



Rowden Consulting, LLC
Environmental Services

November 17, 2025

Hempstead County Economic Development Corporation (EDC)
c/o E TTL Engineers & Consultants, Inc.
3527 Star Road
Tyler, Texas 75791

Re: Section 404 (Wetland) Delineation
Approximately 78 acres, Southeast of AR-32 at County Road 26, Hempstead Co., AR

Hempstead County EDC:

Rowden Consulting, LLC has prepared this evaluation and delineation of aquatic features on the property referenced above near Hope in Hempstead County, Arkansas. The entire study area (approximately 78 acres) was evaluated in accordance with the procedures outlined in the U.S. Army Corps of Engineers (USACE) 1987 Wetland Delineation Manual, and the USACE Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0). No wetlands or other waters of the U.S. were identified within the study area. As such, no Section 404 permits from the U.S. Army Corps of Engineers will be required to disturb or develop the property.

WETLAND DELINEATION

The USACE 1987 Wetland Delineation Manual defines wetlands as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." Wetlands have the following general diagnostic environmental characteristics: (1) Vegetation - the prevalent vegetation consists of macrophytes that are typically adapted to areas having hydrologic and soil conditions found in wetlands; (2) Soil - soils are present and have been classified as hydric, or they possess characteristics that are associated with reducing soil conditions; and (3) Hydrology - the area is inundated either permanently or periodically, or the soil is saturated to the surface at some time during the growing season of the prevalent vegetation.

In order to evaluate the property for wetlands, observation points were established along transects. Wetland parameters were characterized at each observation point. The dominant plant species, soil characteristics, and hydrology indicators occurring at each observation point were recorded on Data Forms, copies of which are attached. At each of the established observation points (sample plots) in the field, a soil pit was excavated to evaluate soil characteristics. The soil pits were excavated using a sharp shooter shovel, and the pits were excavated with a minimum one-foot diameter. The sharp shooter was extended to the blade depth in a full circle to circumscribe the pit perimeter, and the final mass of soil was lifted from each hole. This method produced pits with an approximate depth of fifteen inches where practical. Note that this method was employed at each observation point. In addition to observation points, undocumented check plots were also established when confirming upland conditions and mapping features.

The boundaries of the aquatic areas were identified during the delineation, and the features are represented on the attached Delineated Aquatic Features Map. Photographs are also included as an attachment. The boundaries of aquatic features were mapped in the field using a combination of digital LIDAR elevation data interpretation and field mapping with a mapping grade global positioning (GPS) system. The collected data

was used to create the attached exhibits. A Global Navigation Satellite System (GNSS) GPS receiver was used in the delineation. Real-time correction was utilized to attempt meter to submeter accuracy. Accuracy was closely monitored during fieldwork and critical data point collection was allowed to average over time until near or sub-meter results were achieved. The GNSS GPS is typically capable of producing sub-meter positional accuracy using GPS, Precise Point Positioning (PPP), and Satellite-based Augmentation System (SBAS). PPP technology is made possible by stabilizing measurements of the distance between GNSS satellites and the receiver (pseudo-ranges) using carrier phase tracking. Additional accuracy is achieved from ionospheric correctional data received from satellite-based augmentation systems. Benchmark points were utilized to ensure accuracy at the beginning and end of the field day, and control points were carefully monitored with sufficient time to ensure that accuracy levels were acceptable for critical field shots.

The property was found to comprised entirely of uplands with no wetlands. The property is generally characterized as an upland flat with convex surface relief. The property has been used as a hay meadow in recent years, and vegetation was recently cut. The great majority of the property was found to be in this condition, except for the extreme southern end of the property. A mature forest was identified on the south end of the property. The following sections provide a description of the characteristics of the property observed at the sample plots.

Vegetation

Plot 1 was established in an upland flat on the northeast side of the property. Vegetation at Plot 1 was represented by broomsedge (*Andropogon virginicus*), Vasey's grass (*Paspalum urvillei*), foxtail (*Setaria pumila*), and smutgrass (*Sporobolus indicus*). The area of Plot 1 exhibited a dominance of facultative hydrophytes, which satisfied wetlands criteria for vegetation. However, wetlands hydrology and hydric soils were absent.

Plot 2 was established in another upland flat on the northwest side of the property just below a large linear mound of fill placed in recent years. The fill appears to have originated from nearby railroad construction. Vegetation at Plot 2 was represented by broomsedge, Vasey's grass, goldenrod (*Solidago altissima*), and Johnsongrass (*Sorghum halepense*). The area of Plot 2 exhibited no dominance or prevalence of hydrophytes, which did not satisfy wetlands criteria for vegetation.

Plot 3 was established in a mature forest on the south end of the property. This plot was located at the lowest elevation found within the study area. Vegetation at Plot 3 was represented by shagbark hickory (*Carya ovata*), southern red oak (*Quercus falcata*), hackberry (*Celtis laevigata*), green ash (*Fraxinus pennsylvanica*), inland woodoats (*Chasmanthium latifolium*), and Cherokee sedge (*Carex cherokeensis*). The area of Plot 3 exhibited a dominance of hydrophytes, which satisfied wetlands criteria for vegetation. However, wetlands hydrology and hydric soils were absent.

Plot 4 was established in another upland flat on the southwest side of the property. Vegetation at Plot 4 was represented by broomsedge, Vasey's grass, Baldwin ironweed (*Vernonia baldwinii*), Johnsongrass, and smutgrass. The area of Plot 4 exhibited no dominance or prevalence of hydrophytes, which did not satisfy wetlands criteria for vegetation.

Plot 5 was established in another upland flat near the middle of the property. Vegetation at Plot 5 was represented by broomsedge, Vasey's grass, and foxtail. The area of Plot 5 exhibited a dominance of facultative hydrophytes, which satisfied wetlands criteria for vegetation. Wetlands hydrology and hydric soils were absent.

Plot 6 was established in another upland flat on the east side of the property. Vegetation at Plot 6 was represented by broomsedge, Vasey's grass, and thistle (*Cirsium discolor*). The area of Plot 6 exhibited a dominance of facultative hydrophytes, which satisfied wetlands criteria for vegetation. Wetlands hydrology and hydric soils were absent.

Soils

According to soil survey information, two soil series are mapped on the property. Sample plots were established in the Houston clay, 1 to 3 percent slopes and the Kipling silty clay loam, 3 to 8 percent slopes, eroded soil series. A map depicting the NRCS hydric ratings by map type (attached) shows the hydric soil rating for these map units to be an estimated 5% and 0%, respectively. Soil characteristics observed throughout the property appeared to be generally representative of these soil series.

Munsell soil colors observed throughout the diagnostic horizons of Plot 1 were 10YR 3/2 with no redoximorphic features. A soil horizon with a color of 10YR 4/2 with redoximorphic features was observed below a depth of thirteen inches. However, this type of horizon must be located within ten inches of the ground surface to satisfy hydric soil criteria. Munsell soil colors observed throughout the diagnostic horizons of Plots 2, 3, 4, 5, and 6 were 10YR 2/2, 10YR 3/2, 10YR 3/3, 10YR 4/2, and 10YR 4/3 without redoximorphic features, which did not satisfy wetlands criteria for hydric soils.

Hydrology

The property was studied during a seasonal period of normal conditions during the wet season. To ensure that observations were conducted during a typical year, the USACE Antecedent Precipitation Tool was used to make an empirical comparison between reference rainfall data and conditions at the time of observation. The output of this tool is included as an attachment, which supports normal conditions during the wet season.

