# CITY OF MAGNOLIA 45 +/- ACRE PROJECT SITE

# DELINEATION PROJECT SITE MONGTOMERY COUNTY, TEXAS

## WETLANDS & JURISDICTIONAL WATERS OF THE UNITED STATES ASSESSMENT





PREPARED BY

SMC CONSULTING, INC.

ENVIRONMENTAL ENGINEERING

PEARLAND, TEXAS

(281) 997-7911

Tuesday, October 12, 2021

SMC CONSULTING, INC. PROJECT 21104
AEI PROJECT NUMBER 211009.40

PRELIMINARY- NON USACE VERIFIED REPORT

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#### **EXECUTIVE SUMMARY**

This study is a Jurisdictional Waters of the United States and Wetland Determination and Delineation Study for the approximate 45 acre project site for the City of Magnolia located along the western edge of Highway 149 and south of FM 1488 in the City of Magnolia in northern Montgomery County, Texas

Portions of the site have been altered in the somewhat recent past (between 2012 and 2016) with timber harvesting, pipeline, roadway, utility and drainage construction evident. The noted alterations on the site have clearly disturbed the natural site condition and the drainage. The result is a unique drainage system which appears to only be moderately effective in draining portions of the site. The site is largely covered in dense tree and shrub vegetation. The site contains one small dry pond area and two somewhat effective drainage pathways.

The site has been altered and has a mix of well defined, dug drainage channels on the site, erosional incised drains, and ill-defined overland flow drainage pathways. The drainage runs along the northeastern portion of the site, then turns southwest and becomes overland – almost sheet flow – in the southwestern portion of the site. While not currently wetlands – it is evident that portions of the site are converting toward a more wetland condition due to the ineffective nature of the drainage system.

No wetlands were found on the subject site. Portions of the subject site met two of the three necessary technical criteria to be wetlands – however, the soils on the subject site were not hydric. The lack of hydric soils is almost certainly the result of somewhat recent alteration of the site, and the permeable nature of the site. *Left alone – the development of wetlands on the site is virtually assured.* 

The site is not mapped as being within the 100 year floodplain of any drainage feature.

It is our Professional Opinion that the subject site contains 0.00 acres of Jurisdictional Wetlands. We additionally find that the subject site contains 0.44 acres and 2827 linear feet of Jurisdictional Tributaries.

The remainder of the subject site was found to be "Non-Wetland or Non-Jurisdictional Waters of the US" and thus not subject to the provisions of the Clean Water Act and associated USACE Permitting Program.

This report includes all the necessary evaluation forms as defined by the USACE to determine the Jurisdictional Nature of the water features on site. In order for the report to be considered "final", the client will need to deliver this report to the USACE and request an Approved Jurisdictional Determination. <u>Until approval by the USACE</u>, this document is considered draft and preliminary.

Attached to this report are aerial and site photographs which depict the project site conditions.

#### SMC CONSULTING, INC.

Civil & Environmental Engineers 3418 Pickering Lane Pearland, Texas 77584 (281) 997-7911

#### JURISDICTIONAL WATERS OF THE UNITED STATES AND WETLANDS ASSESSMENT DETERMINATION AND DELINEATION

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#### FOR THE

# CITY OF MAGNOLIA APPROX. 45 ACRE TRACT IN MONTOGOMERY COUNTY, TEXAS

#### INTRODUCTION

This study is a Jurisdictional Waters of the United States and Wetland Determination and Delineation Study for City of Magnolia approximate 45 acre project. The site is located to the west of Highway 149, and to the south of FM 1488 in Magnolia, Montgomery County, Texas. The site is generally rectangular shaped parcel of somewhat improved but undeveloped land. The attached maps provide site location information.

The site is currently and has historically been vacant unimproved land. The site is covered in a mix of native and invasive plants.

#### **SITE LOCATION**

The site is to the west of Highway 149 Jackson Road, and approximately 1/3 mile south of FM 1488 in the City of Magnolia, in northern Montgomery County, Texas.

The site is largely native and unimproved. The site has been altered in the somewhat recent past (between 2012 and 2016) with timber harvesting, pipeline, roadway, utility and drainage construction evident. The noted alterations on the site have disturbed the natural condition and the drainage on the site is unique. The site is largely covered in dense tree and shrub vegetation. The site contains one small dry pond area and two somewhat effective drainage pathways.

The project site is depicted more specifically in the site maps located in the appendices of this report.

#### WETLANDS CRITERIA

Many ponds and streams are Waters of the United States. Areas that are permanently inundated at mean annual water depths of greater than (>) 6.6 feet or are permanently inundated areas (<) 6.6 feet that do not support rooted emergent or woody plant species are generally classified as deep-water habitats. Areas that are inundated or saturated by surface water or groundwater and that do support rooted emergent or woody

plant species are generally considered wetlands. Wetlands are a "*subset*" of the Waters of the United States. It should be noted that not all Waters of the United States are Wetlands.

Jurisdictional determination of wetlands regulated under Section 404 of the Clean Water Act is made using the United States Army Corps of Engineers Wetlands Delineation Manual (1987). The Manual specifies three technical criteria which must all be met before an area is determined to be a wetland. The three criteria are, (1) hydrophilic vegetation (wetland plants), (2) hydric soils, and (3) wetland hydrology.

- (1) Hydrophilic vegetation consists of plant life which grows in water, soil, or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content. The US Fish & Wildlife Service has published a list of plants that commonly occur in wetlands. This plant list separates the plants into five basic groups. A plant is placed in on of these five basic groups dependent on the plant species frequency of occurrence in wetlands. These basic groups are:
  - (a) Obligate wetland plants (OBL)
  - (b) Faculative wetland plants (FACW)
  - (c) Faculative plants (FAC)
  - (d) Faculative Upland plants (FACU)
  - (e) Obligate Upland plants (UPL)

Generally, an area is considered to satisfy the criterion for hydrophilic vegetation when more than 50 percent of the dominant species are obligate wetland, faculative wetland, or faculative species. These three noted groups are those most commonly found in wetland areas.

- (2) Hydric soils are soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in upper layers. An area has hydric soils when the National Technical Committee for Hydric Soils (NTCHS) criteria for hydric soils is met. While a listing of hydric soils and mapping of those soils is often available, site sampling and testing is required to verify the presence or absence of the hydric soils.
- (3) Wetland hydrology exists whenever ponding or frequent flooding persists during the growing season. The 1987 USACE Manual specifies the use of certain field indicators to assist in the determination of the fulfillment of the hydric soils and wetland hydrology criteria. These criteria include the water source, topography, and impoundments present at a project site.

#### **SCOPE OF WORK**

The objective of this Jurisdictional Waters and Wetland Determination and Delineation was to evaluate the project site for jurisdictional waters and jurisdictional wetlands in accordance with Section 404 of the Clean Water Act. Particular attention was paid to the presence of Wetlands and other Jurisdictional Waters of the United States in accordance with the <u>United States Army Corps of Engineers (USACE) 1987 Wetlands Delineation Manual</u>. The following evaluations were performed for this project:

1. **Vegetation Indicators**: Evaluate the presence or absence of hydrophilic vegetation (water plants) that is typically adapted to wetlands and determine the vegetative patterns that are prevalent within the site, or specific areas within the site.

- 2. **Soil Indicators**: Determine the presence or absence of soils which would be classified as Hydric.
- 3. *Hydrology Indicators*: Evaluate the hydrological features of the site with respect to water accumulation and wetland development.
- 4. *Historical Characteristics*: Evaluate historical information to determine the existence and development of wetland features over extended periods of time.

#### METHODOLOGY/INVESTIGATIVE WORK

Wetland Analysis and Delineation work consisted of a site visit and current condition assessment. Additionally, the following items were utilized: The following activities were undertaken to perform the assessment: 1) review county soil maps; 2) review Federal Emergency Management Agency (FEMA) flood plain maps; 3) review United States Geological Service (USGS) topographic maps; and 4) perform site reconnaissance to evaluate and document soil, hydrology, and vegetation indicators.

#### 1. Soil Survey Evaluation:

Prior to site reconnaissance activities, the <u>Soil Survey of Montgomery County, Texas</u> was reviewed to determine the types of soils that would most likely be present on the project site. The soil delineation indicated that the dominant soils on the site were of the Montgomery Geologic Formation and the Conroe Association. Specifically, these soils were identified as the Conroe loamy fine sand 0-5% slopes, the Splendora fine sandy loam 0-2% slopes, and the Conroe soils.

Given the criteria and techniques employed by the Natural Resource Conservation Service (NRCS), formerly known as the Soil Conservation Service, for the survey process, it was considered probable that the boundaries depicted on the survey could contain certain inaccuracies. The minimum mapping area for any given soil in the NRCS survey is ten (10) acres, with the probability of imprecise boundary delineation being relatively high. Therefore, as part of site reconnaissance activities, on-site soil evaluations were performed to describe, classify, and document the hydric, or non-hydric, characteristics of the property's soils.

#### 2. <u>Flood Plain Evaluation</u>:

To assess the hydrological characteristics of the site, flood data from the FEMA was evaluated to determine if the property lies within, or adjacent to, a known flood plain. Due to the low topographic grades found on the Gulf Coast, periodic floods along rivers, creeks, and bayous are common. These floods, along with rainfall, are the primary hydrology drivers for wetlands located inland immediate coastal areas.

In addition to FEMA map reviews, on-site hydrology evaluations were made to assess probable flow patterns on the project site, and to evaluate inundation and/or saturation periods for respective wetland areas, if any.

#### 3. Topography Evaluation:

Investigative activities also included observations of the property's general topography and the location of landscape features such as depressions, ridges, and levees. These features could determine wetland patterns

and their associated hydrological functions. Topography was evaluated by reviewing: 1) topographical information published by the USGS; 2) aerial photography; and 3) on-site observations.

#### 4. Aerial Photography:

Wetlands generally occur as historical features on the landscape and usually maintain their basic configurations and appearances over a long period of time. However, vegetation communities naturally progress through several stages of predominance as wetlands age and become more mature. Additionally, topographical, and hydrological characteristics may be changed by natural processes or by man-induced alterations in or near wetland areas. While field verification remains essential to wetland identification and delineation, historical aerial photography can play a vital role in the evaluation of wetland features and the variations which may occur over extended periods of time.

- 1. Black & White Photography: Black & white photographs contain features which may outline the subtle changes in shading and contrast where wetland vegetation or soil may occur. Anaerobic soils are often of a different hue due to hydrous conditions and vegetation patterns associated with such soils. Due to the hydro period and vegetation variation, these areas can be distinguished from surrounding uplands. Black & white photography becomes a primary method for interpretive delineation since wetland areas may often be very distinctive.
- 2. Methodology of Interpretation: Photographic information was gathered from 2004, 2006, 2009, 2010, and 2018 for the project site. The historical aerial photograph indicates the project site much as it appears today.

#### 5. <u>Site Reconnaissance</u>:

The primary method of wetland identification and delineation was site reconnaissance activity that would identify and document the conditions that existed on the project site as related to jurisdictional wetlands. The site visits were performed to target the following specific areas: 1) soil surveys and geology; 2) topography and hydrology; and 3) vegetation.

The site was visited on Thursday September 30<sup>th</sup>, 2021by personnel from SMC Consulting, Inc. using the criteria set forth in the 1987 USACE Wetland Delineation Manual as modified by the Regional Conditions for hydrology, soils, and hydrophilic vegetation. The site was evaluated for the presence and absence of conditions that would indicate the presence of wetlands and/or Waters of the United States.

The soils of the site were evaluated to document their hydric (or non hydric) characteristics and to accurately describe and map any wetland areas. Six (6) sample locations at the site were documented and fully described according to NRCS staff criteria and were classified taxonomically as either hydric or non-hydric. Numerous additional undocumented observations were made to define established trends (from documented descriptions) or to verify aerial photo interpretation and/or NRCS mappings.

#### **FINDINGS**

#### 1. Geology and Soils:

The soil delineation indicated that the dominant soils on the site were of the Montgomery Geologic Formation and the Conroe Association. Specifically, these soils were identified as the Conroe loamy fine *SMC Consulting, Inc. (281) 997-7911*Pearland, Texas

sand 0-5% slopes, the Splendora fine sandy loam 0-2% slopes, and the Conroe soils. These soils are sandy and intermixed with gravel strata. The soils are mainly used for native and improved pasture and for pine tree production. The soils are well drained to moderately well drained.

The NRCS soil survey was accurate in identifying the basic types of soils found on the property and depicting significant areas of hydric soils. Documentation of soil descriptions and classifications from each of the sample areas are presented in the Data Forms contained in the appendix of this report.

#### 2. Topography and Hydrology:

USGS maps indicate a well sloped landscape in the area with flow generally being directed to the southeast. One dry manmade impoundment area was noted in the southwestern portion of the site. The site has been altered and has a mix of well defined, dug drainage channels on the site, erosional incised drains, and ill-defined overland flow drainage pathways. The drainage runs along the northeastern portion of the site, then turns southwest and becomes overland – almost sheet flow – in the southwestern portion of the site.

No wetlands were found on the subject site. Portions of the subject site met two of the three necessary technical criteria to be wetlands – however, the soils on the subject site were not hydric. The lack of hydric soils is almost certainly the result of somewhat recent alteration of the site, and the permeable nature of the site.

The site is not mapped as being within the 100 year floodplain of any drainage feature.

