: gravelly sandy clay
H4 - 53 to 85 inches: fine sandy loam

Properties and qualities

Slope: 1 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 8.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 3e Hydrologic Soil Group: C Ecological site: Clayey Upland (F133BY003TX) Hydric soil rating: No

DRF—Darley-Sacul association, 12 to 30 percent slopes

Map Unit Setting

National map unit symbol: m594 Elevation: 150 to 450 feet Mean annual precipitation: 47 to 63 inches Mean annual air temperature: 52 to 75 degrees F Frost-free period: 210 to 265 days Farmland classification: Not prime farmland

Map Unit Composition

Darley and similar soils: 50 percent Sacul and similar soils: 40 percent Minor components: 10 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Darley

Setting

Landform: Interfluves Landform position (two-dimensional): Shoulder, summit Down-slope shape: Convex Parent material: Iron-rich clayey fluviomarine deposits

Typical profile

H1 - 0 to 12 inches: gravelly fine sandy loam
H2 - 12 to 24 inches: sandy clay
H3 - 24 to 50 inches: gravelly sandy clay
H4 - 50 to 60 inches: fine sandy loam

Properties and qualities

Slope: 12 to 30 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 8.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 6e Hydrologic Soil Group: C Ecological site: Clayey Upland (F133BY003TX) Hydric soil rating: No

Description of Sacul

Setting

Landform: Interfluves Landform position (two-dimensional): Shoulder, summit Down-slope shape: Convex Across-slope shape: Linear Parent material: Clayey fluviomarine deposits

Typical profile

H1 - 0 to 3 inches: very fine sandy loam
H2 - 3 to 6 inches: fine sandy loam
H3 - 6 to 48 inches: clay
H4 - 48 to 60 inches: clay loam

Properties and qualities

Slope: 12 to 30 percent *Depth to restrictive feature:* More than 80 inches *Natural drainage class:* Moderately well drained

Custom Soil Resource Report

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr) Depth to water table: More than 80 inches Frequency of flooding: None Frequency of ponding: None Available water storage in profile: High (about 9.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 6e Hydrologic Soil Group: C Ecological site: Clayey Upland (F133BY003TX) Hydric soil rating: No

Minor Components

Unnamed

Percent of map unit: 10 percent Hydric soil rating: No

GyA—Guyton-Ouachita silt loams, frequently flooded

Map Unit Setting

National map unit symbol: m598 Elevation: 20 to 250 feet Mean annual precipitation: 47 to 63 inches Mean annual air temperature: 52 to 75 degrees F Frost-free period: 210 to 265 days Farmland classification: Not prime farmland

Map Unit Composition

Guyton and similar soils: 45 percent *Ouachita and similar soils:* 35 percent *Minor components:* 20 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Guyton

Setting

Landform: Depressions Down-slope shape: Concave Across-slope shape: Linear Parent material: Loamy alluvium of holocene age

Typical profile

H1 - 0 to 28 inches: silt loam H2 - 28 to 45 inches: silty clay loam H3 - 45 to 85 inches: silty clay loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 0 to 18 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Gypsum, maximum in profile: 5 percent
Sodium adsorption ratio, maximum in profile: 10.0
Available water storage in profile: Very high (about 12.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 4w Hydrologic Soil Group: C/D Ecological site: Loamy Bottomland (F133BY017TX) Hydric soil rating: Yes

Description of Ouachita

Setting

Landform: Natural levees Down-slope shape: Convex Across-slope shape: Linear Parent material: Loamy alluvium

Typical profile

H1 - 0 to 4 inches: silt loam H2 - 4 to 11 inches: silt loam H3 - 11 to 62 inches: silt loam H4 - 62 to 80 inches: fine sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water storage in profile: High (about 11.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 4w Hydrologic Soil Group: C Hydric soil rating: Yes

Minor Components

Unnamed

Percent of map unit: 20 percent Hydric soil rating: No

ScC—Sacul very fine sandy loam, 1 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2tnjd Elevation: 180 to 560 feet Mean annual precipitation: 43 to 57 inches Mean annual air temperature: 63 to 65 degrees F Frost-free period: 205 to 238 days Farmland classification: All areas are prime farmland