No saturation or inundation were observed at any of the sample plots. Wetlands hydrology criteria were not satisfied at any of the sample plots (or check plots). One secondary hydrology indicator was observed at Plots 4 and 6 due to the presence of crawfish burrows; however, wetlands hydrology criteria were not satisfied by the observation of only one secondary indicator. Two are required to satisfy wetlands hydrology.

Other Waters – Dry Man-Made Ditch

Other waters (non-wetland aquatic areas) included one drainage ditch located on the south end of the property. The ditch provides drainage collected along the side of an existing railroad track just west of the subject property. This ditch enters the study boundary and crosses the southern end of the property. The ditch was delineated at its ordinary high water mark (OHWM). The OHWM defines the lateral extent of non-tidal aquatic features and the limits of regulatory jurisdiction under Section 404 of the Clean Water Act. The federal regulatory definition of the OHWM, 33 CFR 328.3(c)(7), states, “The term ordinary high water mark means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.” The ditch was delineated at its ordinary high water mark, which was represented by secondary shelving and a scour.

Jurisdictional Determination

Only the USACE has the authority to confirm the classification of nonjurisdictional waters. However, in the professional opinion of Rowden Consulting, LLC, the delineated ditch shown on the Delineated Aquatic Features Map is expected to be non-jurisdictional and unregulated.

The regulatory agencies issued a rule defining waters of the U.S. (WOTUS) in early 2023. On May 25, 2023, the U.S. Supreme Court issued an opinion in the Sackett v. Environmental Protection Agency (EPA) case stating “the Clean Water Act extends only to wetlands that have a continuous surface connection with ‘waters’ of the United States – i.e., with a relatively permanent body of water connected to traditional interstate navigable waters, 33 U.S.C. § 1362(7) – making it difficult to determine where the water ends and the wetland begins.” In response to this ruling, the USACE and the EPA have issued a rule amendment and regulatory guidance to revise the definition of WOTUS.

Note that Arkansas is currently one of twenty-six states where the original 2023 WOTUS rule is enjoined due to ongoing litigation, which makes the recent agency rule amendment inapplicable in Arkansas. For enjoined states

such as Arkansas, guidance has been issued to USACE districts with no formal publication. It is our understanding they have been instructed to operate under the “pre-2015 regulatory regime” while incorporating the effective provisions of the Sackett case. The attached Delineated Aquatic Features Map reflects our understanding of current jurisdiction.

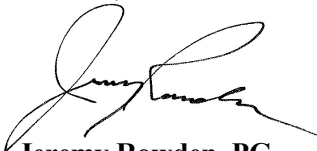
In response to the Sackett case, open waters, streams, and drainage ditches may now be characterized as relatively permanent waters (RPW) or non-relatively permanent waters (non-RPW) as this terminology reflects the difference between regulated non-wetland features (RPW) and non-regulated features (non-RPW). The jurisdictional status of wetlands and other waters has been updated, depending on their physical connectivity or lack of connectivity to RPW, which is now a requirement for regulation.

The dry ditch identified on the south end of the property was observed to be dry during a time of normal conditions during the wet season. Based on these conditions and the characteristics of the ditch observed, the ditch would only flow following a precipitation event. As such, its flow regime was classified as ephemeral, which is a non-RPW. Non-RPW ditches are not regulated as waters of the U.S. As such, no Section 404 permit should be required to fill or disturb the ditch identified on the property.

SUMMARY

This delineation was prepared using currently applicable guidance and methodology, and it represents the best professional judgment of Rowden Consulting, LLC. As a professional opinion only, it does not represent final agency approval of the jurisdictional status of delineated features, and we recommend submitting this information to the USACE for review and verification if agency approval is needed for future planning. No wetlands or other waters of the U.S. were identified within the study area. As such, no Section 404 permits from the U.S. Army Corps of Engineers will be required to disturb or develop the property.