#### 3. <u>Vegetation:</u>

Attempts were made to comprehensively observe and document plant communities and species for all areas of the property, with special focus on those plants that would be considered hydrophytes associated with wetlands. Other sites within the general area were also recorded to define the boundaries of wetland and non-wetland areas. Representative samples were collected as necessary for specific sites and were identified.

The vast majority of the subject site was found to be uplands. The upland areas were covered in a mix of pasture covered in Bahia grass, flat sedge, bluestem, and Dog fennel, and in the wooded areas in a mix of Loblolly pine, Cedar elm, Southern red oak, Yaupon, and American beautyberry.

Wetland vegetation was identified in portions of the subject site – including Black willow, Chinese tallow, Sweet gum, Stinging nettle, Smartweed and Chinese privet.

The site contained a mix of open water, and non-vegetated drainage pathways and impoundment areas. Some of these features have obviously been improved and altered.

The attached datasheets fully document the specific vegetation at each sample location, including scientific names, wetland status, dominance, and coordinates.

As with the methods employed during soil survey activities, specific documentation was made in order to identify representative vegetation patterns within certain areas. Documentation of plant descriptions and classifications from each of the sample areas are presented in the Data Forms contained in the Appendix of this report.

#### TABLE 1: WETLANDS DELINEATED DURING SITE INVESTIGATION

AREA	DESCRIPTION	SIZE (ACRES)
	NO WETLANDS WERE IDENTIFED ON THE SITE	N/A

Total Wetland Areas Identified on site
TOTAL LIKELY JURISDICITONAL WETLAND ON SITE

0.00 acres. **0.00 ACRES** 

#### **TABLE 2: POTENTIAL WATERS OF THE US**

AREA	DESCRIPTION	SIZE (ACRES)
1	EPHEMERAL TRIBUTARY 1 – 0.01 AC & 191 LF ***	0.01 AC & 191 LF
2	EPHEMERAL TRIBUTARY 2 – 0.03 AC & 395 LF	0.03 AC & 395 LF
3	EPMEMERAL TRIBUTARY 3 – 0.05 AC & 718 LF	0.05 AC & 718 LF
4	INTERMITTENT TRIBUTARY 4 – 0.01 AC & 50 LF	0.01 AC & 50 LF
5	EPHEMERAL TRIBUTARY 5 – 0.01 AC & 191 LF	0.01 AC & 191 LF
6	INTERMITTENT TRIBUTARY 6 – 0.19 AC & 975 LF	0.19 AC & 975 LF
ADJ. POND	NESTED ADJ. POND/ DITCH WITHIN TRIBUTARY AREA 0.14	0.14 AC & 307 LF
/DITCH	AC & 307 LF – PART OF / ADJ. TO TRIB. 5	

Total Potential Waters of the US on site
POTENTIAL JURISDICITONAL WATERS ON SITE

0.44 AC. / 2827 LF 0.44 AC. / 2827 LF

Since the implementation of the US Supreme Court Rapanos Decision by the USACE and EPA, only the USACE and EPA can make the final determination of the Jurisdictional Status of Water Features.

<sup>\*\*\*</sup>EPHEMERAL TRIBUTARY 1 BEGINS AND ENDS ON THE SUBJECT SITE BEGINNING AT THE SOUTH SIDE OF THE ROADWAY, THEN PLAYING OUT AND BECOMING SHEET FLOW BEFORE TYING INTO ANY OTHER RECEIVING WATER BODY. IT IS POSSIBLE THAT THIS FEATURE WOULD BE DETERMINED TO BE NON-JURISDICTIONAL BY THE USACE.

#### **CONCLUSIONS**

This study is a Jurisdictional Waters of the United States and Wetland Determination and Delineation Study for the approximate 45 acre project site for the City of Magnolia located along the western edge of Highway 149 and south of FM 1488 in the City of Magnolia in northern Montgomery County, Texas

Portions of the site have been altered in the somewhat recent past (between 2012 and 2016) with timber harvesting, pipeline, roadway, utility and drainage construction evident. The noted alterations on the site have clearly disturbed the natural site condition and the drainage. The result is a unique drainage system which appears to only be moderately effective in draining portions of the site. The site is largely covered in dense tree and shrub vegetation. The site contains one small dry pond area and two somewhat effective drainage pathways.

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Attached to this report are aerial and site photographs which depict the project site conditions.

Steve McElyea, MS PE
President
SMC Consulting, Inc.
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Pearland, Texas

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National List of Plan Species that Occur in Wetlands: South Plains (Region 6). Porter B. Reed, Jr., May 1988, United States Department of the Interior, Fish and Wildlife Service, Washington, D.C.

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<u>Wetlands Delineation Manual.</u> U.S. Army Corps of Engineers, 1987, U.S. Army Corps of Engineers, Vicksburg, Mississippi.

### City of Magnolia - 44 Acre Tract

FM 149

Magnolia, TX 77354

Inquiry Number: 6680305.5

September 28, 2021

# The EDR Aerial Photo Decade Package



6 Armstrong Road, 4th floor Shelton, CT 06484 Toll Free: 800.352.0050 www.edrnet.com

#### **EDR Aerial Photo Decade Package**

09/28/21

Site Name: Client Name:

City of Magnolia - 44 Acre Trac SMC Consulting, Inc FM 149 3418 Pickering Lane

Magnolia, TX 77354 Pearland, TX 77584 EDR Inquiry # 6680305.5 Contact: Steve Mcelyea



Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

#### Search Results:

<u>Year</u>	<u>Scale</u>	<u>Details</u>	Source
2016	1"=500'	Flight Year: 2016	USDA/NAIP
2012	1"=500'	Flight Year: 2012	USDA/NAIP
2006	1"=500'	Flight Year: 2006	USDA/NAIP
1995	1"=500'	Acquisition Date: January 14, 1995	USGS/DOQQ
1983	1"=500'	Flight Date: January 29, 1983	USDA
1979	1"=500'	Flight Date: March 05, 1979	USDA
1968	1"=500'	Flight Date: December 15, 1968	USDA
1952	1"=500'	Flight Date: October 11, 1952	USDA
1940	1"=500'	Flight Date: October 19, 1940	USDA
1938	1"=500'	Flight Date: April 12, 1938	USDA

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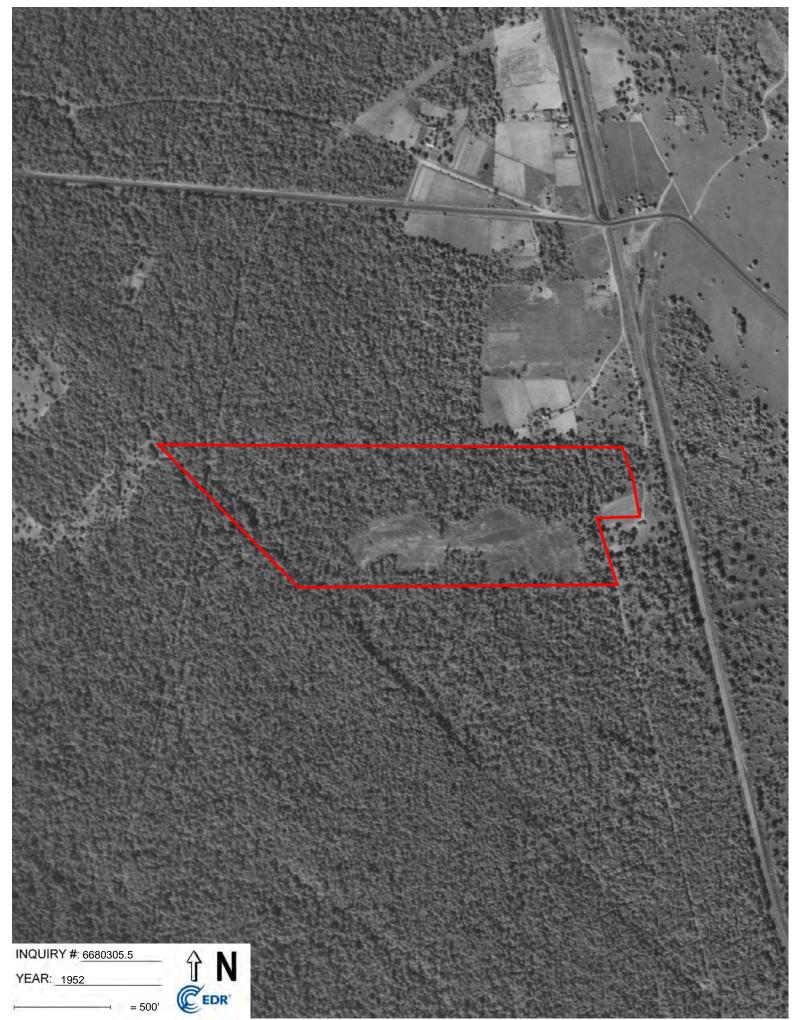