Map Unit Composition

Sacul and similar soils: 90 percent Minor components: 10 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sacul

Setting

Landform: Interfluves Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Parent material: Clayey marine deposits

Typical profile

A - 0 to 3 inches: very fine sandy loam E - 3 to 6 inches: very fine sandy loam Bt1 - 6 to 30 inches: clay Bt2 - 30 to 43 inches: clay BC - 43 to 55 inches: clay loam C - 55 to 80 inches: clay loam

Properties and qualities

Slope: 1 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 24 to 48 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline (0.1 to 1.0 mmhos/cm)
Available water storage in profile: High (about 9.9 inches)

Interpretive groups

Land capability classification (irrigated): 4e Land capability classification (nonirrigated): 4e *Hydrologic Soil Group:* D *Ecological site:* Clayey Upland (F133BY003TX) *Hydric soil rating:* No

Minor Components

Bowie

Percent of map unit: 10 percent Landform: Interfluves Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Ecological site: Loamy Upland (F133BY005TX) Hydric soil rating: No

SCE—Sacul very fine sandy loam, 5 to 12 percent slopes

Map Unit Setting

National map unit symbol: m59g Elevation: 150 to 450 feet Mean annual precipitation: 47 to 63 inches Mean annual air temperature: 52 to 75 degrees F Frost-free period: 210 to 265 days Farmland classification: Not prime farmland

Map Unit Composition

Sacul and similar soils: 100 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sacul

Setting

Landform: Interfluves Landform position (two-dimensional): Shoulder, summit Down-slope shape: Convex Across-slope shape: Linear Parent material: Clayey fluviomarine deposits

Typical profile

- H1 0 to 2 inches: very fine sandy loam
- H2 2 to 12 inches: very fine sandy loam
- H3 12 to 60 inches: clay
- H4 60 to 75 inches: clay loam

Properties and qualities

Slope: 5 to 12 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: More than 80 inches Frequency of flooding: None Frequency of ponding: None Available water storage in profile: High (about 9.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 6e Hydrologic Soil Group: C Ecological site: Clayey Upland (F133BY003TX) Hydric soil rating: No

Soil Information for All Uses

Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

Land Classifications

Land Classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

Hydric Rating by Map Unit

This rating indicates the percentage of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor nonhydric components in the higher positions on the landform, and map units that are made up dominantly of nonhydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is rated based on its respective components and the percentage of each component within the map unit.

The thematic map is color coded based on the composition of hydric components. The five color classes are separated as 100 percent hydric components, 66 to 99 percent hydric components, 33 to 65 percent hydric components, 1 to 32 percent hydric components, and less than one percent hydric components.

In Web Soil Survey, the Summary by Map Unit table that is displayed below the map pane contains a column named 'Rating'. In this column the percentage of each map unit that is classified as hydric is displayed.
Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

References:

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

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Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.





Hydric Rating by Map Unit— Summary by Map Unit — Lincoln Parish, Louisiana (LA061)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
AnB	Angie very fine sandy loam, 1 to 3 percent slopes	0	15.1	9.6%
DrC	Darley gravelly fine sandy loam, 1 to 5 percent slopes	0	31.7	20.2%
DRF	Darley-Sacul association, 12 to 30 percent slopes	0	38.5	24.6%
GyA	Guyton-Ouachita silt loams, frequently flooded	80	56.8	36.3%
ScC	Sacul very fine sandy loam, 1 to 5 percent slopes	0	0.4	0.3%
SCE	Sacul very fine sandy loam, 5 to 12 percent slopes	0	14.1	9.0%
Totals for Area of Inter	est		156.7	100.0%

Table—Hydric Rating by Map Unit

Rating Options—Hydric Rating by Map Unit

Aggregation Method: Percent Present

Aggregation is the process by which a set of component attribute values is reduced to a single value that represents the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. For the attribute being aggregated, the first step of the aggregation process is to derive one attribute value for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be rendered. Aggregation must be done because, on any soil map, map units are delineated but components are not.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that the corresponding component typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

The aggregation method "Percent Present" returns the cumulative percent composition of all components of a map unit for which a certain condition is true. For example, attribute "Hydric Rating by Map Unit" returns the cumulative percent composition of all components of a map unit where the corresponding hydric rating is "Yes". Conditions may be simple or complex. At runtime, the user may be able to specify all, some or none of the conditions in question.