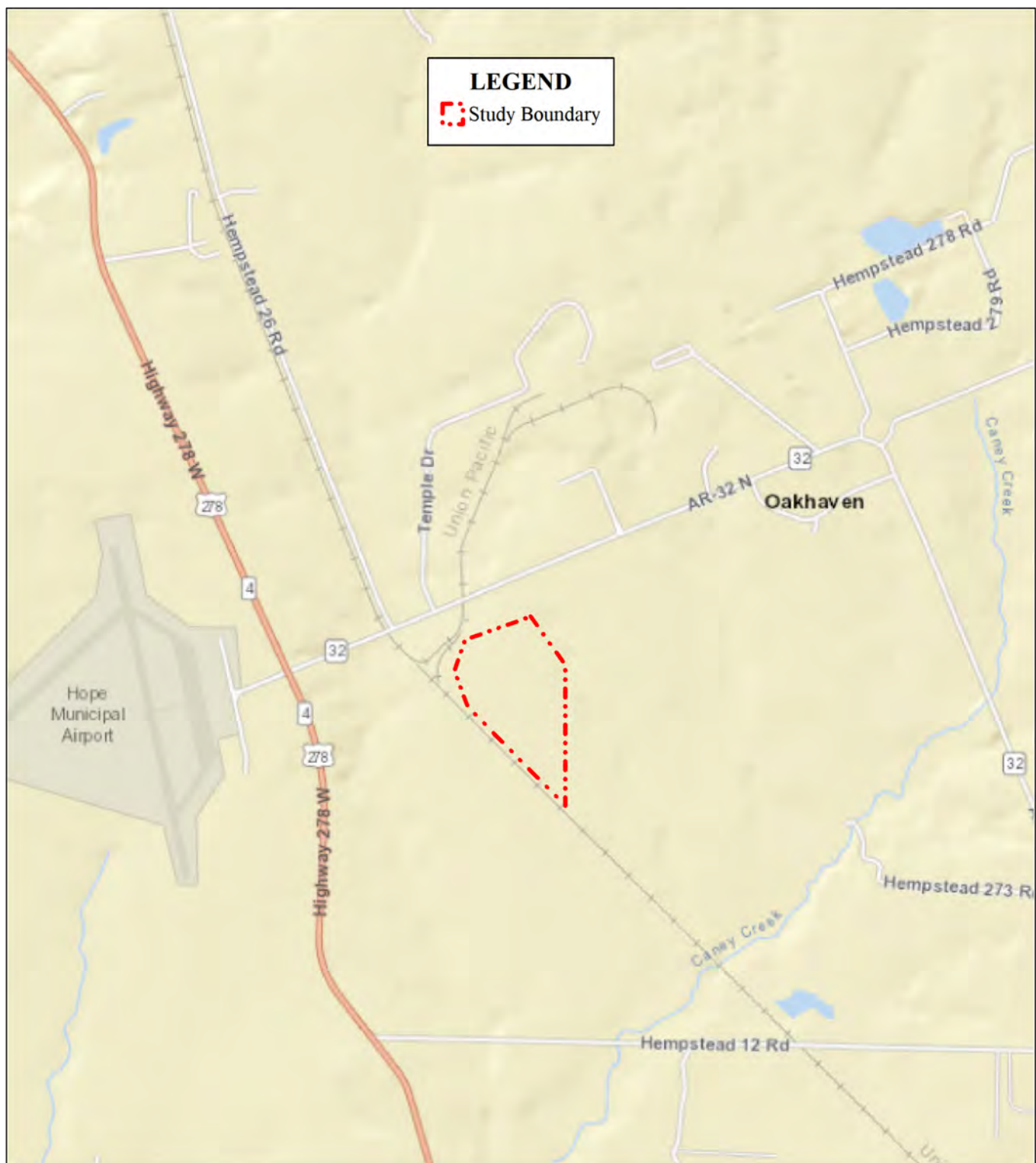
Sincerely,



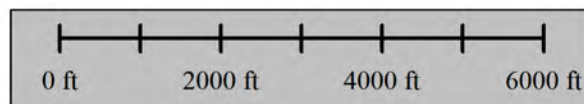
Jeremy Rowden, PG

Enclosures

Attachment 1 – Maps and Exhibits

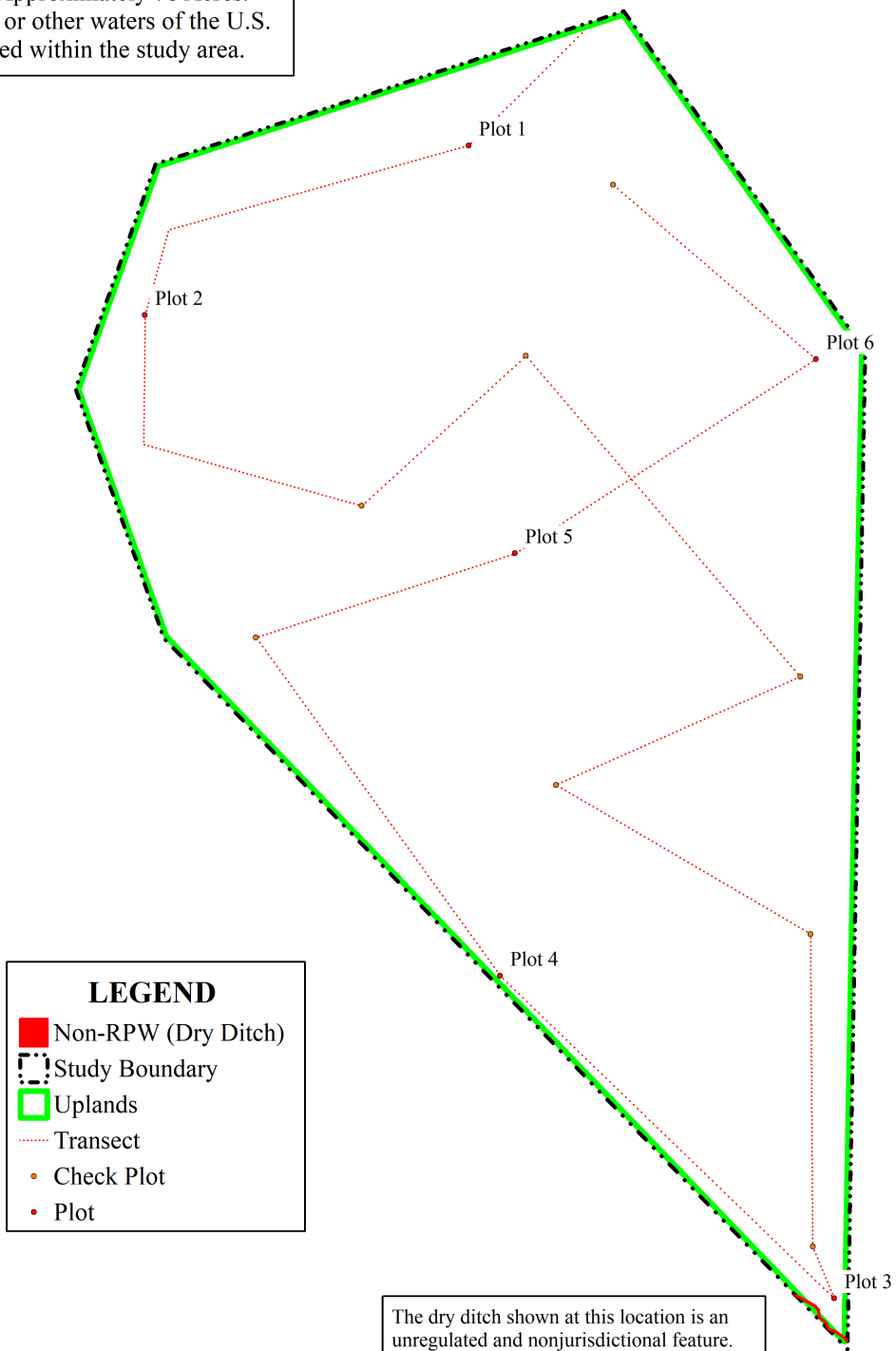


Location Map

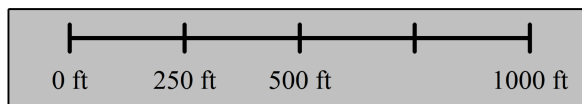


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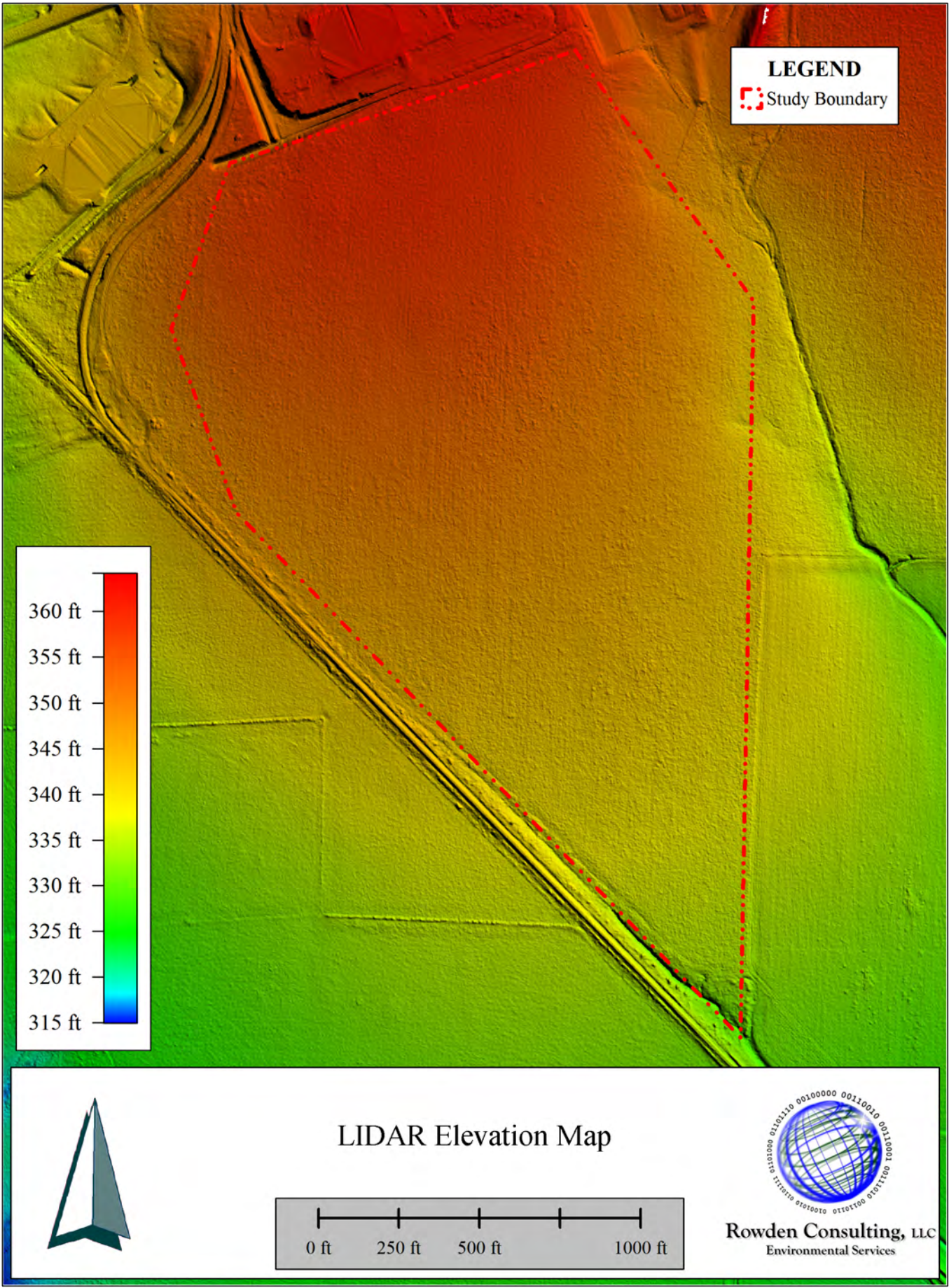
Study Area: Approximately 78 Acres.
No wetlands or other waters of the U.S.
were identified within the study area.