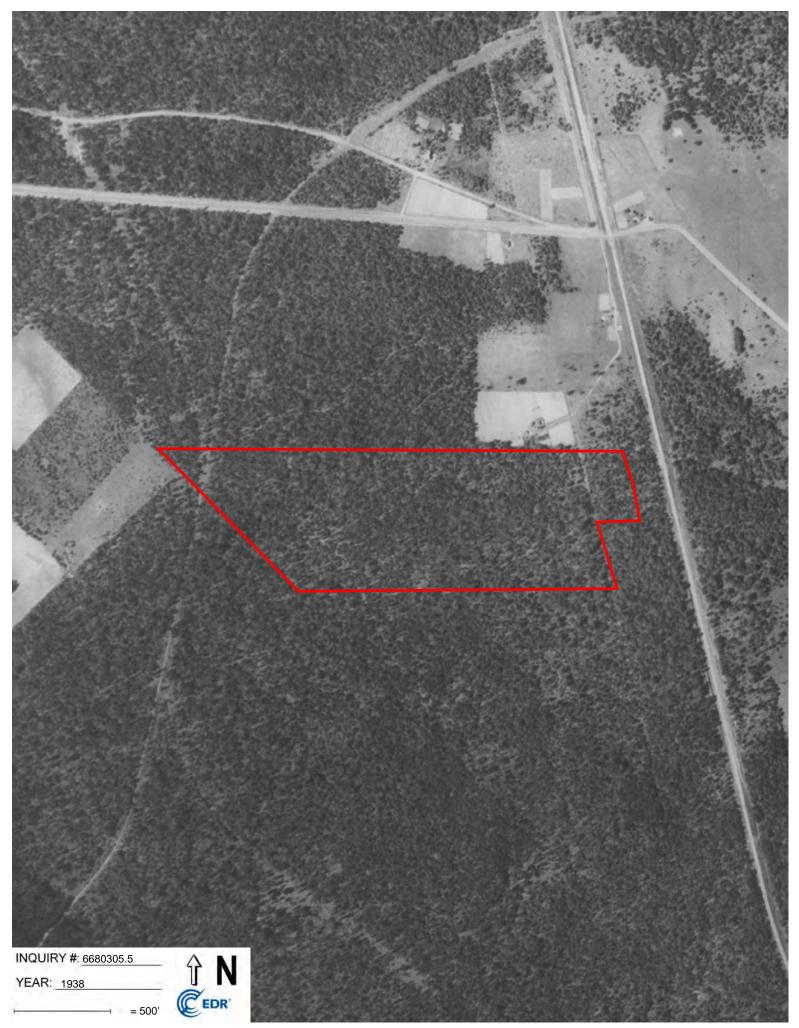


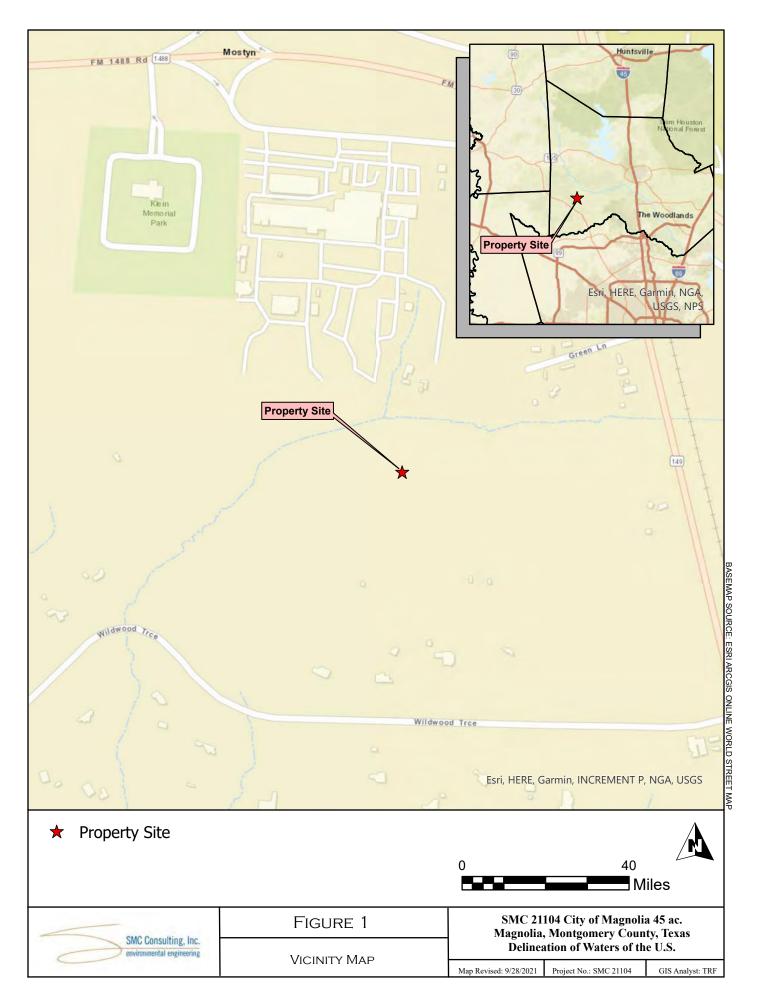


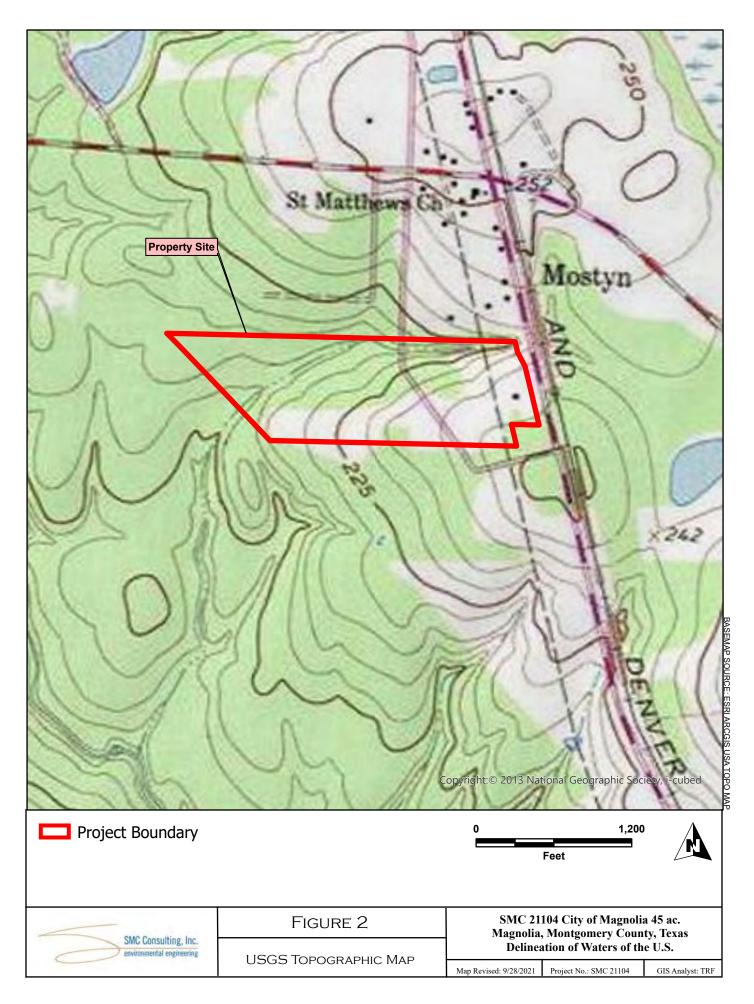




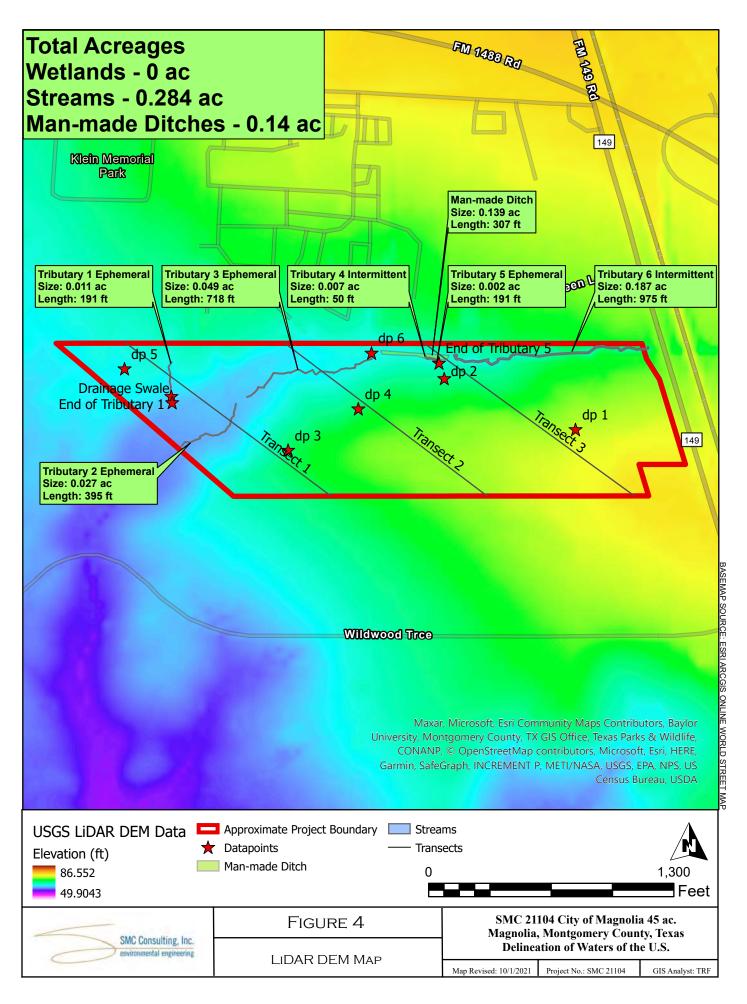


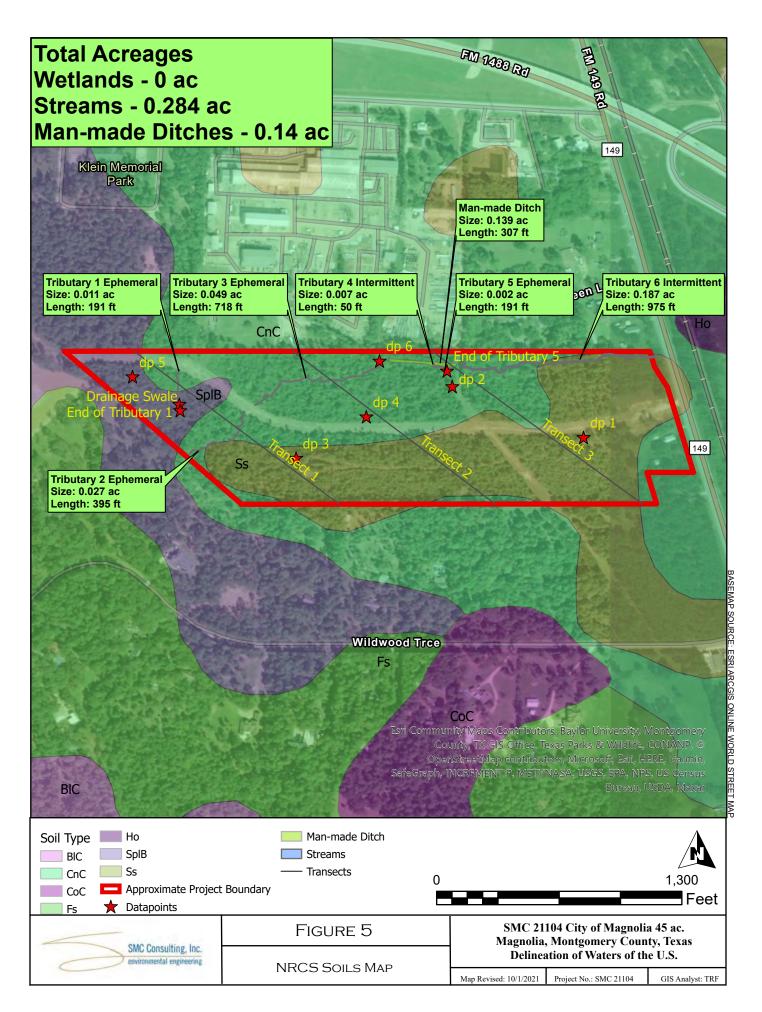


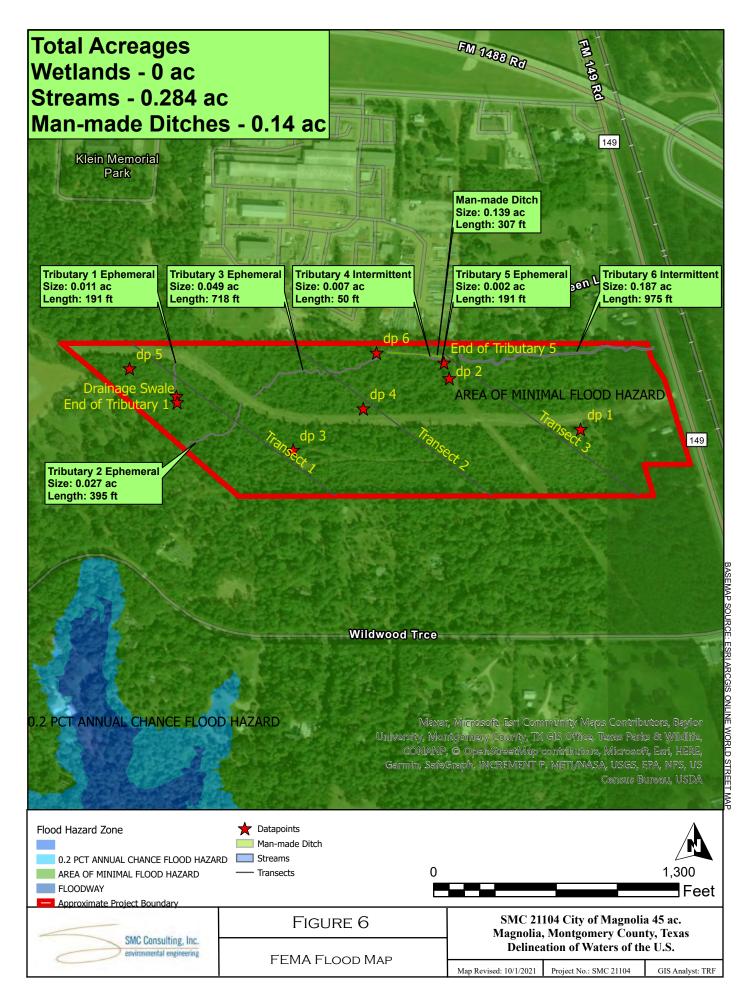


















1 : ROADWAY/UTILITY CLEARING ON SITE



3 : EAST EDGE OF SITE LOOK. WEST



5 : LOOK. SOUTH ALONG EAST EDGE OFSITE



2 : EAST EDGE OF SITE LOOK. NORTH



4 : EAST EDGE OF SITE LOOK. SW



6 : LOOKING NORTH ALONG EAST EDGE OF SITE

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7 : LOOKING EAST FROM EAST EDGE OF SITE -HIGHWAY 149



9 : TYP. VEG. EAST PART OF SITE



11 : WATER LINE MARKER - EAST EDGE OF SITE



8 : HOUSE IN SE CORNER OF SITE



10 : FIRE HYDRANT ON SITE



12 : LEFT OVER PIPE ON SITE

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13 : TYP. VEG. EAST PART OF SITE



15 : HOUSEHOLD TRASH ON SITE



17: TYP. SOIL SAMPLE



14 : MANHOLE - EAST PART OF SITE



16: TIRES ON SITE



18: TYPICAL SOIL SAMPLE

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19 : PIPELINE STATION ON SITE



21 : LOOKING ACROSS PIPELINE ON SITE



23: SITE VEG.



20: PIPELINE ON SITE



22 : LOOK. NORTH ALONG PIPELINE ON SITE



24: TYP. SITE VEG.