Component Percent Cutoff: None Specified

Components whose percent composition is below the cutoff value will not be considered. If no cutoff value is specified, all components in the database will be considered. The data for some contrasting soils of minor extent may not be in the database, and therefore are not considered.

Tie-break Rule: Lower

The tie-break rule indicates which value should be selected from a set of multiple candidate values, or which value should be selected in the event of a percent composition tie.

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American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

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APPENDIX V

- GPS / Photo Location Exhibit

- Photographs of Selected Property Features





WAYPOINT NO. 1	
Upland (Non-wetland) forested habitat	
<image/>	<image/>
Description	View depicting the typical upland (non-wetland) forested habitat conditions observed within the northern portion of the subject property.















Upland (non-hydric) soil profile



Description

View of the non-hydric soil profile observed at this waypoint. The soils at this waypoint were a 4/6 on the 10 YR page of the Munsell Soil Color chart.







Upland (non-wetland) soil profile



Description

View depicting the upland (non-wetland) soil profile observed within a natural topographic feature that conveys storm water down gradient to the north towards the intermittent stream channel.















Hydric soil profile with forested wetland habitat (PFO-1)



Description	View depicting the hydric soil profile observed within the forested wetland fringe habitat (PFO-1) within the southeast portion of the site. The soils at this waypoint were a $4/1 - 5/1$ on the 10YR page of the Munsell Soil Color chart with a mottle color of 4/6 on the 7.5 page of approximately 20-25%. Redox concentrations were observed within the top 12" of the soil profile.
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Forested Wetland Habitat (PFO-2)



Description

View depicting the northern end of the forested wetland complex (PFO-2) observed within the eastern portion of the subject property.











Hydric soil profile (PFO-2)



Description

View depicting the hydric soil profile observed within the forested wetland habitat (PFO-2) within the southeast portion of the site. The soils at this waypoint were a 5/1 on the 10YR page of the Munsell Soil Color chart with a mottle color of 5/6 on the 7.5 page of approximately 20-25%. Redox concentrations were observed within the top 12" of the soil profile



Scrub – Shrub Wetland Habitat (PSS-1)





Upland (non-wetland) cut-over habitat



nerally west depicting the typical conditions observed or habitat in the central portion of the site.







	WAYPOINT NO. 18
	Perennial Stream (OW-7)
<image/>	<image/>
Description	View looking down gradient of the perennial stream (OW-7) observed meandering along the northern property boundary within the western half of the site. The perennial stream maintained an upland (non-wetland) forested habitat throughout the site.



	WAYPOINT NO. 19
	Upland (non-wetland) soil profile
<image/>	
Description	View depicting the upland (non-wetland) soil profile observed along the top banks of the perennial streams within the forested habitats. The soils consisted of a very sandy loam material with little to no mottle.



WAYPOINT NO. 19 Perennial Stream (OW-8) View looking up gradient of the perennial stream (OW-8) observed within the western limits of the site. The perennial stream maintained an upland (non-wetland) forested habitat throughout the site. Description



WAYPOINT NO. 19		
Upland (non-wetland) forested habitat		
<image/>		
Description	View looking east depicting the typical forested upland (non-wetland) habitat conditions observed along the top banks of the perennial streams.	



Hydric soil profile (PFO-4)



Description View depicting the hydric soil profile observed within the western end of the large forested wetland complex (PFO-4) in the western half of the subject property.







WAYPOINT NO. 23	
Forested Wetland Habitat (PFO-4)	
<image/>	
Description	View depicting the habitat conditions observed within the forested wetland complex (PFO-4) in the western half of the subject property. Photo taken is looking northeast.


Hydric soil profile (PFO-4)



Description View depicting the hydric soil profile observed within the western end of the large forested wetland complex (PFO-4) in the western half of the subject property. The soils at this waypoint were a 5/1 on the 10YR page of the Munsell Soil Color chart with a 5/8 mottle on the 7.5YR page.