Delineated Aquatic Features

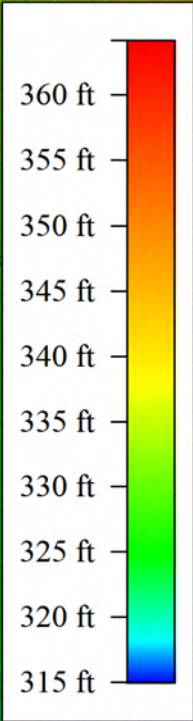


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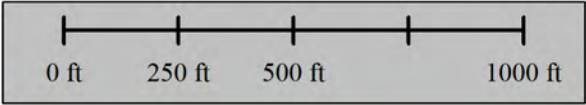


LEGEND

 Study Boundary



LIDAR Elevation Map



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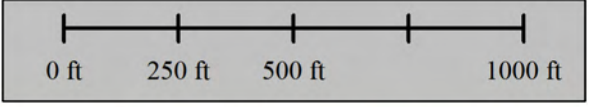


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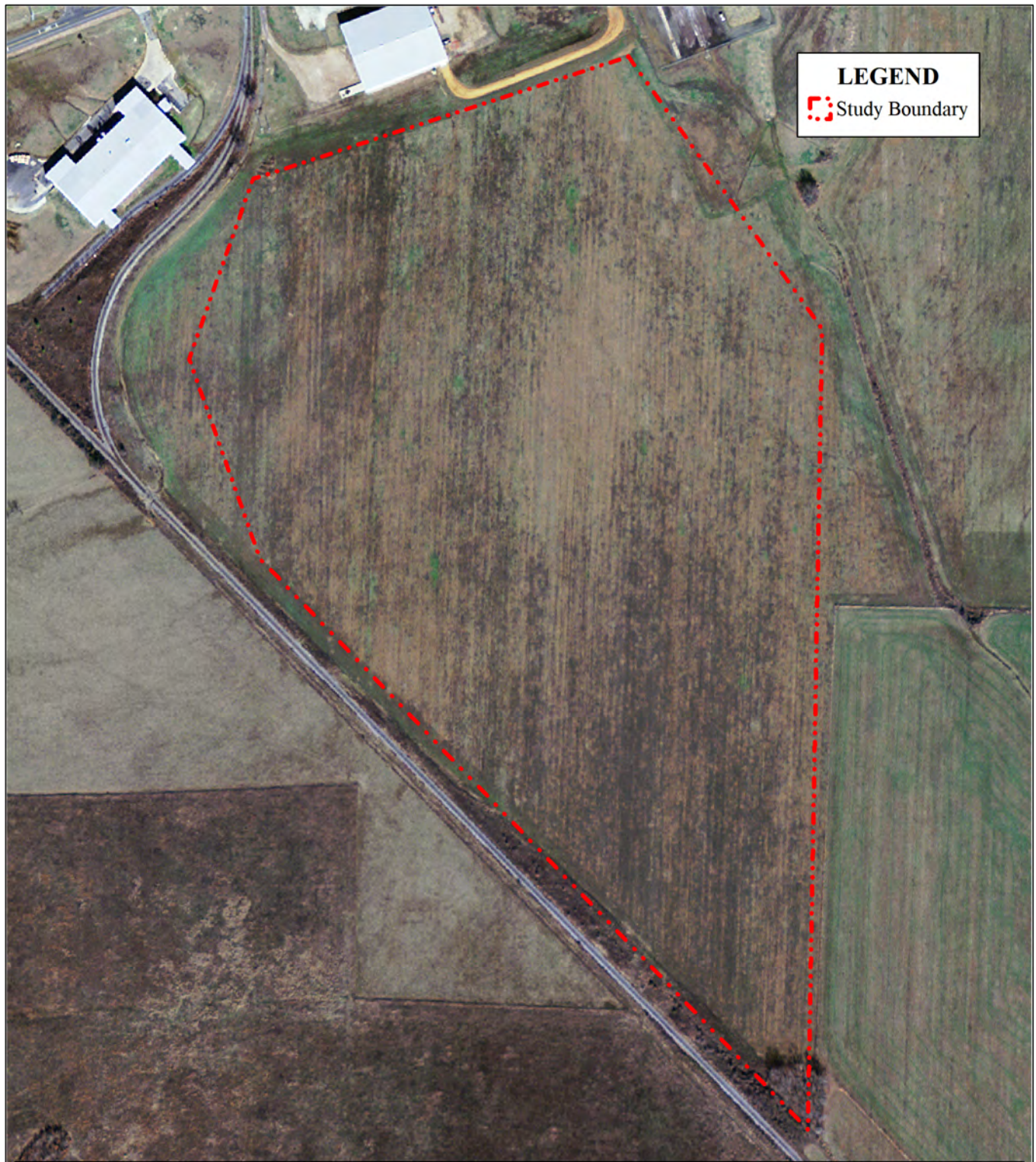
 Study Boundary



2024 Aerial



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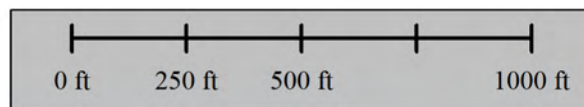


LEGEND

 Study Boundary



2006 Aerial



Rowden Consulting, LLC
Environmental Services

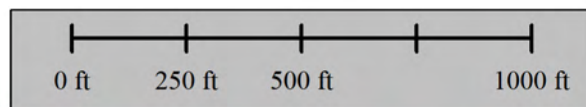


LEGEND

 Study Boundary



2000 Aerial



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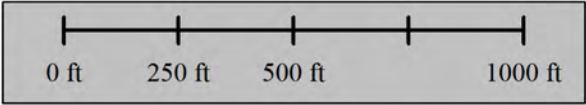