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25 : LOOKING DOWN ROAD/UTILITY CLEARING ON SITE



27: TYP. SOIL SAMPLING



29 : MISC. VEG. NORTH PART OF SITE



26 : DENSE SITE VEGETATION



28: TYP. UPLAND SOIL



30 : CREEK - NORTHEAST PART OF SITE

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31 : CREEK NORTH EDGE OF SITE



33 : DENSE VEG. NORTH PART OF SITE



35 : LOOK. EAST ALONG CREEK FROM PIPELINE -NORTH EDGE OF SITE



32 : LOOK. NORTH FROM NORTH PROP./PIPELINE BOUNDARY



34 : LOOK. SOUTH ALONG PIPELINE FROM NORTH EDGE OF SITE



36 : SITE VEGETATION - SOUTH PORTION

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37 : DENSE SITE VEG. SOUTH PORTIO



39 : LOOK. EAST FROM DEER STAND AREA



41 : SOIL SAMPLE NEAR DEER STAND AREA



38 : DEER STAND ON SITE - SOUTH PORTIO



40 : TYP. VEG. NEAR DEER STAND



42 : PINE TREE VEG. NEAR DEER STAND AREA - SOUTH PART OF SITE

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43: SOIL SAMPLE



45 : LOOK. WEST ALONG ROADWAY/UTILITY CLEARING - CENTER OF SITE



47 : ROADWAY/UTILITY CLEARING - WEST PART OF SITE



44 : DRAINAGE PATHWAY ON SITE



46 : LOOK. EAST ALONG ROADWAY/UTILITY CLEARING - CENTER OF SITE



48 : AUDUBON DEVELOPMENT - WEST OF NW EDGE OF SIE

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49 : LOOK. NORTH FROM ROADWAY/UTILITY CLEARING - NW PART OF SITE



51 : DRAINAGE TRIBUTARY ON SITE



53 : SOIL SAMPLING -NEAR DRAINAGE TRIBUTARY - SOUTH PART OF SITE



50 : TYP. VEG. IN DRAINAGE PATHWAY ON SITE



52 : DRAINAGE TRIBUTARY - SOUTH PART OF SITE



54 : DRAINAGE PATHWAY -SOUTH EDGE OF SITE

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55 : DRAINAGE PATHWAY -NORTH PART OF SITE



57 : PONDED WATER -NORTH CENTRAL DRAINAGE PATHWAY



59 : NORTH EDGE OF SITE - DISCHARGE FROM ADJ. PROPERTY



56 : PONDED WATER -NORTH CENTRAL DRAINAGE PATHWAY



58 : LOOK. ACROSS DRAINAGE PATHWAY



60 : DRAINAGE CHANNEL -NORTH CENTRAL PART OF SITE

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61: NORTHERN TRIBUTARY



63 : WOOD/METAL IN CHANNEL - NORTH EDGE OF SITE



65 : GLASS/CANS/TRASH IN CREEK - NORTH EDGE OF SITE



62 : METAL/JUNK ALONG CREEK - NE PART OF SITE



64 : OLD METAL REFRIGERATORS / TRASH IN CREEK - NORTH EDGE OF SITE



66 : CREEK - NORTHEAST PART OF SITE

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67 : HOUSING - NORTH OF NE CORNER OF SITE



69 : HOUSING NORTH OF SITE



71 : FUNERAL HOME -NORTH OF SITE, SOUTH OF FM 1488



68 : HOUSING - NORTH OF NE ART OF SITE - LOOK. SOUTH



70 : OFFICE BUILDING NORTH OF SITE, SOUTH OF FM 1488



72 : FUNERAL HOME ALONG FM 1488 - NORTH OF SITE

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73 : FUNERAL HOME -NORTH OF SITE, SOUTH OF FM 1488



75 : CANRIG - DRILLING EQUIPMENT COMPANY -NORTH OF SITE



77 : TYP. BUILDINGS IN CANRIG COMPLEX - NORTH OF SITE



74 : CEMETERY NORTH OF SITE



76 : PARKING LOT FOR CANRIG - NORTH OF SITE



78 : PARKING LOT/BUILDINGS - CANRIG FACILITY, NORTH OF SITE

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Project/Site:	City	of Magnolia 45 ac.		County:	Montgomer	у	Sampling Da	te: Sep	otember 30, 2021
Applicant/Owner:		City of Magr	nolia	Sta	ate:	TX	Sample Poir	nt:	dp 1
Investigator(s):	T. Freiday	and	S. McElyea	Section, Townsh	ip, Range:		M	agnolia	
Landform (hillslope, terrac	e, etc.):			Local relief (cond	cave, convex, r	none):	Flat	Slope (%):	0-5%
Subregion (LRR or MLRA	):	Р		Lat: 30.:	223200 I	Long:	-95.692101	Datum:	WGS 1984
Soil Map Unit Name:			Conroe soils			NWI Cla	ssification:		None
Are climatic / hydrologic c	onditions on	the site typical for this	•		Yes	`	plain in Rema	,	
Are Vegetation No.		No ,or Hydrology		cantly disturbed?			-		X No
Are Vegetation No.	.Soil	,or Hydrology	No natura	ally problematic?	(If	needed, ex	plain any ansv	vers in Ren	narks.)
<b>SUMMARY OF FIN</b>	IDINGS -	Attach site ma	p showing s	ampling poi	nt location	s, transe	ects, impo	rtant fea	atures, etc.
Hydrophytic Vegetation I Hydric Soil Present? Wetland Hydrology Pres		Yes X Yes Yes	No X No X	Is the Sam within a W		Yes	s	No	<u>x</u>
·		be within a wetland d			etland hydrolog	gy.			
HYDROLOGY									
Wetland hydrology	Indicators:					Seconda	ry Indicators (	minimum o	f two required)
		ne is required; check					ırface Soil Cra		
Surface Water			_ Aquatic Fauna	, ,					ve Surface (B8)
High Water Ta			Marl Deposits				ainage Patterr	, ,	
Saturation (A3	•		Hydrogen Sulfi	, ,	D t - (OO)		oss Trim Lines		20)
Water Marks (				spheres on Living	g Roots(C3)		y-Season Wat	,	52)
Sediment Dep				educed Iron (C4)	Soile (CC)		ayfish Burrow		Imagan, (CO)
Drift Deposits Algal Mat or C			Thin Muck Sur	eduction in Tilled (	Solis (Co)				Imagery (C9)
Iron Deposits			Other (Explain	, ,			eomorphic Pos allow Aquitard	, ,	
Inundation Vis		I Imagery (R7)	_ Other (Explain	iii Remarks)			C-Neutral Tes		
Water-Stained		, ,					hagnum moss	. ,	2 T 11)
	200.00 (20)	,						, (20) <b>(2</b>	, • ,
Field Observations:									
Surface Water Present?	Yes	NoX	Depth (inche	s): <b>N/A</b>					
Water Table Present?	Yes	No X	Depth (inche	s): <b>&gt;20</b>					
Saturation Present?	Yes	NoX	_ Depth (inche	s): <b>&gt;20</b>	Wetland Hy	drology Pr	esent? Ye	es	NoX
(includes capillary fringe	)								
Describe Recorded I	)ata (stream	gauge, monitoring we	ell, aerial photos,	previous inspection	ons), if availabl	e:			
Remarks:									
No positive indication	า of wetland l	hydrology was observ	red.						

	Absolute	Dominant	Indicator	Dominance Test worksheet:		
<u>Tree Stratum</u> (Plot size: 30 ft. )	% cover	Species?	Status	Number of Dominant Species		
1. Loblolly Pine (Pinus taeda)	20	Yes	FAC	That Are OBL, FACW, or FAC:	5	(A)
Sweet Gum (Liquidambar styraciflua)	10	Yes	FAC		_	,
3. Southern Red Oak (Quercus falcata)	5	No	FACU	Total Number of Dominant		
4.					7	(B)
5		•			<u> </u>	(=)
6.		•		Percent of Dominant Species		
·	35	= Total Cover		That Are OBL, FACW, or FAC:	71%	(A/B)
50% of total cover		20% of total cover:	7	That Ale OBE, TAOW, OF TAO.	7 1 70	(700)
	. 17.5	20 % Of total cover.		Prevalence Index Worksheet:		
Sapling Stratum (Plot size: 30 ft. )  1. None Observed					Multiply by	
		·		Total % Cover of:  OBL species <b>0</b> x 1	Multiply by:	
2		<del></del>		FACW species 15 x 2		
3		<del></del>		· —	-	
4				· -		
5		· —		FACU species 25 x 4		
6		- <del></del>		UPL species 35 x 5		— <sub>(D)</sub>
		= Total Cover		Column Totals: 130 (A)	470	(B)
		20% of total cover:				
Shrub Stratum (Plot size: 30 ft. )				Prevalence Index = B/A =	3.62	
Yaupon (Ilex vomitoria)	20	Yes	FAC			
2. Water Oak (Quercus nigra)	5	Yes	FAC	Hydrophytic Vegetation Indicators:		
3				1 - Rapid Test for Hydrophytic	Vegetation	
4		<u> </u>		X 2 - Dominance Test is >50%		
5				3 - Prevalence Index is ≤ 3.0 <sup>1</sup>		
6		. <u> </u>		Problematic Hydrophytic Vege	tation <sup>1</sup> (Explain)	
	25	= Total Cover				
50% of total cover	12.5	20% of total cover:	5	<sup>1</sup> Indicators of hydric soil and wetland h	nydrology must	
Herb Stratum (Plot size: 30 ft. )				be present, unless disturbed or problem	natic.	
Windmill Grass (Chloris cucullata)	15	Yes	UPL	Definitions of Five Vegetation Strata	:	
2. Silverleaf Nightshade (Solanum elaeagnifolium)	10	No	UPL	Tree - Woody plants, excluding woody	vines,	
3. Crabgrass (Digitaria sanguinalis)	20	Yes	FACU	approximately 20 ft (6m) or more in heigh	ght and 3 in.	
4. Soft Goldaster (Bradburia pilosa)	10	No	UPL	(7.6 cm) or larger in diameter at breast	height (DBH).	
5. Round-pod St. John's Wort (Hypericum cistifolium)	15	Yes	FACW		- , ,	
6.		· <u></u>	,	Sapling - Woody plants, excluding woo	ody vines,	
7		· -		approximately 20 ft (6 m) or more in he	ight and less	
8.		<u> </u>		than 3 in. (7.6 cm) DBH.		
0	-	·				
9 10.		•		Shrub - Woody plants, excluding wood	y vines,	
11.		•		approximately 3 to 20 ft (1 to 6 m) in he	ight.	
··· <u> </u>	70	= Total Cover				
50% of total acyon		•	1.1	Herb - All herbaceous (non-woody) plan	nts. includina	
50% of total cover	. 33	20% of total cover:	14	herbaceous vines, regardless of size, a		
Woody Vine Stratum (Plot size: 30 ft. )				plants, except woody vines, less than a		
1. None Observed		<del></del>		3 ft (1 m) in height.	pp. oxaro.y	
2		· —		o it (1 iii) iii noight.		
3		· <u> </u>		Woody vine - All woody vines, regardle	acc of boight	
4		· —		Woody ville - All woody villes, regardle	ess of fleight.	
5		. <u>—</u>				
		= Total Cover		Hydrophytic		
50% of total cover		20% of total cover:		Vegetation		
				Present? Yes X No		
Remarks: (if observed, list morphological adapta	tions below	).				
A positive indication of hydrophytic vegetation wa	e ohearvad	(>50% of dominant	eneciae indo	exed as ORL FACW or FAC		
, , positive indication of hydrophytic vegetation wa	C ODSCIVEU	1. 00 % of dominalit	Species inde	AGG GO ODE, I AOVV, OI I AO).		

epth	Matrix			Redox F	eatures						
nches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks			
0-2	7.5 YR 3/3	100	None				Sandy Loam				
2-18	7.5 YR 5/6	90	5 YR 4/6	_10_	C	M	Sandy Loam				
				<u> </u>							
	Concentration, D=Dep					<sup>2</sup> Location: F	PL=Pore Lining, M=Matrix	_			
•	ils Indicators: (Appl	icable to a	•		•	DD 0 T II)	Indicators for Proble	•			
	sol (A1)				Surface (S8) <b>(LI</b>		1 cm Muck (A9) (	·			
Histic Epipedon (A2)  Black Histic (A3)  Thin Dark Surface (S9) (LRR Loamy Mucky Mineral (F1) (LF							2 cm Muck (A10) (LRR S)  Reduced Vertic (F18) (outside MLRA 150A,B				
Black Histic (A3)						U)		, .			
	gen Sulfide (A4)		Gleyed Ma	` ,			lain Soils (F19) (LRR P, S, T				
	ied Layers (A5)	D T 11)		ed Matrix (F	,			t Loamy Soils (F20)			
_ `	nic Bodies (A6) (LRR			Dark Surfa	` '		(MLRA 153B)  Red Parent Material (TF2)  Very Shallow Dark Surface (TF12)  Other (Explain in Remarks)				
	Mucky Mineral (A7) (L				rface (F7)						
	Presence (A8) (LRR			Depression	. ,						
	Muck (A9) (LRR P, T)			10) (LRR I	•						
	ted Below Dark Surfa	ice (A11)		,	F11) (MLRA 15	•	3				
	Dark Surface (A12)		<del></del>	•	Masses (F12) (I	•	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				
	Prairie Redox (A16)	•	· —	•	=13) <b>(LRR P, T</b> ,	U)					
	Mucky Mineral (S1)	(LRR O, S	<del></del>	•	) (MLRA 151)						
	Gleyed Matrix (S4)			,	F18) <b>(MLRA 150</b>						
	Redox (S5)			•	ain Soils (F19) (	•	I9A)				
	ed Matrix (S6)		Anoma	lous Bright	Loamy Soils (F	20) <b>(MLRA 14</b>	9A, 153C, 153D)				
Dark S	Surface (S7) (LRR P,	S, T, U)									
estrictive	Layer (if observed)	):									
Type:											
Depth (i	inches):					Hydri	c Soil Present? Yes	NoX			
							_	<u></u>			