Wetland (PFO-4) – Upland (non-wetland) habitat transition line



Description

View looking north depicting the forested upland (non-wetland) habitat observed to the north of this transition line. The forested wetland habitat (PFO-4) is located to the south of this transition line.



Wetland (PFO-4) – Upland (non-wetland) habitat transition line



Description

View depicting the transition soils profile observed along the habitat transition line. The soils at this waypoint were a 5/3 on the 10YR page of the Munsell Soil Color chart with a predominant mottle color of 5/6 on the 10YR page.



Wetland (PFO-4) – Upland (non-wetland) habitat transition line



Description

View looking north depicting the forested upland (non-wetland) habitat observed to the north of this transition line. The forested wetland habitat (PFO-4) is located to the south of this transition line.



WAYPOINT NO. 28 Wetland (PFO-4) - Upland (non-wetland) habitat transition line

Description

View looking south depicting the forested wetland habitat (PFO-4) observed to the south of this transition line. It was observed to be upland (non-wetland) in nature to the north of this waypoint.











WAYPOINT NO. 30 Upland (non-hydric) soil profile

Description

View depicting the upland (non-hydric) soil profile observed along the ridge within the forested upland habitat. The soils at this waypoint were a 4/6 on the 10YR page of the Munsell Soil Color chart.



Wetland (PFO-4) – Upland (non-wetland) habitat transition line





WAYPOINT NO. 32		
	Forested Wetland Habitat (PFO-4)	
<image/>		
Description	View to the northwest within the forested wetland complex (PFO-4) depicting the typical habitat conditions observed.	







Description

View depicting the upland (non-wetland) soil profile observed at this waypoint within the forested upland habitat.



Intermittent Stream (OW-6) and forested wetland habitat (PFO-4)



-	View looking down gradient of the intermittent stream (OW-6) as it meanders through the forested wetland complex (PFO-4).
Description	



Wetland (PFO-4) – Upland (non-wetland) habitat transition line



DescriptionView looking south depicting the forested upland (non-wetland) habitat
observed to the south of this transition waypoint. The forested wetland
(PFO-4) is located north of this waypoint.







Wetland (PFO-4) – Upland (non-wetland) habitat transition line



View looking north depicting the forested wetland habitat (PFO-4) from the wetland – upland transition line. It is upland (non-wetland) forested habitat to the south of this waypoint.







Upland (non-hydric) soil profile



Description

View depicting the upland (non-hydric) soil profile along the wetland – upland transition line form the micro-habitat forested wetland habitat (PFO-5) observed to the west of this waypoint. The soils at this waypoint ranged from a 4/4 - 4/6 on the 10YR page of the Munsell Soil Color chart.



WAYPOINT NO. 42	
l	Jpland (non-wetland) forested habitat
<image/>	
Description	View depicting the typical forested upland (non-wetland) habitat conditions observed along the top-bank of the perennial stream (OW-7).



WAYPOINT NO. 43	
Intermittent Stream (OW-6)	
<image/>	
Description	View looking up gradient of the intermittent stream (OW-6) just south of where the stream merges with the larger perennial stream (OW-7). The streams contained a forested upland (non-wetland) habitat at this waypoint.



WAYPOINT NO. 43		
l	Upland (non-wetland) forested habitat	
<image/>		
Description	View depicting the typical forested upland (non-wetland) habitat conditions observed along the top-bank of the perennial stream (OW-7) and intermittent stream (OW-6) at this waypoint. Photo taken is looking southwest.	



Emergent Wetland Habitat (PEM-1)



Description

View depicting the conditions observed within the cutover habitat that was identified as an emergent wetland habitat (PEM-1) in the northern portion of the site.







WAYPOINT NO. 47	
	Ephemeral Stream (OW-5)
<image/>	
Description	View depicting the segment of ephemeral stream (OW-5) observed within the eastern portion of the large forested wetland complex (PFO-4) observed within the western half of the site. This ephemeral stream merges with the intermittent stream (OW-6) just to the north of this waypoint.