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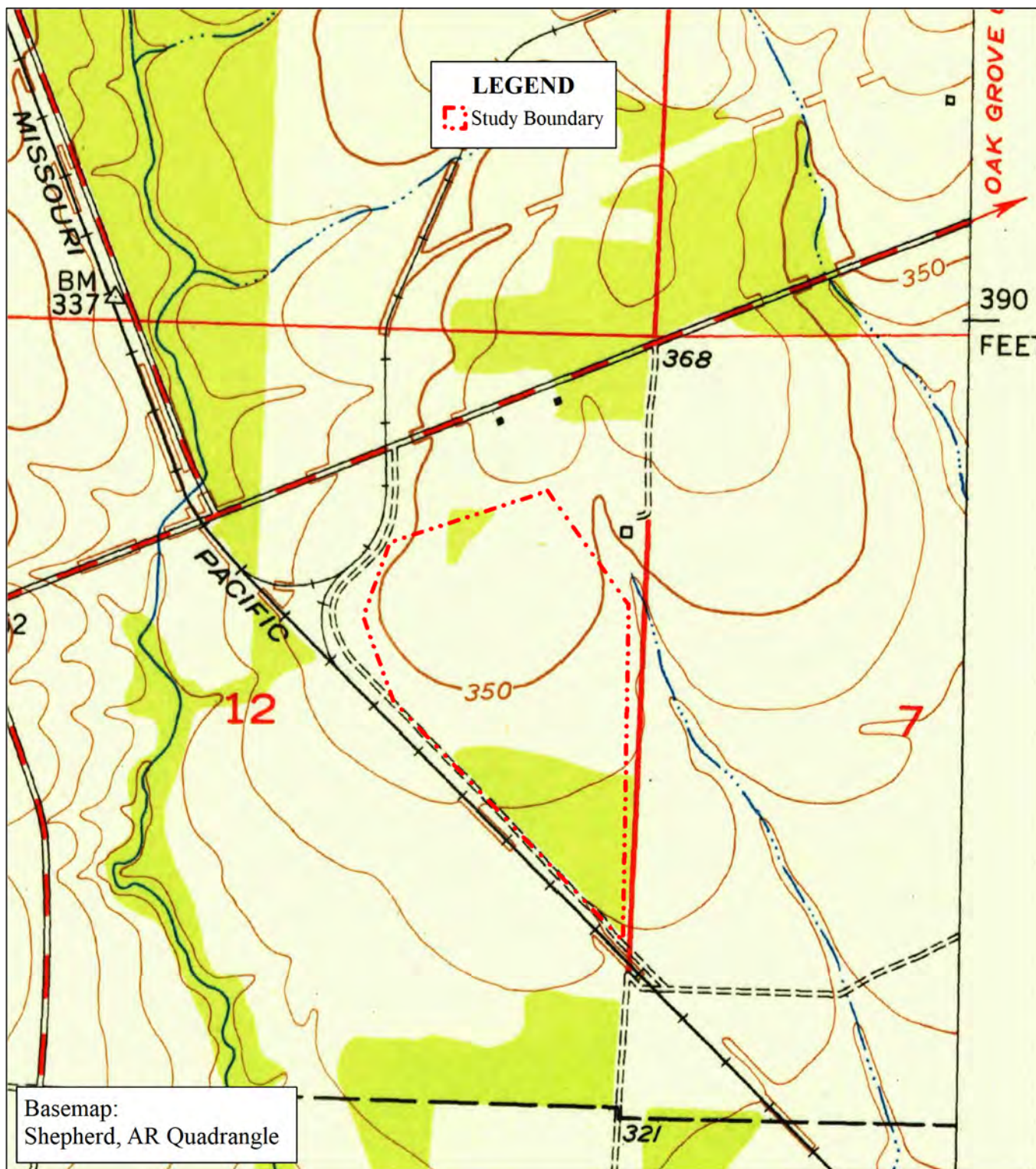
 Study Boundary



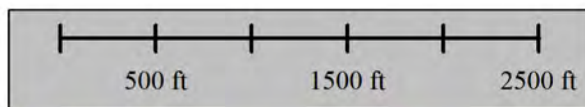
1994 Aerial



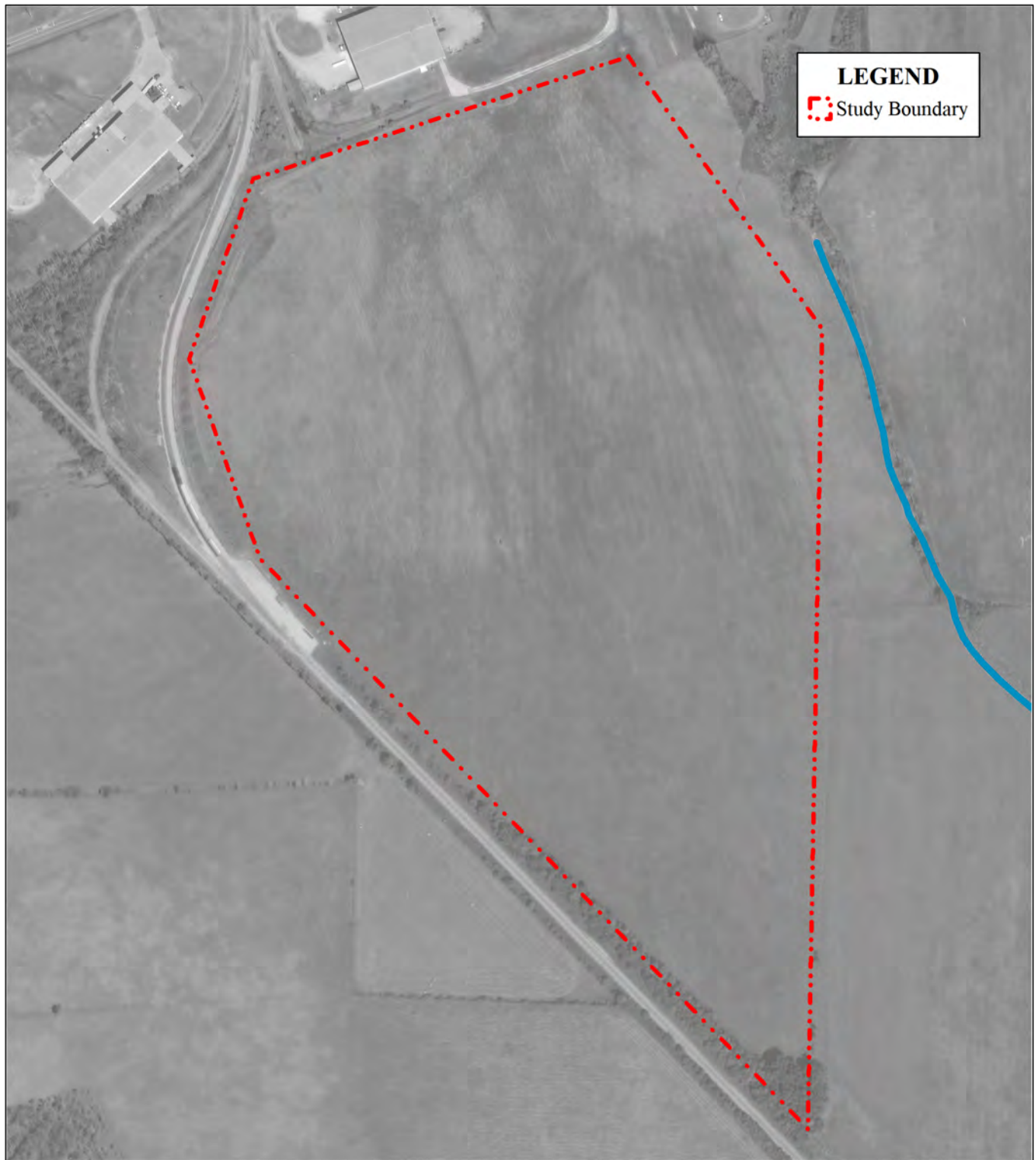
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USGS Topographic Map



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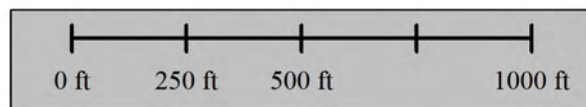