Project/Site:	City	of Magnolia 45 ac.		County:	Montgomery	Sampli	ng Date: Se	ptember 30, 2021
Applicant/Owner:	<u> </u>	City of Magn		-	ate:		e Point:	
Investigator(s):	T. Freiday		S. McElyea	Section, Townsh	-	<u> </u>	Magnolia	
Landform (hillslope, ter				Local relief (cond	cave, convex, no	one): Convex	Slope (%):	0-5%
Subregion (LRR or MLI	RA):	Р	_	Lat:30.2			000 Datum	n: WGS 1984
Soil Map Unit Name:	-	Conroe gravelly loa	my fine sand, 0 t	o 5 percent slope	s	_ NWI Classification	on:	None
Are climatic / hydrologic	conditions on	the site typical for this	time of year?	(Yes / No)	Yes	_(if no, explain in I	Remarks.)	
Are Vegetation	No,Soil	No ,or Hydrology	<b>No</b> signifi	cantly disturbed?	Are "Normal C	Circumstances" pre	sent? Yes	X No
Are Vegetation	No ,Soil	No ,or Hydrology	No natura	ally problematic?	(If n	needed, explain an	y answers in Rei	marks.)
<b>SUMMARY OF F</b>	INDINGS -	Attach site map	showing s	ampling poi	nt locations	, transects, i	mportant fe	atures, etc.
		<u> </u>						
I london o londin Manadadia	D	V	No. V					
Hydrophytic Vegetation Hydric Soil Present?	n Present?	Yes Yes	No X	Is the Sam	nlad Araa			
Wetland Hydrology Pr	esent?	Yes	No X	within a We	-	Yes	No	х
Welland Hydrology Fi	esent:	165	NO X	Within a We	stianu :	163	140	
Remarks:								
Remarks.								
This point was det	ermined not to	be within a wetland dւ	ue to the lack of a	all three wetland c	riteria.			
HYDROLOGY								
Wetland hydrolo						Secondary Indica		of two required)
-	•	ne is required; check a					oil Cracks (B6)	
Surface Wa	, ,		Aquatic Fauna					ave Surface (B8)
High Water	, ,		Marl Deposits	, , , ,			Patterns (B10)	
Saturation (	,		Hydrogen Sulfi	, ,			Lines (B16)	
Water Mark			•	spheres on Living	g Roots(C3)		n Water Table (	C2)
	eposits (B2)		•	educed Iron (C4)			urrows (C8)	
Drift Deposi			•	eduction in Tilled S	Soils (C6)	Saturation	Visible on Aeria	I Imagery (C9)
Algal Mat or	, ,		Thin Muck Sur	, ,		Geomorph	ic Position (D2)	
Iron Deposi			Other (Explain	in Remarks)		Shallow Ad	quitard (D3)	
	/isible on Aeria	, ,				FAC-Neutr	ral Test (D5)	
Water-Stair	ed Leaves (B9	)				Sphagnum	n moss (D8) <b>(LR</b> I	R T, U)
Field Observations:								
Surface Water Preser		No <u>X</u>	Depth (inche	· —				
Water Table Present?		NoX	Depth (inche					
Saturation Present?		NoX	Depth (inche	es): <b>&gt;20</b>	Wetland Hyd	drology Present?	Yes	No <u>X</u>
(includes capillary frin	<i>,</i>							
Describe Recorde	d Data (stream	gauge, monitoring we	ll, aerial photos,	previous inspection	ons), if available:	:		
Remarks:								
No positive indica	ion of wetland I	hydrology was observe	ed.					

US Army Corps of Engineers

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Sampling Point: dp 2
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	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: 30 ft. )	% cover	Species?	Status	Number of Dominant Species	
Water Oak (Quercus nigra)	30	Yes	FAC	That Are OBL, FACW, or FAC:3 (A	4)
Loblolly Pine (Pinus taeda)	30	Yes	FAC		,
3. Sweet Gum (Liquidambar styraciflua)	15	No	FAC	Total Number of Dominant	
4. Chinese Tallow (Triadica sebifera)	5	No	FAC	Species Across All Strata: 7 (B	3)
5.				(2	.,
6.				Percent of Dominant Species	
<u> </u>	80	= Total Cover		·	VB)
50% of total cover		20% of total cover:	16		,
Sapling Stratum (Plot size: 30 ft. )				Prevalence Index Worksheet:	
1. None Observed				Total % Cover of: Multiply by:	
2.				OBL species <b>0</b> x 1 = <b>0</b>	_
3.				FACW species <b>0</b> x 2 = <b>0</b>	_
4.				FAC species 145 x 3 = 435	_
5				FACU species 30 x 4 = 120	_
6.				UPL species <b>0</b> x 5 = <b>0</b>	_
·		= Total Cover		Column Totals: 175 (A) 555	(B)
50% of total cover		20% of total cover:			_ (_)
Shrub Stratum (Plot size: 30 ft. )		2070 01 total 00701.		Prevalence Index = B/A = 3.17	
1. Yaupon (Ilex vomitoria)	60	Yes	FAC		_
American Beautyberry (Callicarpa americana)	15	Yes	FACU	Hydrophytic Vegetation Indicators:	
3				1 - Rapid Test for Hydrophytic Vegetation	
4				2 - Dominance Test is >50%	
5				$3 - \text{Prevalence Index is} \le 3.0^1$	
6		<del></del>		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
·- <u></u>	75	= Total Cover		(	
50% of total cover		20% of total cover:	15	<sup>1</sup> Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size: 30 ft. )		2070 01 10101 00701.		be present, unless disturbed or problematic.	
Southern Dewberry (Rubus trivialis)	5	Yes	FACU	Definitions of Five Vegetation Strata:	
Japanese Honeysuckle (Lonicera japonica)	5	Yes	FACU	Tree - Woody plants, excluding woody vines,	
Slender Wood Oats (Chasmanthium sessilific	5	Yes	FACU	approximately 20 ft (6m) or more in height and 3 in.	
4				(7.6 cm) or larger in diameter at breast height (DBH).	
5				(7.0 only of larger in diameter at broadt height (5511).	
6				Sapling - Woody plants, excluding woody vines,	
_				approximately 20 ft (6 m) or more in height and less	
7 8				than 3 in. (7.6 cm) DBH.	
9					
10.				Shrub - Woody plants, excluding woody vines,	
11.				approximately 3 to 20 ft (1 to 6 m) in height.	
··· <u> </u>	15	= Total Cover			
50% of total cover		20% of total cover:	3	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size: 30 ft. )		20% of total cover.		herbaceous vines, regardless of size, and woody	
Round-leaf Greenbriar (Smilax rotundifolia)	5	Yes	FAC	plants, except woody vines, less than approximately	
2		103	1710	3 ft (1 m) in height.	
3					
4.				Woody vine - All woody vines, regardless of height.	
5					
o	5	= Total Cover		Hydrophytic	
50% of total cover	-	20% of total cover:	1	Vegetation	
00% of total 0000		2070 01 10101 00701.	<u> </u>	Present? Yes No X	
				100 N	
Remarks: (if observed, list morphological adapta	tions helow	)		I.	
		,			
No positive indication of hydrophytic vegetation w	as observe	d (≥50% of dominan	t species inde	exed as FAC- or drier).	

Depth	Matrix			Redox F	eatures	-					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks			
0-6	7.5 YR 4/4	100	None				Sandy Loam				
6-18	7.5 YR 6/4	95	7.5 YR 5/6	5	C	M	Sandy Loam				
	Concentration, D=Dep					<sup>2</sup> Location: F	L=Pore Lining, M=Matrix	_			
•	ls Indicators: (Appl	icable to a	•		•		Indicators for Proble				
	ol (A1)				Surface (S8) <b>(L</b>	· · · · ·	1 cm Muck (A9)				
Histic Epipedon (A2) Thin Dark Surface (S9) (					. , .		2 cm Muck (A10) <b>(LRR S)</b>				
<u> </u>					neral (F1) <b>(LRR</b>						
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2)							<del></del>	plain Soils (F19) <b>(LRR P, S, T</b>			
Stratified Layers (A5) Depleted Matrix				,	,			nt Loamy Soils (F20)			
	ic Bodies (A6) (LRR			Dark Surfa	,		(MLRA 153B)				
	Mucky Mineral (A7) <b>(L</b>				ırface (F7)		Red Parent Mate	` '			
	Presence (A8) (LRR	•		Depression	,		<del></del> ·	rk Surface (TF12)			
	Muck (A9) (LRR P, T)			10) <b>(LRR I</b>	•		Other (Explain in Remarks)				
	ted Below Dark Surfa	ce (A11)		,	F11) <b>(MLRA 1</b> 5	•	3				
	Dark Surface (A12)			•	Masses (F12) (	Annanana and Annanananananananananananananananananan					
	Prairie Redox (A16)	•	· —	•	=13) <b>(LRR P, T</b>	U)	wetland hydrology must be present, unless disturbed or problematic.				
	Mucky Mineral (S1)	(LRR O, S			) (MLRA 151)		amoss aistars	ou or problemation			
Sandy	Gleyed Matrix (S4)			,	F18) <b>(MLRA 15</b>						
	Redox (S5)		Piedmo	nt Floodpl	ain Soils (F19)	(MLRA 149A)					
	ed Matrix (S6)		Anoma	lous Bright	t Loamy Soils (F	<sup>(20)</sup> (MLRA 14	9A, 153C, 153D)				
Dark S	Surface (S7) (LRR P,	S, T, U)									
Restrictive	Layer (if observed)	:									
Type:											
Depth (i	nches):					Hydri	Hydric Soil Present? Yes No X				

Project/Site:	City	of Magnolia 45	ac.	Cour	nty:	Montgomer	у			ptember 30, 2021
Applicant/Owner:			Magnolia		Stat		TX		oint:	dp 3
Investigator(s):	T. Freiday		S. McElyea		tion, Townshi <sub>l</sub>	·			Magnolia	
Landform (hillslope, terr	·		Islope	Loca	•	ave, convex, r			Slope (%):	
Subregion (LRR or MLR	(A):		Р		Lat: 30.2	22900 I	Long:	-95.696297		
Soil Map Unit Name:			Conroe se					lassification:		None
Are climatic / hydrologic			•	•	es / No)			explain in Rer	•	
			ology No							
Are Vegetation	<b>NO</b> ,Soil	No ,or Hydro	ology <b>No</b>	naturally p	roblematic?	(If	needed, e	explain any ai	nswers in Rer	narks.)
SUMMARY OF F	INDINGS -	<ul> <li>Attach site</li> </ul>	map showir	ng sam <sub>l</sub>	pling poin	t location	s, trans	sects, imp	ortant fe	atures, etc.
				1						
Hydrophytic Vegetation	n Present?	Yes X	No							
Hydric Soil Present?	i r ieseiit!	Yes	No No X		Is the Samp	lad Araa				
Wetland Hydrology Pre	asant?	Yes	NoX		within a We		V	es	No	х
Welland Hydrology Fre	,501it:	103	_ 10 _ X	_	within a vic	tiuliu i				
Remarks:				I						
This point was dete				,						
Wetland hydrolog	y Indicators:						Second	dary Indicator	s (minimum o	of two required)
Primary Indicators	(minimum of a	one is required; o	check all that apply	y)				Surface Soil C		
Surface Wat	er (A1)		Aquatic F	auna (B13	3)		{	Sparsely Veg	etated Conca	ve Surface (B8)
High Water	Table (A2)		Marl Dep	osits (B15)	) (LRR U)		[	Orainage Patt	erns (B10)	
Saturation (A	43)		Hydroger	n Sulfide O	dor (C1)		^	Moss Trim Lin	nes (B16)	
Water Marks	s (B1)		Oxidized	Rhizosphe	eres on Living	Roots(C3)	[	Ory-Season V	Vater Table (0	32)
Sediment De	eposits (B2)		Presence	of Reduc	ed Iron (C4)		(	Crayfish Burro	ows (C8)	
Drift Deposit	s (B3)		Recent Ir	on Reduct	ion in Tilled S	oils (C6)	8	Saturation Vis	sible on Aerial	I Imagery (C9)
Algal Mat or	Crust (B4)		Thin Muc	k Surface	(C7)		(	Geomorphic F	Position (D2)	
Iron Deposit	s (B5)		Other (Ex	kplain in Re	emarks)		\$	Shallow Aquit	ard (D3)	
Inundation V	isible on Aeria	al Imagery (B7)					F	AC-Neutral	Γest (D5)	
Water-Stain	ed Leaves (B9	9)					\$	Sphagnum mo	oss (D8) <b>(LRF</b>	₹ T, U)
						1				
Field Observations:										
Surface Water Present		No		(inches): _	N/A					
Water Table Present?	-	No		(inches): _	>20					
Saturation Present?		No	X Depth (	(inches): _	>20	Wetland Hy	/drology	Present?	Yes	NoX
(includes capillary fring Describe Recorded	,	n gauge, monitori	ing well, aerial ph	otos, previ	ious inspection	lns), if availabl	e:			
Remarks:										
No positive indicati	on of wetland	hydrology was o	bserved.							