LEGEND

 Study Boundary

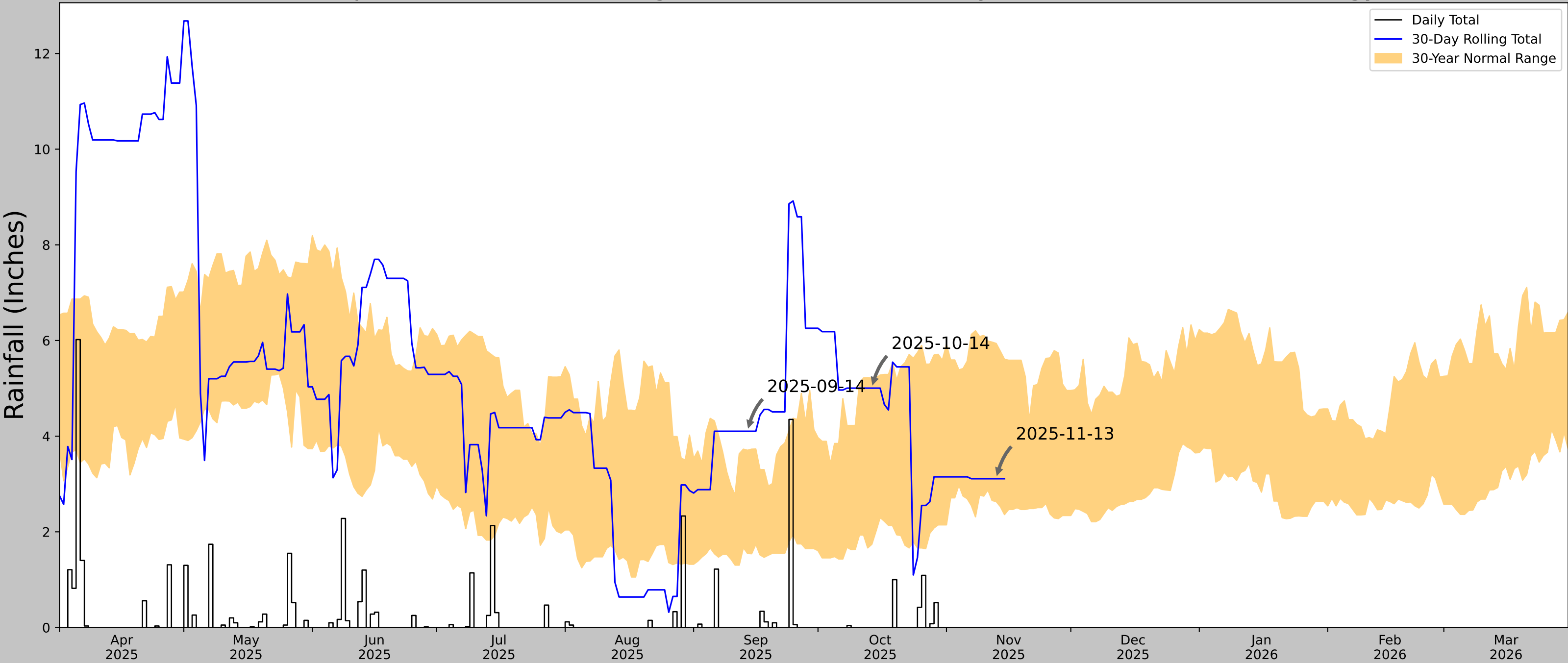


National Wetlands Inventory Map



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Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	33.72112, -93.6353
Observation Date	2025-11-13
Elevation (ft)	351.005
Drought Index (PDSI)	Not available (2025-10)
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2025-11-13	2.632677	5.937795	3.110236	Normal	2	3	6
2025-10-14	1.740551	5.21063	5.003937	Normal	2	2	4
2025-09-14	1.548032	3.705512	4.102362	Wet	3	1	3
Result							Normal Conditions - 13



US Army Corps
of Engineers



ERDC

Figures and tables made by the
Antecedent Precipitation Tool
Version 3.0

Developed by:
U.S. Army Corps of Engineers and
U.S. Army Engineer Research and
Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
NASHVILLE	33.9292, -93.8508	399.934	18.966	48.929	9.463	11321	88
NASHVILLE 0.4 NNW	33.9468, -93.8534	453.084	1.225	53.15	0.616	2	0
NASHVILLE 1.0 NE	33.9518, -93.8396	409.121	1.688	9.187	0.775	6	0
COLUMBUS 2.1 NNE	33.8077, -93.8122	348.097	8.682	51.837	4.357	2	0
MURFREESBORO 1W	34.0783, -93.7014	370.079	13.392	29.855	6.426	18	0
MURFREESBORO 4.5 E	34.0756, -93.6135	534.121	16.943	134.187	9.898	1	0
MILLWOOD DAM	33.6772, -93.9903	315.945	19.165	83.989	10.234	1	1
DELIGHT 2.2 WNW	34.0417, -93.5418	482.94	19.334	83.006	10.305	2	0
DELIGHT 0.3 NNW	34.0331, -93.5069	354.003	20.97	45.931	10.4	0	1

Hydric Rating by Map Unit—Hempstead County, Arkansas
(Hope)



Hydric Rating by Map Unit—Hempstead County, Arkansas
(Hope)

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

Soil Rating Polygons

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available

Soil Rating Lines

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available

Soil Rating Points

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available

Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Hempstead County, Arkansas
Survey Area Data: Version 25, Sep 10, 2025

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 22, 2023—Feb 17, 2023

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.

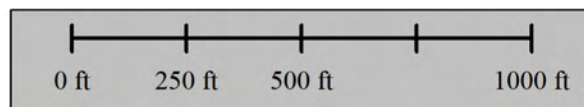
Hydric Rating by Map Unit

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
12	Houston clay, 1 to 3 percent slopes	5	54.1	71.1%
15	Kipling silty clay loam, 3 to 8 percent slopes, eroded	0	22.0	28.9%
Totals for Area of Interest			76.2	100.0%

Attachment 2 – Photographs



Photo Key



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Environmental Services

Site Photos



1

View overlooking uplands facing south from the north side of the property.



2

View overlooking uplands facing southeast from the northwest side of the property.

Site Photos



3

View of upland conditions at Plot 2. The plot was established below a linear mound of soil that appears to have been placed in recent years in connection with nearby railroad construction.



4

View overlooking uplands facing east from the west side of the property.

Site Photos



5

View overlooking uplands facing north from the south side of the property.



6

View of forested conditions at Plot 3 located on the south side of the property.

Site Photos



7

View of an upland man-made ditch with a non-relatively permanent flow regime. The ditch is located on the south side of the property.



Plot 1

View of the non-hydric soil profile at Plot 1.

Site Photos



Plot 2

View of the non-hydric soil profile at Plot 2.



Plot 3

View of the non-hydric soil profile at Plot 3.

Site Photos



Plot 4

View of the non-hydric soil profile at Plot 4.



Plot 5

View of the non-hydric soil profile at Plot 5.

Site Photos



Plot 6

View of the non-hydric soil profile at Plot 6.

Attachment 3 – Data Forms

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Hemstead 78 Acres City/County: Hempstead County Sampling Date: 11/13/25
 Applicant/Owner: Hempstead County EDC State: AR Sampling Point: 1
 Investigator(s): Jeremy Rowden Section, Township, Range: S12 T12S R25W
 Landform (hillslope, terrace, etc.): upland flat Local relief (concave, convex, none): convex Slope (%): <2
 Subregion (LRR or MLRA): LRR P Lat: 33.72367478° N Long: 93.63569641° W Datum: NAD83
 Soil Map Unit Name: Houston clay, 1 to 3 percent slopes NWI classification: nonwet

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

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

 Sampling Point: 1

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>none</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
50% of total cover: _____ 20% of total cover: _____				
Sapling/Shrub Stratum (Plot size: <u>30'</u>)				
1. <u>none</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
_____ = Total Cover				Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)
50% of total cover: _____ 20% of total cover: _____				
Herb Stratum (Plot size: <u>30'</u>)				
1. <u>Andropogon virginicus</u>	<u>60</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Paspalum urvillei</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>Setaria pumila</u>	<u>10</u>	<u>No</u>	<u>FAC</u>	
4. <u>Sporobolus indicus</u>	<u>10</u>	<u>No</u>	<u>FACU</u>	
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
_____ = Total Cover				Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.
50% of total cover: <u>50</u> 20% of total cover: <u>20</u>				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. <u>none</u>				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Remarks: (If observed, list morphological adaptations below).				

SOIL

Sampling Point: 1

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-13	10YR 3/2	100					clay	
13-15	10YR 4/2	80	10YR 4/6	20	C	M	clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Hemstead 78 Acres City/County: Hempstead County Sampling Date: 11/13/25
 Applicant/Owner: Hempstead County EDC State: AR Sampling Point: 2
 Investigator(s): Jeremy Rowden Section, Township, Range: S12 T12S R25W
 Landform (hillslope, terrace, etc.): upland flat Local relief (concave, convex, none): convex Slope (%): <2
 Subregion (LRR or MLRA): LRR P Lat: 33.72257614° N Long: 93.63811493° W Datum: NAD83
 Soil Map Unit Name: Kipling silty clay loam, 3 to 8 percent slopes, eroded NWI classification: nonwet

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

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

 Sampling Point: 2

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. none				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)																
2.																				
3.																				
4.																				
5.																				
6.																				
7.																				
8.																				
_____ = Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species <u>50</u></td> <td>x 3 = <u>150</u></td> </tr> <tr> <td>FACU species <u>50</u></td> <td>x 4 = <u>200</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>350</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>3.5</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species <u>50</u>	x 3 = <u>150</u>	FACU species <u>50</u>	x 4 = <u>200</u>	UPL species _____	x 5 = _____	Column Totals: <u>100</u> (A)	<u>350</u> (B)	Prevalence Index = B/A = <u>3.5</u>	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = _____																			
FACW species _____	x 2 = _____																			
FAC species <u>50</u>	x 3 = <u>150</u>																			
FACU species <u>50</u>	x 4 = <u>200</u>																			
UPL species _____	x 5 = _____																			
Column Totals: <u>100</u> (A)	<u>350</u> (B)																			
Prevalence Index = B/A = <u>3.5</u>																				
50% of total cover: _____ 20% of total cover: _____																				
Sapling/Shrub Stratum (Plot size: <u>30'</u>)																				
1. none																				
2.																				
3.																				
4.																				
5.																				
6.																				
7.																				
8.																				
_____ = Total Cover																				
50% of total cover: _____ 20% of total cover: _____																				
Herb Stratum (Plot size: <u>30'</u>)																				
1. <u>Andropogon virginicus</u>	<u>30</u>	<u>Yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Paspalum urvillei</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>																	
3. <u>Solidago altissima</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>																	
4. <u>Sorghum halepense</u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>																	
5.																				
6.																				
7.																				
8.																				
9.																				
10.																				
11.																				
12.																				
_____ = Total Cover																				
50% of total cover: <u>50</u> 20% of total cover: <u>20</u>																				
Woody Vine Stratum (Plot size: <u>30'</u>)																				
1. none																				
2.																				
3.																				
4.																				
5.																				
_____ = Total Cover																				
50% of total cover: _____ 20% of total cover: _____																				
Hydrophytic Vegetation Present?																				
Yes _____ No <u>X</u>																				
Remarks: (If observed, list morphological adaptations below).																				

SOIL

Sampling Point: 2

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 3/2	100					clay	
12-15	10YR 3/3	100					clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Hemstead 78 Acres City/County: Hempstead County Sampling Date: 11/13/25
 Applicant/Owner: Hempstead County EDC State: AR Sampling Point: 3
 Investigator(s): Jeremy Rowden Section, Township, Range: S12 T12S R25W
 Landform (hillslope, terrace, etc.): upland flat Local relief (concave, convex, none): convex Slope (%): <2
 Subregion (LRR or MLRA): LRR P Lat: 33.71646118° N Long: 93.63280487° W Datum: NAD83
 Soil Map Unit Name: Houston clay, 1 to 3 percent slopes NWI classification: nonwet

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

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

 Sampling Point: 3

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Carya ovata</u>	<u>60</u>	<u>Yes</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60</u> (A/B)
2. <u>Quercus falcata</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
<u>80</u> = Total Cover 50% of total cover: <u>40</u> 20% of total cover: <u>16</u>				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: <u>30'</u>)				
1. <u>Celtis laevigata</u>	<u>5</u>	<u>Yes</u>	<u>FACW</u>	
2. <u>Fraxinus pennsylvanica</u>	<u>5</u>	<u>Yes</u>	<u>FACW</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
<u>10</u> = Total Cover 50% of total cover: <u>50</u> 20% of total cover: <u>2</u>				
Herb Stratum (Plot size: <u>30'</u>)				
1. <u>Chasmanthium latifolium</u>	<u>60</u>	<u>Yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Carex cherokeensis</u>	<u>10</u>	<u>No</u>	<u>FACW</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
<u>70</u> = Total Cover 50% of total cover: <u>35</u> 20% of total cover: <u>14</u>				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. <u>none</u>	_____	_____	_____	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover 50% of total cover: _____ 20% of total cover: _____				
Hydrophytic Vegetation Present? Yes ☒ No _____				
Remarks: (If observed, list morphological adaptations below).				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 2/2	100					clay	
2-8	10YR 3/2	100					clay	
8-15	10YR 4/2	100					clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)****Indicators for Problematic Hydric Soils³:**

- | | | |
|---|---|---|
| ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ Organic Bodies (A6) (LRR P, T, U)
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
☐ Muck Presence (A8) (LRR U)
☐ 1 cm Muck (A9) (LRR P, T)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Coast Prairie Redox (A16) (MLRA 150A)
☐ Sandy Mucky Mineral (S1) (LRR O, S)
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Dark Surface (S7) (LRR P, S, T, U) | ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
☐ Thin Dark Surface (S9) (LRR S, T, U)
☐ Loamy Mucky Mineral (F1) (LRR O)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Marl (F10) (LRR U)
☐ Depleted Ochric (F11) (MLRA 151)
☐ Iron-Manganese Masses (F12) (LRR O, P, T)
☐ Umbric Surface (F13) (LRR P, T, U)
☐ Delta Ochric (F17) (MLRA 151)
☐ Reduced Vertic (F18) (MLRA 150A, 150B)
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) | ☐ 1 cm Muck (A9) (LRR O)
☐ 2 cm Muck (A10) (LRR S)
☐ Reduced Vertic (F18) (outside MLRA 150A,B)
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
☐ Anomalous Bright Loamy Soils (F20)
(MLRA 153B)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks) |
|---|---|---|

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ^X _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Hemstead 78 Acres City/County: Hempstead County Sampling Date: 11/13/25
 Applicant/Owner: Hempstead County EDC State: AR Sampling Point: 4
 Investigator(s): Jeremy Rowden Section, Township, Range: S12 T12S R25W
 Landform (hillslope, terrace, etc.): upland flat Local relief (concave, convex, none): convex Slope (%): <2
 Subregion (LRR or MLRA): LRR P Lat: 33.71845627° N Long: 93.63536072° W Datum: NAD83
 Soil Map Unit Name: Houston clay, 1 to 3 percent slopes NWI classification: nonwet