Sampling Point: dp 3

		Absolute	Dominant	Indicator	Dominance Test worksheet:		
Tree Stratum (Plot size:	80 ft. )	% cover	Species?	Status	Number of Dominant Species		
Loblolly Pine (Pinus taeda)		70	Yes	FAC	That Are OBL, FACW, or FAC:	3	(A)
2. Sweet Gum (Liquidambar styrad	riflua)	15	No	FAC			
3.	,		·		Total Number of Dominant		
4.					Species Across All Strata:	3	(B)
5.			<del></del>		· ·		. ( )
			<del></del>		Percent of Dominant Species		
6	<del></del>	95	= Total Cover		· ·	1000/	(A/D)
_	00/ 11 1		•	47	That Are OBL, FACW, or FAC:	100%	(A/B)
		42.5	20% of total cover:	1/	Prevalence Index Worksheet:		
Sapling Stratum (Plot size:	<u>80 ft.</u> )						
1. None Observed					Total % Cover of:	Multiply by	<u>/:</u>
2					OBL species 0	x 1 =0	
3					FACW species 0	x 2 = <b>0</b>	
4			·		FAC species 110	x 3 = <b>330</b>	
5					FACU species 0	x 4 = 0	
6.					UPL species 0	x 5 = <b>0</b>	
			= Total Cover		Column Totals: 110	(A) <b>330</b>	(B)
5	0% of total cover	-	20% of total cover:			,	( ' '
	30 ft. )				Prevalence Index = B/A	= 3.00	
1. Yaupon (Ilex vomitoria)	/	20	Voc	FAC	. Tovalence muck – B/A		
		5	Yes		Hydronbytic Vacatation Indicat		
Loblolly Pine (Pinus taeda)		5	Yes	FAC	Hydrophytic Vegetation Indicat		
3			· <u> </u>		1 - Rapid Test for Hydro	-	
4					X 2 - Dominance Test is >		
5					X 3 - Prevalence Index is		
6					Problematic Hydrophytic	Vegetation <sup>1</sup> (Explain	1)
		25	= Total Cover				
5	0% of total cover:	12.5	20% of total cover:	5	<sup>1</sup> Indicators of hydric soil and wet	land hydrology must	
Herb Stratum (Plot size: 3	30 ft. )				be present, unless disturbed or pr	oblematic.	
1. Zarzaparilla (Smilax bona-nox)		10	Yes	#N/A	Definitions of Five Vegetation S	Strata:	
2.					Tree - Woody plants, excluding v		
					* '	-	
3			<del></del>		approximately 20 ft (6m) or more	· ·	
4			·		(7.6 cm) or larger in diameter at b	reast neight (DBH).	
5			<del></del>		Continue Manda allegate avaluation		
6					Sapling - Woody plants, excluding		
7			<u> </u>		approximately 20 ft (6 m) or more	in height and less	
8					than 3 in. (7.6 cm) DBH.		
9							
10.					Shrub - Woody plants, excluding	woody vines,	
11.					approximately 3 to 20 ft (1 to 6 m	in height.	
	<del></del>	10	= Total Cover				
5	0% of total cover:		20% of total cover:	2	Herb - All herbaceous (non-wood	v) plants, including	
			20 % Of total cover.		herbaceous vines, regardless of	,,,,	
Woody Vine Stratum (Plot size:	<u> 30 II.</u> )				plants, except woody vines, less		
1. None Observed			· <u> </u>		3 ft (1 m) in height.	пан арргохинатогу	
2			<del></del>		3 it (1 iii) iii neight.		
3							
4					Woody vine - All woody vines, re	gardless of height.	
5			<u> </u>				
			= Total Cover		Hydrophytic		
5	0% of total cover:		20% of total cover:		Vegetation		
			•		Present? Yes X	No	
Pomerke: (if observed list marr	halagiaal adaptati	iono holow	١				
Remarks: (if observed, list morp	mological adaptati	ions below	).				
A positive indication of hydrophy	tic vegetation was	observed	(>50% of dominant	species inde	xed as OBL, FACW, or FAC).		
A positive indication of hydrophy	tic vegetation was	observed	(Prevalence Index is	s ≤ 3.00).			
,	J		,	/-			

SOIL

Sampling Point: dp 3

Depth	Matrix		-	Redox F	eatures					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks		
0-1	7.5 YR 4/3	100	None				Sandy Clay Loam			
1-18	7.5 YR 4/4	70					Sandy Clay Loam	Dual Matrix		
	7.5 YR 5/8	25	7.5 YR 7/3	5	C	<u>M</u>	Sandy Clay Loam			
Type: C=C	Concentration, D=De	oletion RM	=Reduced Matrix M	—— IS=Masker	d Sand Grains	<sup>2</sup> Location: F	PL=Pore Lining, M=N	Matrix		
	Is Indicators: (App					Location. 1		roblematic Hydric Soils <sup>3</sup> :		
•	ol (A1)		· ·		Surface (S8) <b>(L</b>	RRS T III		(A9) (LRR O)		
	Epipedon (A2)				e (S9) <b>(LRR S</b> ,			(A10) (LRR S)		
<u> </u>					neral (F1) <b>(LRR</b>	<u> </u>				
	gen Sulfide (A4)			Gleyed Ma	· , •	0,		oodplain Soils (F19) (LRR P, S, T		
	ed Layers (A5)		ed Matrix (F				Bright Loamy Soils (F20)			
	, , ,		Dark Surfa	,		(MLRA 153	0 , ( ,			
	Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T, U)				rface (F7)		Red Parent Material (TF2)			
	Presence (A8) <b>(LRR</b>		· — ·	Depression	. ,		Very Shallow Dark Surface (TF12) Other (Explain in Remarks)			
	Muck (A9) (LRR P, T	•		10) <b>(LRR I</b>	, ,					
	ed Below Dark Surfa			, •	-, F11) <b>(MLRA 15</b>	1)				
	Dark Surface (A12)	(, , , ,		,	Masses (F12) (	•	<sup>3</sup> Indicator	s of hydrophytic vegetation and		
	Prairie Redox (A16)	(MLRA 15			13) <b>(LRR P, T</b> ,		wetland hydrology must be present,			
	Mucky Mineral (S1)	•	<del></del>	,	) (MLRA 151)	-,	unless dis	sturbed or problematic.		
	Gleyed Matrix (S4)	,, •,		•	7 ( <u>-</u> 18) <b>(MLRA 15</b>	)A, 150B)				
	Redox (S5)			,	ain Soils (F19)					
	ed Matrix (S6)			•	,	•	9A, 153C, 153D)			
	Surface (S7) <b>(LRR P</b> ,	S, T, U)		3	, (	, •				
	, , , ,									
Restrictive	Layer (if observed)	):								
Type:										
Depth (i	nches):					Hydri	c Soil Present? Y	es No X		
. ,										

Project/Site:	City	of Magnolia 45 ac.		County:	Montgomery	Sampli	ng Date: Se	ptember 30, 2021
Applicant/Owner:		City of Magr	nolia		ate:		le Point:	
Investigator(s):	T. Freiday		S. McElyea	Section, Townsh	-		Magnolia	
Landform (hillslope, ter	ace, etc.):			Local relief (cond	cave, convex, no	one): Convex	Slope (%):	0-5%
Subregion (LRR or MLI	₹A):	Р		Lat:30.2		· · · · · · · · · · · · · · · · · · ·	5297 Datum	n: WGS 1984
Soil Map Unit Name:		Conroe gravelly loa				_ NWI Classification	on:	None
Are climatic / hydrologic	conditions on	the site typical for this	time of year?	(Yes / No)	Yes	_(if no, explain in	Remarks.)	
Are Vegetation	No,Soil	,or Hydrology		-		· · · · · · · · · · · · · · · · · · ·		
Are Vegetation	No,Soil	,or Hydrology	<b>No</b> natura	ally problematic?	(If n	needed, explain an	y answers in Re	marks.)
<b>SUMMARY OF F</b>	INDINGS -	Attach site maj	showing s	ampling poir	nt locations	s, transects, i	mportant fe	atures, etc.
							<u> </u>	
I london o londin Nome de di		V <b>V</b>	NI-					
Hydrophytic Vegetation Hydric Soil Present?	n Present?	Yes X Yes	No X	Is the Sam	nlad Araa			
Wetland Hydrology Pr	esent?	Yes	No X	within a We	-	Yes	No	х
Welland Hydrology Fr	556111!	165	NO X	within a we	stialiu :	163		
Remarks:								
Remarks.								
This point was det	ermined not to	be within a wetland d	ue to the lack of l	nydric soils and we	etland hydrology	<i>1</i> .		
HYDROLOGY								
Wetland hydrolo						Secondary Indica		of two required)
-	•	ne is required; check					oil Cracks (B6)	
Surface Wa	` ,		Aquatic Fauna				egetated Conca	ve Surface (B8)
High Water	, ,		-	(B15) <b>(LRR U)</b>			Patterns (B10)	
Saturation (	•		_ Hydrogen Sulf	, ,			Lines (B16)	
Water Mark			_	ospheres on Living	ر Roots(C3)		on Water Table (	C2)
Sediment D	. , ,		_	educed Iron (C4)			Surrows (C8)	
Drift Deposi			_	eduction in Tilled S	Soils (C6)	Saturation	Visible on Aeria	I Imagery (C9)
Algal Mat or			_ Thin Muck Sur	, ,		Geomorph	nic Position (D2)	
Iron Deposi			Other (Explain	in Remarks)			quitard (D3)	
		Il Imagery (B7)					ral Test (D5)	
Water-Stair	ed Leaves (B9	))				Sphagnun	n moss (D8) <b>(LR</b>	R T, U)
					_			
Field Observations:								
Surface Water Preser		No <u>X</u>	Depth (inche	· <del></del>				
Water Table Present?		No X	Depth (inche	· ——				
Saturation Present? (includes capillary fring		NoX	_ Depth (inche	es): <u>&gt;20</u>	Wetland Hyd	drology Present?	Yes	NoX
` '	,							
Describe Recorde	d Data (stream	gauge, monitoring we	ell, aerial photos,	previous inspection	ons), if available:	:		
Remarks:								
No positivo indicat	ion of watland	hudralagu waa ahaan	ad					
No positive indical	ion or welland	hydrology was observ	eu.					

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: 30 ft. )	% cover	Species?	Status	Number of Dominant Species	
1. Water Oak (Quercus nigra)	50	Yes	FAC	That Are OBL, FACW, or FAC: 4	A)
2. Sweet Gum (Liquidambar styraciflua)	30	Yes	FAC		
3.	,	·	<u> </u>	Total Number of Dominant	
4.	, <u> </u>	·	<u> </u>	Species Across All Strata: 4 (I	B)
5.					Ť
6.		<u></u> -		Percent of Dominant Species	
	80	= Total Cover		·	A/B)
50% of total cover		20% of total cover:	16	(	,
Sapling Stratum (Plot size: 30 ft. )		2070 01 10101 001011		Prevalence Index Worksheet:	
1. None Observed				Total % Cover of: Multiply by:	
2.		·	,	OBL species <b>0</b> x 1 = <b>0</b>	_
3.	-			FACW species <b>0</b> x 2 = <b>0</b>	
	-	<del></del>		FAC species 165 x 3 = 495	
4 5	-	<del></del>		FACU species 5 x 4 = 20	
				UPL species <b>0</b> x 5 = <b>0</b>	_
6		= Total Cover		Column Totals: 170 (A) 515	(B)
FOO/ of total cover				Column Totals. 170 (A) 313	(b)
	•	20% of total cover:		Prevalence Index = B/A = 3.03	
Shrub Stratum (Plot size: 30 ft. )	75	Vc -	FAC	Prevalence Index = B/A = 3.03	_
1. Yaupon (Ilex vomitoria)	<u>75</u>	Yes	FAC	Hudronbusia Vanatatian Indicators	
American Beautyberry (Callicarpa americana,	5	<u>No</u>	FACU	Hydrophytic Vegetation Indicators:	
3		<del></del>		1 - Rapid Test for Hydrophytic Vegetation	
4				X 2 - Dominance Test is >50%	
5				3 - Prevalence Index is ≤ 3.0 <sup>1</sup>	
6				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
		= Total Cover		1	
50% of total cover	: 40	20% of total cover:	16	<sup>1</sup> Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size: 30 ft. )				be present, unless disturbed or problematic.	
Slender Wood Oats (Chasmanthium sessilifle	10	Yes	FAC	Definitions of Five Vegetation Strata:	
2				Tree - Woody plants, excluding woody vines,	
3	-			approximately 20 ft (6m) or more in height and 3 in.	
4				(7.6 cm) or larger in diameter at breast height (DBH).	
5		·			
6				Sapling - Woody plants, excluding woody vines,	
7				approximately 20 ft (6 m) or more in height and less	
8				than 3 in. (7.6 cm) DBH.	
9					
10				Shrub - Woody plants, excluding woody vines,	
11				approximately 3 to 20 ft (1 to 6 m) in height.	
	10	= Total Cover			
50% of total cover	: 5	20% of total cover:	2	Herb - All herbaceous (non-woody) plants, including	
Woody Vine Stratum (Plot size: 30 ft. )				herbaceous vines, regardless of size, and woody	
1. None Observed				plants, except woody vines, less than approximately	
2		·		3 ft (1 m) in height.	
3		·			
4		·		Woody vine - All woody vines, regardless of height.	
5					
		= Total Cover		Hydrophytic	
50% of total cover	:	20% of total cover:		Vegetation	
			<u> </u>	Present? Yes X No	
Remarks: (if observed, list morphological adapta	tions below	).			
A positive indication of hydrophytic vegetation we	المدرسممام م	(>EOO/ of dominant	anasias indav	ved as OPI FACIN or FAC)	
A positive indication of hydrophytic vegetation wa	s observed	(>50% of dominant	species index	xed as OBL, FACW, or FAC).	

SOIL

Sampling Point: dp 4

Depth	Matrix			Redox F	eatures					
inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks		
0-12	7.5 YR 4/4	100	None				Sandy Loam			
12-18	7.5 YR 4/4	40					Silt Loam	Dual matrix		
	7.5 YR 5/6	60					Silt Loam			
				<u> </u>						
		<u> </u>		<u> </u>		21				
	Concentration, D=Dep  Is Indicators: (Appli					Location: P	L=Pore Lining, M=I	viatrix. Problematic Hydric Soils <sup>3</sup> :		
Histos		Cabic IU d	•		Surface (S8) <b>(L</b>	RRS T III		(A9) (LRR O)		
	Epipedon (A2)				e (S9) <b>(LRR S</b> ,			` , ` ,		
Black Histic (A3)  Black Histic (A3)  Loamy Mucky Mineral (F1)				. , .		2 cm Muck (A10) (LRR S)  Reduced Vertic (F18) (outside MLRA 19				
Hydrogen Sulfide (A4)  Loamy Gleyed Matrix (F2)				` , .	<b>-</b> ,	Piedmont Floodplain Soils (F19) (LRR P				
	Stratified Layers (A5)  Depleted Matrix (F3)					Anomalous Bright Loamy Soils (F20)				
	Organic Bodies (A6) (LRR P, T, U)  Redox Dark Surface (F6)					(MLRA 153B)				
<u> </u>				ed Dark Su	` '		Red Parent Material (TF2)			
	Muck Presence (A8) (LRR U)  Redox Depressions (F8)				` '		Very Shallow Dark Surface (TF12)			
1 cm N	/luck (A9) (LRR P, T)	-	Marl (F	10) <b>(LRR (</b>	J) Ó		Other (Expl	ain in Remarks)		
Deplet	ed Below Dark Surfac	ce (A11)			F11) <b>(MLRA 1</b>	51)		·		
Thick I	Dark Surface (A12)	, ,	Iron-Ma	anganese N	Masses (F12)	LRR O, P, T)	<sup>3</sup> Indicato	rs of hydrophytic vegetation and		
Coast	Prairie Redox (A16) (	A) Umbric	Surface (F	13) <b>(LRR P, T</b>	, U)	wetland hydrology must be present,				
Sandy	Mucky Mineral (S1) (	LRR O, S)	Delta C	chric (F17	) (MLRA 151)		unless di	sturbed or problematic.		
Sandy	Gleyed Matrix (S4)		Reduce	ed Vertic (F	18) <b>(MLRA 15</b>	0A, 150B)				
Sandy	Redox (S5)		Piedmo	nt Floodpla	ain Soils (F19)	(MLRA 149A)				
Strippe	ed Matrix (S6)		Anoma	lous Bright	Loamy Soils (I	20) <b>(MLRA 14</b> 9	9A, 153C, 153D)			
Dark S	Surface (S7) (LRR P,	S, T, U)								
Restrictive	Layer (if observed):	:								
Type:										
Depth (ii	nches):					Hydric	Soil Present? Y	'es NoX		
Remarks:										

Project/Site:	City	of Magnolia 45 ac.		County:	Montgomery	Sampl	ing Date: Se	eptember 30, 2021
Applicant/Owner:	<u> </u>	City of Magn	nlia	Sta			ole Point:	
Investigator(s):	T. Freiday	·	S. McElyea	Section, Townshi		·	Magnolia	
Landform (hillslope, ter	-		•	Local relief (cond		one): Convex	Slope (%):	: 0-5%
Subregion (LRR or MLF				Lat: 30.2			8700 Datum	
Soil Map Unit Name:	,		andy loam, 0 to	2 percent slopes		NWI Classificati	ion:	None
Are climatic / hydrologic	conditions on	the site typical for this	time of year?	(Yes / No)	Yes	_ _(if no, explain in	Remarks.)	
		No ,or Hydrology					esent? Yes	X No
Are Vegetation	No ,Soil	,or Hydrology	<b>No</b> natur	ally problematic?	(If r	needed, explain ar	ny answers in Re	marks.)
SUMMARY OF F	INDINGS -	Attach site mai	showing s	ampling poir	nt locations	transacts i	important fe	atures etc
OOMMAK! OI I	IIIIIIIII -	Attach Site ma	J Showing S	sampling pon	it locations	s, transcots, i	inportant re	atures, etc.
Hydrophytic Vegetation	n Present?	Yes X	No					
Hydric Soil Present?		Yes	No <u>X</u>	Is the Samp	oled Area			
Wetland Hydrology Pr	esent?	Yes	No <u>X</u>	within a We	∍tland?	Yes	No	X
·	ermined not to	be within a wetland d	ue to the lack of	hydric soils and we	∍tland hydrology	ı.		
HYDROLOGY Wetland hydrolog	av Indicators:							
		no io roguirod, obook	all that apply)				ators (minimum o	of two required)
Surface Wa		ne is required; check	Aquatic Fauna	(R13)			Soil Cracks (B6)	ave Surface (B8)
High Water	` ,			(B15) <b>(LRR U)</b>			Patterns (B10)	ive Surface (DO)
Saturation (	, ,		-	fide Odor (C1)			n Lines (B16)	
Water Mark	,	-		ospheres on Living	r Roots(C3)		on Water Table (	(C2)
	eposits (B2)	<u> </u>	_	Reduced Iron (C4)	, 110013(00)		Burrows (C8)	(02)
Drift Deposi		-	_	eduction in Tilled S	Soils (C6)		n Visible on Aeria	al Imagery (C9)
Algal Mat or		-	Thin Muck Su		20110 (00)		hic Position (D2)	
Iron Deposi			Other (Explain	, ,			quitard (D3)	
	/isible on Aerial	I Imagery (B7)	_ Outor (Explain	r iii r torriarito)			tral Test (D5)	
	ned Leaves (B9)						m moss (D8) <b>(LR</b>	R T. U)
	(,	'					(= <b>-</b> ) <b>(</b> =:-	, .,
Field Observations:								
Surface Water Preser	nt? Yes	NoX	Depth (inch	es): <b>N/A</b>				
Water Table Present?	Yes	NoX	Depth (inche	es): <b>&gt;20</b>				
Saturation Present?		NoX	Depth (inch	es): <b>&gt;20</b>	Wetland Hyd	drology Present?	Yes	NoX
(includes capillary frin	је)							
Describe Recorde	d Data (stream	gauge, monitoring we	ell, aerial photos,	previous inspection	ns), if available	:		
Remarks:								
No positivo indicat	tion of watland l	hydrology was observ	ad					
No positive indicat	ion or wetland i	lydrology was observ	eu.					

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: 30 ft)	% cover	Species?	Status	Number of Dominant Species	
Water Oak (Quercus nigra)	30	Yes	FAC	That Are OBL, FACW, or FAC: 5 (	(A)
2. Loblolly Pine (Pinus taeda)	30	Yes	FAC		
3. Sweet Gum (Liquidambar styraciflua)	15	No	FAC	Total Number of Dominant	
4. Chinese Tallow (Triadica sebifera)	5	No	FAC	Species Across All Strata: 8 (	(B)
5	-				
6	-	. <u>———</u>		Percent of Dominant Species	
	80	= Total Cover		That Are OBL, FACW, or FAC: 63% (	A/B)
50% of total cover:	40	20% of total cover:	16		
Sapling Stratum (Plot size: 30 ft. )				Prevalence Index Worksheet:	
1. None Observed		. <u> </u>		Total % Cover of: Multiply by:	_
2				OBL species <b>0</b> x 1 = <b>0</b>	
3				FACW species <b>0</b>	
4				FAC species 150 x 3 = 450	
5				FACU species 25 x 4 = 100	
6				UPL species <b>0</b> x 5 = <b>0</b>	
		= Total Cover		Column Totals:(A)550	(B)
50% of total cover:		20% of total cover:			
Shrub Stratum (Plot size: 30 ft. )				Prevalence Index = B/A = 3.14	
1. Ilex vomitoria	60	Yes	FAC		
Callicarpa americana	15	Yes	FACU	Hydrophytic Vegetation Indicators:	
3				1 - Rapid Test for Hydrophytic Vegetation	
4		<u> </u>		X 2 - Dominance Test is >50%	
5				3 - Prevalence Index is ≤ 3.0 <sup>1</sup>	
6		<u> </u>		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
		= Total Cover			
50% of total cover:	37.5	20% of total cover:	15	<sup>1</sup> Indicators of hydric soil and wetland hydrology must	
Herb Stratum (Plot size: 30 ft. )				be present, unless disturbed or problematic.	
Southern Dewberry (Rubus trivialis)	5		FACU	Definitions of Five Vegetation Strata:	
Japanese Honeysuckle (Lonicera japonica)	5		FACU	Tree - Woody plants, excluding woody vines,	
3. Slender Wood Oats (Chasmanthium sessiliflorum)	5	Yes	FAC	approximately 20 ft (6m) or more in height and 3 in.	
4		· —		(7.6 cm) or larger in diameter at breast height (DBH).	
5				Carling Mandage and dispersions	
6		· ———		Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less	
7		· ———		than 3 in. (7.6 cm) DBH.	
8		· ———		than 3 in. (7.0 diri) DBH.	
9		· <u> </u>		Shrub - Woody plants, excluding woody vines,	
10		· <u> </u>		approximately 3 to 20 ft (1 to 6 m) in height.	
11		· _ <del></del>		approximately 3 to 20 ft (1 to 0 fff) in height.	
	15	= Total Cover	•	Herb - All herbaceous (non-woody) plants, including	
50% of total cover:	7.5	20% of total cover:	3	herbaceous vines, regardless of size, and woody	
Woody Vine Stratum (Plot size: 30 ft. )	_	.,	<b>540</b>	plants, except woody vines, less than approximately	
Round-leaved Greenbriar (Smilax rotundifolia)	5	<u>Yes</u>	FAC	3 ft (1 m) in height.	
2		· —		o it (1 iii) iii height.	
3		· —		Woody vine - All woody vines, regardless of height.	
4		· —		Woody vine - All woody vines, regardless of neight.	
5		- Tatal Causa		Hudronbudia	
FOW of total covers	5	= Total Cover	1	Hydrophytic	
50% of total cover:	2.5	20% of total cover:	1	Vegetation	
				Present? Yes <u>X</u> No	
Remarks: (if observed, list morphological adaptat	ione below	١			
		,			
A positive indication of hydrophytic vegetation was	s observed	(>50% of dominant	species index	xed as OBL, FACW, or FAC).	

Depth	Matrix			Redox F	eatures				
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0-6	7.5 YR 4/4	100	None				Sandy Loam		
6-18	7.5 YR 6/4	95	7.5 YR 5/6	5	<u> </u>	<u>M</u>	Sandy Loam		
1 0		<u></u>		<u></u>		21			
	Concentration, D=Dep					Location: P	L=Pore Lining, M=Matrix	_	
-	s Indicators: (Appl	icable to a	-		•	DD C T III		ematic Hydric Soils <sup>3</sup> :	
Histos	Epipedon (A2)				Surface (S8) <b>(L</b> e (S9) <b>(LRR S</b> ,		1 cm Muck (A9)	•	
	,				. , .		2 cm Muck (A10)	•	
Black Histic (A3) Loamy Mucky Mineral (F1) (LRR 0)					0)	Reduced Vertic (F18) (outside MLRA 150A,B) Piedmont Floodplain Soils (F19) (LRR P, S, T)			
Hydrogen Sulfide (A4)  Stratified Levers (A5)  Depleted Matrix (F2)							, , ,		
Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U)  Bredox Dark Surface (F6)					Anomalous Bright Loamy Soils (F20) (MLRA 153B)				
Organic Bodies (A6) (LRR P, T, U)  5 cm Mucky Mineral (A7) (LRR P, T, U)					, ,		(MLRA 153B)		
	, , , ,		· — '	ed Dark Su	` ,		Red Parent Mate	` '	
	Presence (A8) (LRR	•		Depression	. ,		<del></del> ·	rk Surface (TF12)	
	Muck (A9) (LRR P, T)			10) <b>(LRR (</b>		.41	Other (Explain in	Remarks)	
	ed Below Dark Surfa	ce (A11)		,	F11) (MLRA 15	•	31		
	Dark Surface (A12)			•	Masses (F12) <b>(</b>			nydrophytic vegetation and logy must be present,	
	Prairie Redox (A16)	•	· —	,	13) <b>(LRR P, T</b>	U)	unless disturbed or problematic.		
	Mucky Mineral (S1)	(LRR O, S		,	) (MLRA 151)			•	
	Gleyed Matrix (S4)			,	18) <b>(MLRA 15</b>	•			
	Redox (S5)				ain Soils (F19)				
	ed Matrix (S6)		Anoma	ious Bright	Loamy Soils (F	·20) (MLRA 14	9A, 153C, 153D)		
Dark S	Surface (S7) <b>(LRR P,</b>	5, I, U)							
Restrictive	Layer (if observed)	:							
Туре:									
Depth (inches):					Hydric Soil Present? Yes No X				

Project/Site:	City	of Magnolia 45 ac.		County:	Montgomery	, Sam	pling Date:	September 30, 2021
Applicant/Owner:		City of Mag	nolia		ate:		nple Point:	•
Investigator(s):	T. Freiday	and	S. McElyea	Section, Townsh	ip, Range:		. Magnolia	
Landform (hillslope, terra			on	Local relief (cond	cave, convex, n	one): Conca	ve Slope (	(%): 0-5%
Subregion (LRR or MLR	A):	Р		Lat: 30.2		· · · · · · · · · · · · · · · · · · ·	95099 Da	itum: WGS 1984
Soil Map Unit Name:			amy fine sand, 0	) to 5 percent slope	s	NWI Classifica	ation:	None
Are climatic / hydrologic	conditions on	the site typical for thi	s time of year?	(Yes / No)	Yes	(if no, explain i	n Remarks.)	
		No ,or Hydrology				 Circumstances" ¡	oresent? Yes	X No
Are Vegetation •	lo ,Soil	,or Hydrology	<b>No</b> natu	rally problematic?	(If	needed, explain	any answers in	Remarks.)
SUMMARY OF FI	NDINGS -	Attach site ma	n showing	sampling poi	nt locations	s. transects.	important	features, etc.
			p 0				,po	
Hydrophytic Vegetation	Present?	Yes X	No	_				
Hydric Soil Present?		Yes	No X	Is the Sam	-			
Wetland Hydrology Pre	sent?	Yes X	No	within a We	etland?	Yes	No	<u> </u>
								_
Remarks:  This point was dete	rmined not to	be within a wetland o	lue to the lack of	f hydric soils.				
HYDROLOGY								
Wetland hydrolog	y Indicators:		·			Secondary Ind	icators (minimu	ım of two required)
Primary Indicators (	minimum of o	one is required; check	all that apply)			Surface	Soil Cracks (B	6)
X Surface Wate	er (A1)		Aquatic Faun	na (B13)		Sparsely	y Vegetated Co	ncave Surface (B8)
X High Water 1	able (A2)		_ Marl Deposits	s (B15) <b>(LRR U)</b>		Drainag	e Patterns (B10	))
Saturation (A	.3)		_ Hydrogen Su	Ifide Odor (C1)		Moss Tr	im Lines (B16)	
Water Marks	(B1)		Oxidized Rhiz	zospheres on Living	g Roots(C3)	Dry-Sea	son Water Tab	le (C2)
Sediment De	posits (B2)		Presence of I	Reduced Iron (C4)		Crayfish	Burrows (C8)	
Drift Deposits	s (B3)		_ Recent Iron F	Reduction in Tilled	Soils (C6)	Saturati	on Visible on A	erial Imagery (C9)
Algal Mat or	Crust (B4)		_ Thin Muck Su	urface (C7)		Geomor	phic Position ([	02)
Iron Deposits	(B5)		Other (Explai	in in Remarks)		Shallow	Aquitard (D3)	
Inundation V	sible on Aeria	al Imagery (B7)				X FAC-Ne	utral Test (D5)	
Water-Staine	ed Leaves (B9	9)				Sphagn	um moss (D8)	(LRR T, U)
Field Observations:	o v		5 " " 1	,				
Surface Water Present		X No	_ Depth (inch	· ——				
Water Table Present?	Yes	X No	_ Depth (inch	, <del></del>				
Saturation Present? (includes capillary fring		NoX	_ Depth (inch	nes): <u>&gt;20</u>	Wetland Hy	drology Presen	t? Yes	X No
	,	n gauge, monitoring w	ell, aerial photos	s, previous inspection	_  ons), if available	ı:		
Remarks:								
Nemarks.								
A positive indication	n of wetland h	ydrology was observe	ed (at least one p	orimary indicator).				
1		, 3,		,				

Sampling Point:	dp 6

Shrub Stratum (Plot size: 30 ft. )   10		Absolute	Dominant	Indicator	Dominance Test worksheet:		
2. <u>Chinese Tallow (Triadica sebifera)</u> 3. <u>Sweel Gum (Liquidambar styraciflua)</u> 5	Tree Stratum (Plot size: 30 ft. )	% cover	Species?	Status	Number of Dominant Species		
3   Sweet Gum (Liquidambar styraciflua)   5   No   FAC     Total Number of Dominant   Species Across All Strata:   5   (B)	Black Willow (Salix nigra)	60	Yes	OBL	That Are OBL, FACW, or FAC:	5	(A)
Species Across All Strata:   5   (B)	2. Chinese Tallow (Triadica sebifera)	30	Yes	FAC			
Percent of Dominant Species   That Are OBL, FACW, or FAC:   100%   (A/B)	3. Sweet Gum (Liquidambar styraciflua)	5	<u>No</u>	FAC	Total Number of Dominant		
Percent of Dominant Species   That Are OBL, FACW, or FAC: 100% (A/B)	4		<u> </u>		Species Across All Strata:	5	(B)
Sapling Stratum (Plot size: 30 ft. )   That Are OBL, FACW, or FAC: 100% (A/B)	5		<u> </u>				
Sapling Stratum (Plot size: 30 ft. )	6.				Percent of Dominant Species		
Prevalence Index Worksheet:   Total % Cover of:   Multiply by:		95	= Total Cover		That Are OBL, FACW, or FAC:	100%	(A/B)
Total % Cover of: Multiply by:   2	50% of total cover:	47.5	20% of total cover:	19			
2.   OBL species   140   x 1 =   140   3.   FACW species   0   x 2 =   0   FACW species   0   x 4 =   0   UPL species   0   x 5 =   0   UPL species   0	,,						
Shrub Stratum (Plot size: 30 ft. )   10	1. None Observed		<u> </u>				
4.			<u> </u>				
FACU species   0	3		· — ·				
Column Totals:   Column Totals:   205   (A)   335   (B	_		<u> </u>				
Shrub Stratum (Plot size: 30 ft. )   Shrub Stratum (Plot size: 30 ft. )   1. Chinese Privet (Ligustrum sinense)   10			<u> </u>		· · · · · · · · · · · · · · · · · · ·		
Shrub Stratum (Plot size: 30 ft. )	6		· _ <del></del> ·		· -	-	
Shrub Stratum         (Plot size: 30 ft.)         New Prevalence Index = B/A = 1.63           1. Chinese Privet (Ligustrum sinense)         10 Yes FAC           2. Chinese Tallow (Triadica sebitera)         10 Yes FAC           3.			•		Column I otals: 205	(A) <u>335</u>	(B)
1. Chinese Privet (Ligustrum sinense) 2. Chinese Tallow (Triadica sebifera) 3.			20% of total cover:		5		
2. Chinese Tallow (Triadica sebifera)  10 Yes FAC  3.		40	.,	<b>540</b>	Prevalence Index = B/A =	1.63	
1 - Rapid Test for Hydrophytic Vegetation   X 2 - Dominance Test is >50%   X 3 - Prevalence Index is ≤ 3.0   Problematic Hydrophytic Vegetation   Y 2 - Dominance Test is >50%   X 3 - Prevalence Index is ≤ 3.0   Problematic Hydrophytic Vegetation   Problematic Hydrophytic Vegetation   (Explain)					Hudronbudio Vonatation Indicate		
4.		10	res	FAC	- · · · · ·		
5.		-	<u> </u>				
Problematic Hydrophytic Vegetation   (Explain)		-	<del></del>				
Solution		-	<del></del>				
Stratum   (Plot size: 30 ft. )   The indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	0	20	- Total Cover		Froblematic Hydrophytic	vegetation (Explain	,
Herb Stratum (Plot size: 30 ft. )   1. Maidencane (Panicum hemitomon)   70 Yes OBL   2. Stinging Nettle (Urtica chamaedryoides)   10 No FAC   Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).   Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.   Shrub - Woody plants, excluding woody vines, excluding woody vines,   Shrub - Woody plants, excluding woody vines,	50% of total cover:	-	-	1	<sup>1</sup> Indicators of hydric soil and wetl	and hydrology must	
1. Maidencane (Panicum hemitomon) 2. Stinging Nettle (Urtica chamaedryoides) 3. Water Smartweed (Persicaria hydropiperoides) 4			20 % Of total cover.		=		
2. Stinging Nettle (Urtica chamaedryoides) 3. Water Smartweed (Persicaria hydropiperoides) 4		70	Ves	OBL			
3. Water Smartweed (Persicaria hydropiperoides) 4	<del></del>				_		
4. (7.6 cm) or larger in diameter at breast height (DBH).  5. Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  9. Shrub - Woody plants, excluding woody vines,			·			-	
5. Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  9. Shrub - Woody plants, excluding woody vines,						<del>-</del>	
6. Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  9. Shrub - Woody plants, excluding woody vines,			·		(1.0 0) 0. 14.90 4.4	ouerg (22).	
7. approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  9. Shrub - Woody plants, excluding woody vines,		-	<u> </u>		Sapling - Woody plants, excluding	g woody vines,	
8.       than 3 in. (7.6 cm) DBH.         9.       Shrub - Woody plants, excluding woody vines,					approximately 20 ft (6 m) or more	in height and less	
9					than 3 in. (7.6 cm) DBH.		
10. Shrub - Woody plants, excluding woody vines,	· · · · · · · · · · · · · · · · · · ·		<u></u> -				
annuary invested to 2 to 20 ft (4 to C m) in the inter-			<u></u> -		Shrub - Woody plants, excluding	woody vines,	
11. approximately 3 to 20 ft (1 to 6 m) in neight.	11.		<u> </u>		approximately 3 to 20 ft (1 to 6 m)	in height.	
90 = Total Cover		90	= Total Cover				
50% of total cover: 45 20% of total cover: 18 Herb - All herbaceous (non-woody) plants, including	50% of total cover:	45	20% of total cover:	18	Herb - All herbaceous (non-wood)	/) plants, including	
Woody Vine Stratum (Plot size: 30 ft. ) herbaceous vines, regardless of size, and woody	Woody Vine Stratum (Plot size: 30 ft)				herbaceous vines, regardless of si	ize, <u>and</u> woody	
1. None Observed plants, except woody vines, less than approximately	1. None Observed	-	<u> </u>		plants, except woody vines, less the	nan approximately	
2 3 ft (1 m) in height.	2		<u> </u>		3 ft (1 m) in height.		
3			. <u> </u>				
4 Woody vine - All woody vines, regardless of height.	4		. <u> </u>		Woody vine - All woody vines, reg	gardless of height.	
5	5		. <u> </u>				
= Total Cover Hydrophytic			-		' ' '		
50% of total cover: 20% of total cover: Vegetation	50% of total cover:		20% of total cover:		_		
Present? Yes X No					Present? Yes X	No	
Remarks: (if observed, list morphological adaptations below).	Remarks: (if observed, list morphological adaptat	ions below	·).				
A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).	A positive indication of hydrophytic vegetation was	s observed	(>50% of dominant	species index	xed as OBL, FACW, or FAC).		
A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).	A positive indication of hydrophytic vegetation was	s observed	(Prevalence Index is	s ≤ 3.00).			

SOIL

Sampling Point: dp 6

Depth	Matrix			Redox F	eatures				
inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0-4	7.5 YR 4/3	95	5 YR 4/6	_ 5	C	M	Sandy Clay Loam	Disturbed soils	
4-9	7.5 YR 6/4	80	5 YR 4/6	2	C	M	Sandy Clay Loam	Dual matrix	
	7.5 YR 4/3	18					Sandy Clay Loam		
9-18	7.5 YR 4/3	95	5 YR 4/6	5	C	M	Sandy Clay Loam		
		<u> </u>		<u> </u>					
	Concentration, D=Dep					<sup>2</sup> Location: I	PL=Pore Lining, M=N		
•	s Indicators: (Appl	icable to a	•		•			roblematic Hydric Soils <sup>3</sup> :	
Histos	` '				Surface (S8) <b>(L</b>			(A9) <b>(LRR O)</b>	
	Epipedon (A2)				e (S9) <b>(LRR S,</b>	· ·		(A10) <b>(LRR S)</b>	
Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O)						O)	Reduced Vertic (F18) (outside MLRA 150A,B)		
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2)						Piedmont Floodplain Soils (F19) (LRR P, S, T)			
Stratifi	Stratified Layers (A5) Depleted Matrix (F3)					Anomalous Bright Loamy Soils (F20)			
Organi	rganic Bodies (A6) <b>(LRR P, T, U)</b> Redox Dark Surface (F6)				(MLRA 153B)				
5 cm N	/lucky Mineral (A7) <b>(L</b>	lucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7)				Red Parent Material (TF2)			
Muck f	Presence (A8) (LRR	U)	Redox	Depressio	ns (F8)		Very Shallo	w Dark Surface (TF12)	
1 cm N	/luck (A9) <b>(LRR P, T)</b>		Marl (F	10) <b>(LRR</b> I	U)		Other (Expla	ain in Remarks)	
Deplet	ed Below Dark Surfa	ce (A11)	Deplete	ed Ochric (	(F11) <b>(MLRA 1</b>	51)			
Thick I	Dark Surface (A12)		Iron-Ma	anganese I	Masses (F12) (	LRR O, P, T)		s of hydrophytic vegetation and	
Coast	Prairie Redox (A16)	(MLRA 150	A) Umbric	Surface (F	F13) <b>(LRR P, T</b>	, U)	wetland hydrology must be present, unless disturbed or problematic.		
Sandy	Mucky Mineral (S1)	(LRR O, S)	Delta C	chric (F17	") <b>(MLRA 151)</b>		uniess di	sturbed or problematic.	
Sandy	Gleyed Matrix (S4)		Reduce	ed Vertic (F	18) <b>(MLRA 15</b>	0A, 150B)			
Sandy	Redox (S5)		Piedmo	nt Floodpl	ain Soils (F19)	(MLRA 149A)			
Strippe	ed Matrix (S6)		Anoma	lous Bright	t Loamy Soils (F	20) <b>(MLRA 1</b> 4	I9A, 153C, 153D)		
Dark S	Surface (S7) (LRR P,	S, T, U)							
Restrictive	Layer (if observed)	:							
Type:									
Depth (ii	nches):					Hydr	ic Soil Present? Y	es No X	
. ,	• -								