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☒ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

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

 Sampling Point: 4

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>none</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33</u> (A/B)
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species <u>40</u> x 3 = <u>120</u> FACU species <u>60</u> x 4 = <u>240</u> UPL species _____ x 5 = _____ Column Totals: <u>100</u> (A) <u>360</u> (B) Prevalence Index = B/A = <u>3.6</u>
50% of total cover: _____ 20% of total cover: _____				
Sapling/Shrub Stratum (Plot size: <u>30'</u>)				
1. <u>none</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
_____ = Total Cover				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain)
50% of total cover: _____ 20% of total cover: _____				
Herb Stratum (Plot size: <u>30'</u>)				
1. <u>Andropogon virginicus</u>	<u>30</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Vernonia baldwinii</u>	<u>10</u>	<u>No</u>	<u>FAC</u>	
3. <u>Sorghum halepense</u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>	
4. <u>Sporobolus indicus</u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>	
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
_____ = Total Cover				Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.
50% of total cover: <u>50</u> 20% of total cover: <u>20</u>				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. <u>none</u>				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Remarks: (If observed, list morphological adaptations below).				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>

SOIL

Sampling Point: 4

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-15	10YR 3/2	100					clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ Organic Bodies (A6) **(LRR P, T, U)**
☐ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
☐ Muck Presence (A8) **(LRR U)**
☐ 1 cm Muck (A9) **(LRR P, T)**
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Coast Prairie Redox (A16) **(MLRA 150A)**
☐ Sandy Mucky Mineral (S1) **(LRR O, S)**
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Dark Surface (S7) **(LRR P, S, T, U)**

- ☐ Polyvalue Below Surface (S8) **(LRR S, T, U)**
☐ Thin Dark Surface (S9) **(LRR S, T, U)**
☐ Loamy Mucky Mineral (F1) **(LRR O)**
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Marl (F10) **(LRR U)**
☐ Depleted Ochric (F11) **(MLRA 151)**
☐ Iron-Manganese Masses (F12) **(LRR O, P, T)**
☐ Umbric Surface (F13) **(LRR P, T, U)**
☐ Delta Ochric (F17) **(MLRA 151)**
☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ^X _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Hemstead 78 Acres City/County: Hempstead County Sampling Date: 11/13/25
 Applicant/Owner: Hempstead County EDC State: AR Sampling Point: 5
 Investigator(s): Jeremy Rowden Section, Township, Range: S12 T12S R25W
 Landform (hillslope, terrace, etc.): upland flat Local relief (concave, convex, none): convex Slope (%): <2
 Subregion (LRR or MLRA): LRR P Lat: 33.72111511° N Long: 93.63529968° W Datum: NAD83
 Soil Map Unit Name: Houston clay, 1 to 3 percent slopes NWI classification: nonwet

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

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

 Sampling Point: 5

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>none</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
50% of total cover: _____ 20% of total cover: _____				
Sapling/Shrub Stratum (Plot size: <u>30'</u>)				
1. <u>none</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
_____ = Total Cover				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain)
50% of total cover: _____ 20% of total cover: _____				
Herb Stratum (Plot size: <u>30'</u>)				
1. <u>Andropogon virginicus</u>	<u>50</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Paspalum urvillei</u>	<u>30</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>Setaria pumila</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
_____ = Total Cover				Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.
50% of total cover: <u>50</u> 20% of total cover: <u>20</u>				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. <u>none</u>				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Remarks: (If observed, list morphological adaptations below).				

SOIL

Sampling Point: 5

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 3/3	100					clay	
12-15	10YR 4/2	95	10YR 5/8	5	C	M	clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ Organic Bodies (A6) **(LRR P, T, U)**
☐ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
☐ Muck Presence (A8) **(LRR U)**
☐ 1 cm Muck (A9) **(LRR P, T)**
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Coast Prairie Redox (A16) **(MLRA 150A)**
☐ Sandy Mucky Mineral (S1) **(LRR O, S)**
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Dark Surface (S7) **(LRR P, S, T, U)**

- ☐ Polyvalue Below Surface (S8) **(LRR S, T, U)**
☐ Thin Dark Surface (S9) **(LRR S, T, U)**
☐ Loamy Mucky Mineral (F1) **(LRR O)**
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Marl (F10) **(LRR U)**
☐ Depleted Ochric (F11) **(MLRA 151)**
☐ Iron-Manganese Masses (F12) **(LRR O, P, T)**
☐ Umbric Surface (F13) **(LRR P, T, U)**
☐ Delta Ochric (F17) **(MLRA 151)**
☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ^X _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Hemstead 78 Acres City/County: Hempstead County Sampling Date: 11/13/25
 Applicant/Owner: Hempstead County EDC State: AR Sampling Point: 6
 Investigator(s): Jeremy Rowden Section, Township, Range: S12 T12S R25W
 Landform (hillslope, terrace, etc.): upland flat Local relief (concave, convex, none): convex Slope (%): <2
 Subregion (LRR or MLRA): LRR P Lat: 33.72236633° N Long: 93.63305664° W Datum: NAD83
 Soil Map Unit Name: Kipling silty clay loam, 3 to 8 percent slopes, eroded NWI classification: nonwet

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required) ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☒ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

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

 Sampling Point: 6

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>none</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
50% of total cover: _____ 20% of total cover: _____				
Sapling/Shrub Stratum (Plot size: <u>30'</u>)				
1. <u>none</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
_____ = Total Cover				Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)
50% of total cover: _____ 20% of total cover: _____				
Herb Stratum (Plot size: <u>30'</u>)				
1. <u>Andropogon virginicus</u>	<u>80</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Paspalum urvillei</u>	<u>15</u>	<u>No</u>	<u>FAC</u>	
3. <u>Cirsium discolor</u>	<u>5</u>	<u>No</u>	<u>UPL</u>	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
_____ = Total Cover				Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.
50% of total cover: <u>50</u> 20% of total cover: <u>20</u>				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. <u>none</u>				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Remarks: (If observed, list morphological adaptations below).				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 3/2	100					clay	
8-15	10YR 4/3	100					clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)****Indicators for Problematic Hydric Soils³:**

- | | | |
|---|---|---|
| ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ Organic Bodies (A6) (LRR P, T, U)
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
☐ Muck Presence (A8) (LRR U)
☐ 1 cm Muck (A9) (LRR P, T)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Coast Prairie Redox (A16) (MLRA 150A)
☐ Sandy Mucky Mineral (S1) (LRR O, S)
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Dark Surface (S7) (LRR P, S, T, U) | ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
☐ Thin Dark Surface (S9) (LRR S, T, U)
☐ Loamy Mucky Mineral (F1) (LRR O)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Marl (F10) (LRR U)
☐ Depleted Ochric (F11) (MLRA 151)
☐ Iron-Manganese Masses (F12) (LRR O, P, T)
☐ Umbric Surface (F13) (LRR P, T, U)
☐ Delta Ochric (F17) (MLRA 151)
☐ Reduced Vertic (F18) (MLRA 150A, 150B)
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) | ☐ 1 cm Muck (A9) (LRR O)
☐ 2 cm Muck (A10) (LRR S)
☐ Reduced Vertic (F18) (outside MLRA 150A,B)
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
☐ Anomalous Bright Loamy Soils (F20)
(MLRA 153B)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks) |
|---|---|---|

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ^X _____

Remarks: