WETLANDS AND OTHER WATERS FINDINGS REPORT

HOLLY RIDGE NORTHWEST HIGHWAY 183 AND I-20 RICHLAND PARISH, LOUISIANA

Prepared for

Mr. Randy Denmon
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114 Venable Lane
Monroe, LA 71203

Prepared by
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JACKSON, MS 39206

May 2013

INTRODUCTION

A wetlands investigation was conducted for an approximately 282 acre tract of land (herein called the "Site") located on the west side of Highway 183 between Highway 80 and Interstate 20 in Richland Parish, Louisiana (Exhibit 1). The purpose of the investigation was to identify and ***delineate*** any wetlands and *Other Waters of the U.S.* The investigator was Mr. Bill McAbee with McAbee Wetland Services, and the Site was investigated on March 28, 2013. Methodology of the investigation followed guidelines set forth in the 1987 COE Wetland Delineation Manual and the Regional Supplement Manual for the Atlantic and Gulf Coastal Plain Region (Version 2.0).

BACKGROUND

Site Conditions

The entire Site was actively farmed (Exhibits 2 and 3). The site was improved with an east/west access road and two north/south access roads. These roads were not elevated above the adjacent croplands and there was not any evidence of recent or historically reoccurring flooding anywhere on the site. An approximately 1.25 acre block of mature woodland was located in the southwest quadrant (Exhibit 4).

The property contained a drainage ditch that appeared to effective remove surface water from the Site (Exhibit 5). This is a manmade maintained flume ditch that appears to be solely for removing surface waters from the Site although it is connected to, and surrounding, a small forested block noted in the previous paragraph. There was a second ditch that ran diagonal across the southeast corner of the farm tract but it was just outside of the actual study area. However, this second ditch was maintained to carrying surface waters off the Site. An intermittent stream that is a tributary to Cypress Creek lies just to the west of the Site.

At the time of the site visit the fields had been rowed and part of the Site had been planted in corn. The property has been actively farmed since at least 1987 according to USDA Soil Conservation Service records. According to the current owner the entire tract has been precession leveled to facilitate effective drainage. There was no evidence noted during the site visit of recent or historical flooding or ponding of surface waters.

Reference Information

The USDA Soil Conservation Service office for Richland Parish was contacted to acquire any information regarding prior converted or farmed wetland determination conducted for the Site. In February 1988, a SCS-CPA-026 form was completed for this property

and determined that all of the croplands were Prior Converted (PC) farmlands and all of the forested lands were determined wetlands (Appendix A).

The Richland Parish Soil Survey indicates that almost all of soils on the site were Gigger and Gilbert Silt Loam (Appendix B). Gigger (gg) soils are considered well drained while the Gilbert Soils (gk and gm) are considered poorly drained.

Color infrared photography (CIR) dating from 1998 and 2004 (Appendix C) and seven years of aerial photography dating between 1998 and 2012 were collected and reviewed (Appendix D). These resources were used to help identify recurring hydrological signatures such as saturated or inundated soils and drainage patterns.

The USFWS provides a resource for identifying known wetlands; this service is called the National Wetland Inventory (NWI). Data from NWI database was collected and reviewed for the Site (Appendix E). These maps do not contribute to the wetland determination of cropland but do offer opinions on adjacent vegetated habitats.

Floodplain maps from the Federal Emergency Management Agency (FEMA) for the 100-year flood area were collected and reviewed (Appendix F). These maps were revised in 2009 and will become effective in September 2013. While floodplain maps do not include any consideration as to wetland status when being developed, they do often resemble wetland boundaries in areas where surface flooding is the primary hydrological force. They are most useful as a cross reference on larger projects, rather than a delineation tool, to see if any notable difference appears between predicted wetland boundaries and the 100-year floodplain boundaries.

Lidar data developed in 2008 was gathered for the site and evaluated in 2-foot contour lines as well as in 1-foot color imaging (Appendix G). This data is valuable for delineating wetland boundaries that can be based on elevations as verified through on-site investigations.

FINDINGS

It should be noted that boundary of the Site which was investigated in this report, was based on preliminary wetland determinations made for a larger tract, then reduced to avoid and/or minimize any wetland or *Other Water* impacts. Since this was an active farm tract, most of the soil pit locations completed in the field were determined by referencing the CIR and historical aerial photography to identify possible reoccurring "wet" signatures. While there appear to be a few marginal hydrological indicators on the 2004 CIR photography, this was not confirmed through the field investigations, and the site has since been precision leveled and flume ditches enhanced to improve drainage.

The only “wet looking” area noted was the forested section in the southwest quadrant and it was not a wetland since the woods were surrounded on all sides by a deep ditch that effectively removed water from the wooded area.

Based on a site reconnaissance and a review of all the above referenced materials, there were **NO wetlands** identified on the Site. Soils were typically non hydric yellowish brown to dark brownish gray with minor mottling. Hydric indicators such as oxidized root channels and saturated soils were not present. **The north/south flume ditch (apx. 4,700 linear feet) is possibly jurisdictional**, and that determination would need to be made at the time of the permit request (Exhibit 6). Data forms are provided in Appendix H.

I hope this helps you with your decision making process. If you have any additional questions please contact me any time.

Sincerely,

William C. “Bill” McAbee
McAbee Wetland Services
655 Meadowbrook Road
Jackson, MS 39206
wmcabee@mbakercorp.com
601.842.8938

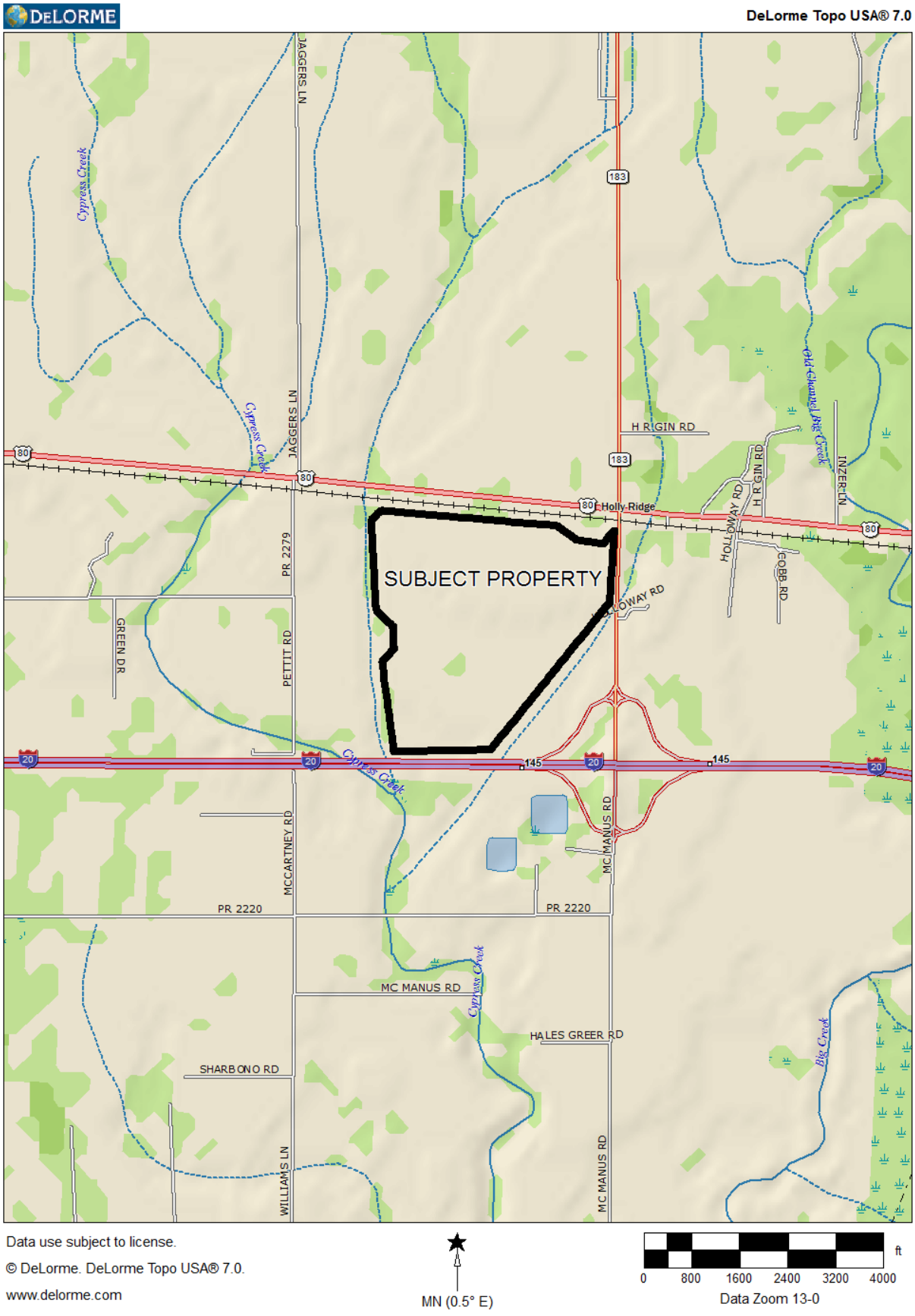


EXHIBIT 1. GENERAL LOCATION MAP

EXHIBIT 2. SUBJECT PROPERTY, EAST SIDE OF FARM

EXHIBIT 3. SUBJECT PROPERTY, WEST SIDE OF FARM

EXHIBIT 4. SUBJECT PROPERTY, FORESTED BLOCK IN SOUTHWEST QUADRANT

EXHIBIT 5. SUBJECT PROPERTY, FLUME DITCH

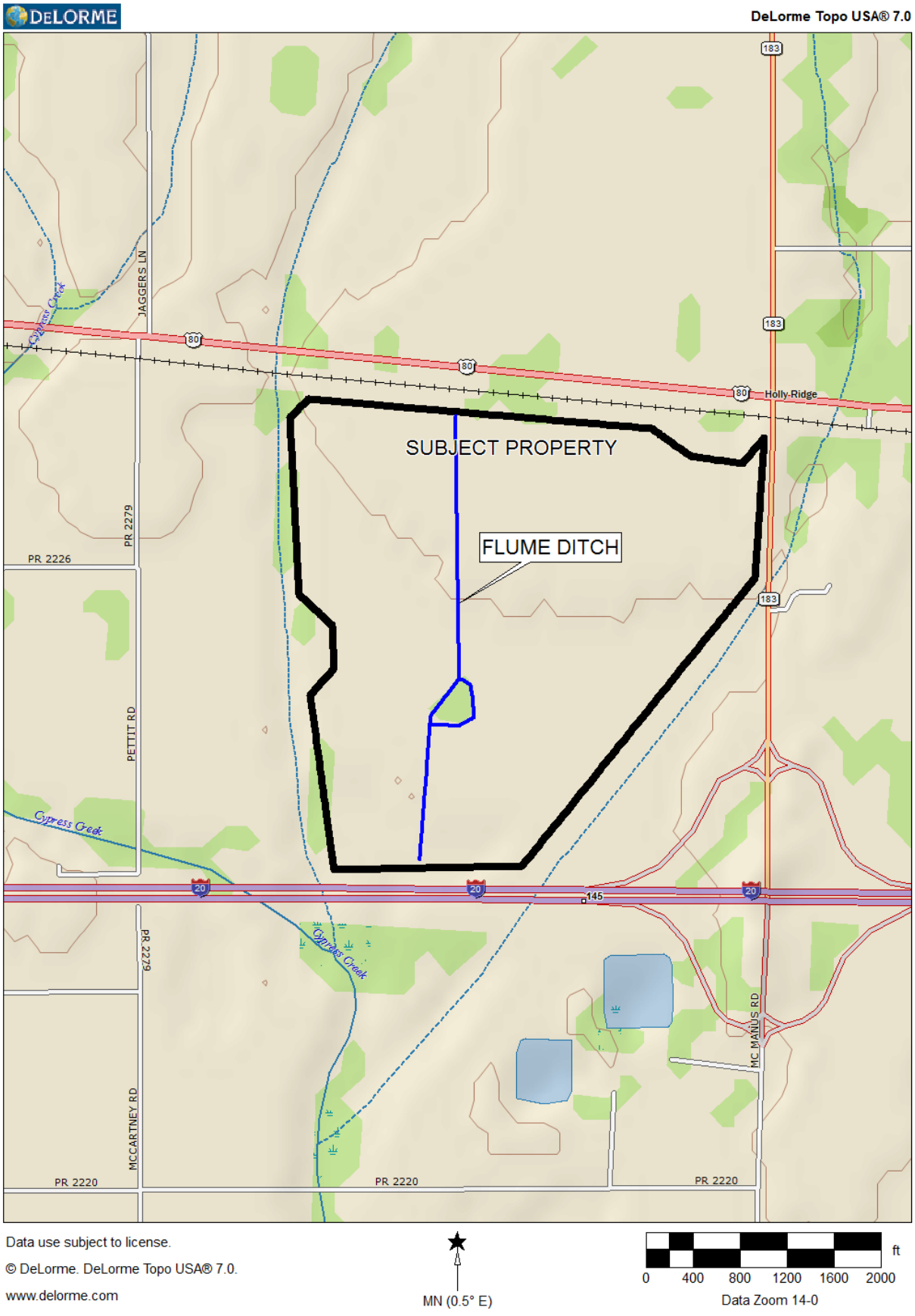
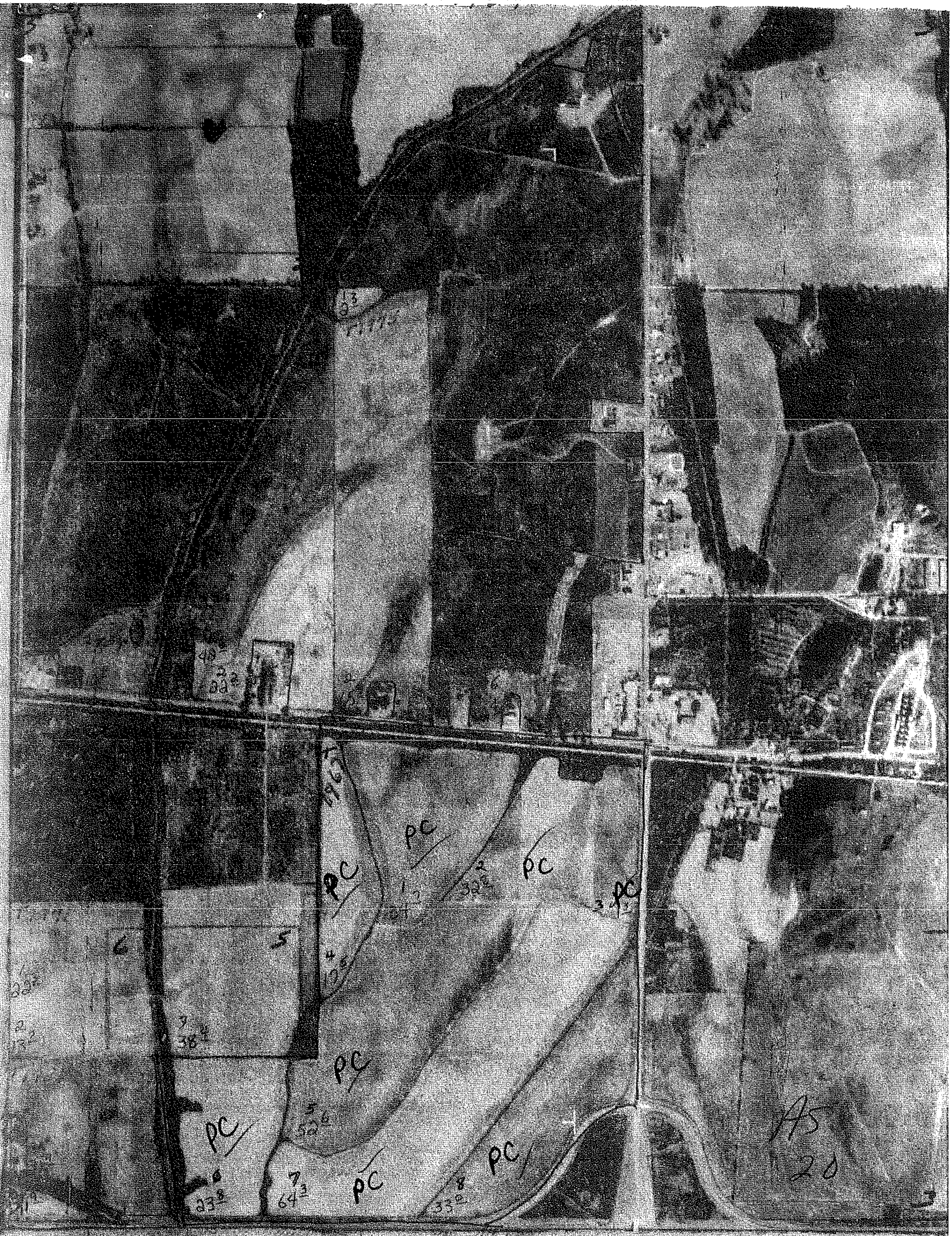


EXHIBIT 6. MAP OF POSSIBLE JURISDICTIONAL FLUME DITCH

APPENDIX A

FARM SERVICE AGENCY
SCS-CPA-028 FORM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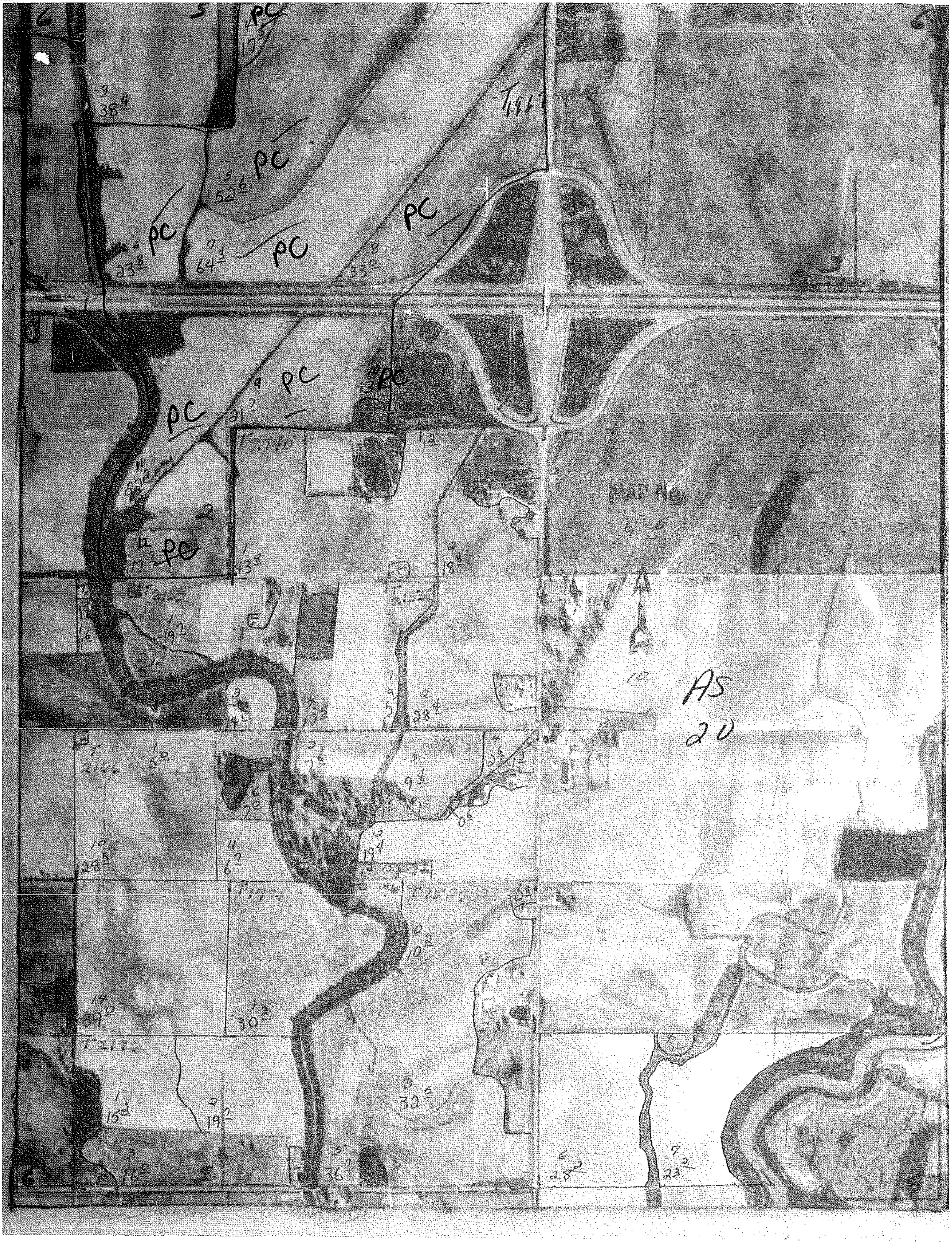
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U.S.D.A.
Soil Conservation Service

SCS-CPA-026
(1-88)

HIGHLY ERODIBLE LAND AND WETLAND CONSERVATION DETERMINATION

1. Name and Address of Person: Ernest T. Greer Jr. Rt 4 Box 227 Rayville, La 71269

2. Date of Request: 2/10/87

3. County: Richland

4. Name of USDA Agency or Person Requesting Determination: ASCS

5. Farm No. and Tract No.: F 1735 T 1967

SECTION I – HIGHLY ERODIBLE LAND

	Yes	No	Field No.(s)	Total Acres
6. Is soil survey now available for making a highly erodible land determination?	✓			
7. Are there highly erodible soil map units on this farm?	✓			
8. List highly erodible fields that, according to ASCS records, were used to produce an agricultural commodity in any crop year during 1981-1985.			—	—
9. List highly erodible fields that have been or will be converted for the production of agricultural commodities and, according to ASCS records, were not used for this purpose in any crop year during 1981-1985; and were not enrolled in a USDA set-aside or diversion program.				

10. This Highly Erodible Land determination was completed in the: Office [✓] Field [ ]

NOTE: If you have highly erodible cropland fields, you may need to have a conservation plan developed for these fields. For further information, contact the local office of the Soil Conservation Service.

SECTION II – WETLAND

	Yes	No	Field No.(s)	Total Wetland Acres
11. Are there hydric soils on this farm?	✓			
List field numbers and acres, where appropriate, for the following EXEMPTED WETLANDS:				
12. Wetlands (W), including abandoned wetlands, or Farmed Wetlands (FW). Wetlands may be farmed under natural conditions. Farmed Wetlands may be farmed and maintained in the same manner as they were prior to December 23, 1985, as long as they are not abandoned.				
13. Prior Converted Wetlands (PC) - The use, management, drainage, and alteration of prior converted wetlands (PC) are not subject to FSA unless the area reverts to wetland as a result of abandonment. You should inform SCS of any area to be used to produce an agricultural commodity that has not been cropped, managed, or maintained for 5 years or more.			1-12	
14. Artificial Wetlands (AW) - Artificial Wetlands includes irrigation induced wetlands. These Wetlands are not subject to FSA.				
15. Minimal Effect Wetlands (MW) - These wetlands are to be farmed according to the minimal effect agreement signed at the time the minimal effect determination was made.				
NON-EXEMPTED WETLANDS:				
16. Converted Wetlands (CW) - In any year that an agricultural commodity is planted on these Converted Wetlands, you will be ineligible for USDA benefits. If you believe that the conversion was commenced before December 23, 1985, or that the conversion was caused by a third party, contact the ASCS office to request a commenced or third party determination.				

17. The planned alteration measures on wetlands in fields ____________ are considered maintenance and are in compliance with FSA.

18. The planned alteration measures on wetlands in fields ____________ are not considered to be maintenance and if installed will cause the area to become a Converted Wetland (CW). See item 16 for information on CW.

19. This wetland determination was completed in the: Office [✓] Field [ ]

20. This determination was: Delivered [ ] Mailed [X] To the Person on Date: 5/26/88

NOTE: If you do not agree with this determination, you may request a reconsideration from the person that signed this form in Block 22 below. The reconsideration is a prerequisite for any further appeal. The request for the reconsideration must be in writing and must state your reasons for the request. The request must be mailed or delivered within 15 days after this determination is mailed to or otherwise made available to you. Please see reverse side of the producer's copy of this form for more information on appeals procedure.

NOTE: If you intend to convert additional land to cropland or alter any wetlands, you must initiate another Form AD-1026 at the local office of ASCS. Abandonment is where land has not been cropped, managed, or maintained for 5 years or more. You should inform SCS if you plan to produce an agricultural commodity on abandoned wetlands.

21. Remarks: Determinations were made on Cropland only. HEL in field 9 is less than 1/3.

✓ 170 —

22. Signature of SCS District Conservationist: RWB [signature]

23. Date: 5/26/88

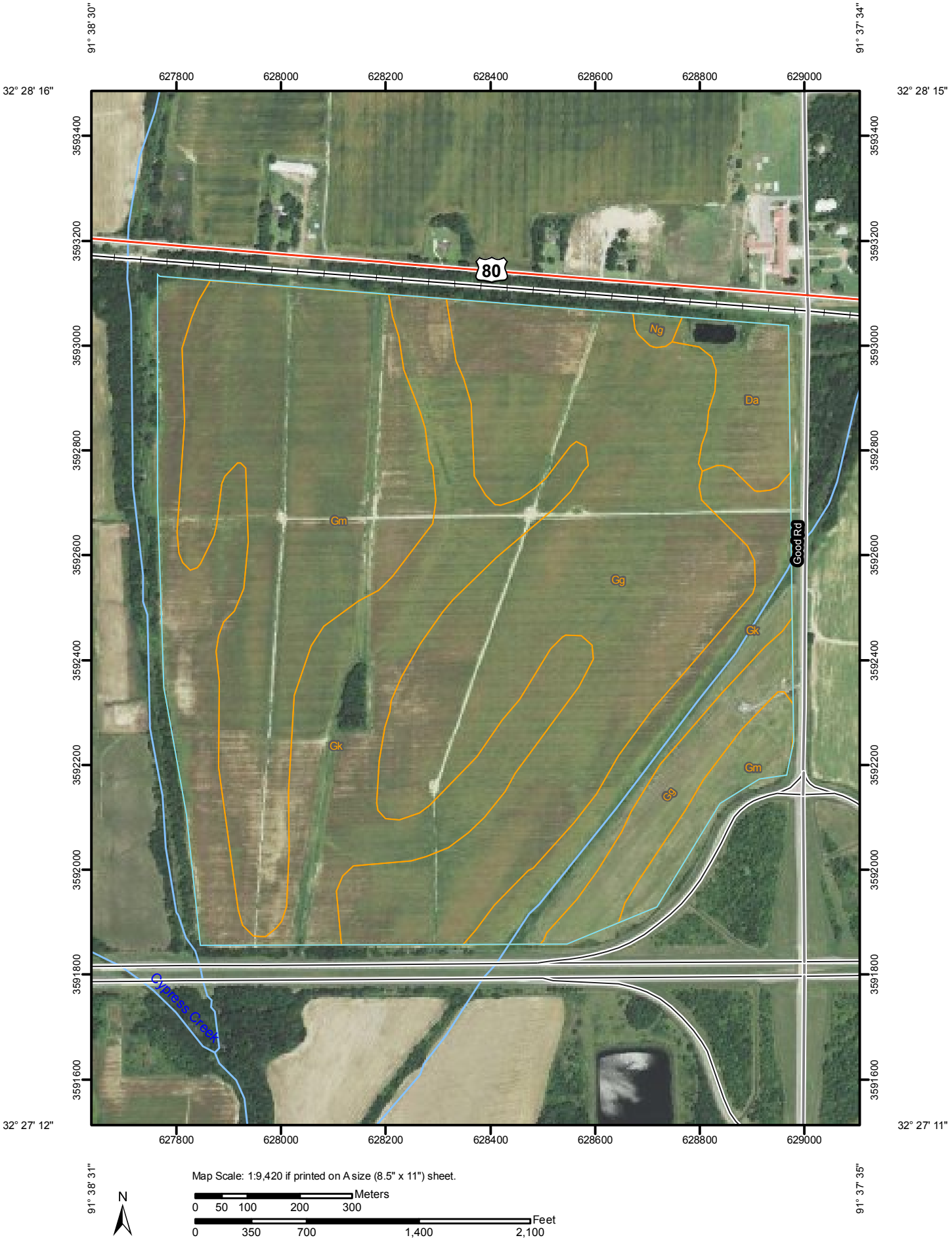
Assistance and programs of the Soil Conservation Service available without regard to race, religion, color, sex, age, handicap, etc.

SCS Copy

APPENDIX B

SOIL SURVEY REPORT

Soil Map—Richland Parish, Louisiana
(Holly Ridge West)



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Units

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other

Special Line Features
- Gully
- Short Steep Slope
- Other

Political Features
- Cities

Water Features
- Streams and Canals

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

MAP INFORMATION

Map Scale: 1:9,420 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:24,000.

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 accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 15N NAD83

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

Soil Survey Area: Richland Parish, Louisiana
Survey Area Data: Version 6, Apr 2, 2008

Date(s) aerial images were photographed: Data not available.

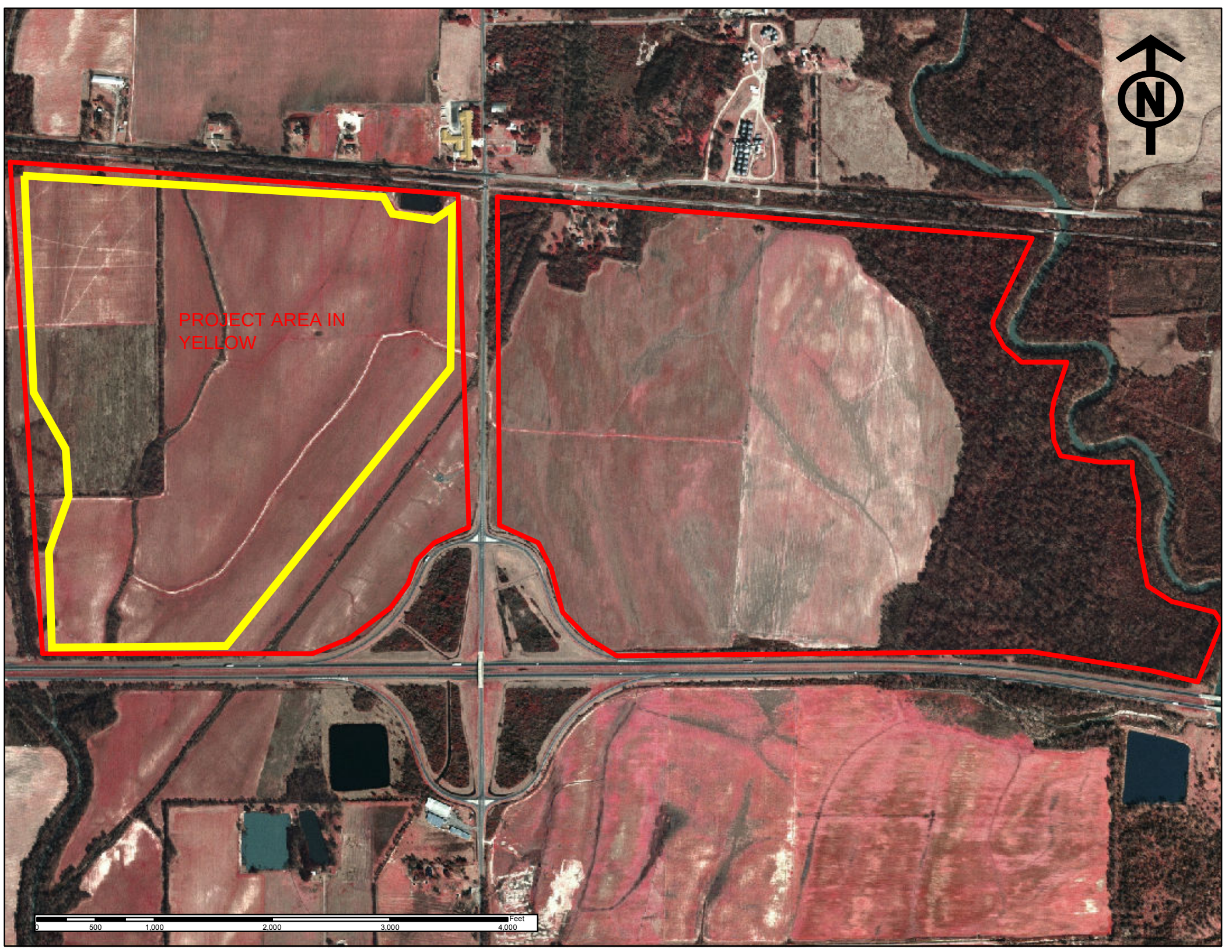
The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Richland Parish, Louisiana (LA083)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
Da	Deerford silt loam	12.2	3.6%
Gg	Gigger-Gilbert silt loams, gently undulating	131.2	38.2%
Gk	Gilbert silt loam	109.8	31.9%
Gm	Gilbert-Egypt silt loams, gently undulating	89.4	26.0%
Ng	Necessity-Gilbert silt loams, gently undulating	1.1	0.3%
Totals for Area of Interest		**343.7**	**100.0%**

APPENDIX C

2004 COLOR INFRARED PHOTOGRAPHY


PROJECT AREA IN YELLOW
N
0
500
1,000
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APPENDIX D

Historically Aerial Photography

12/28/2003

Holly Ridge

80

183

Pettit Rd

Holloway Rd

Image U.S. Geological Survey

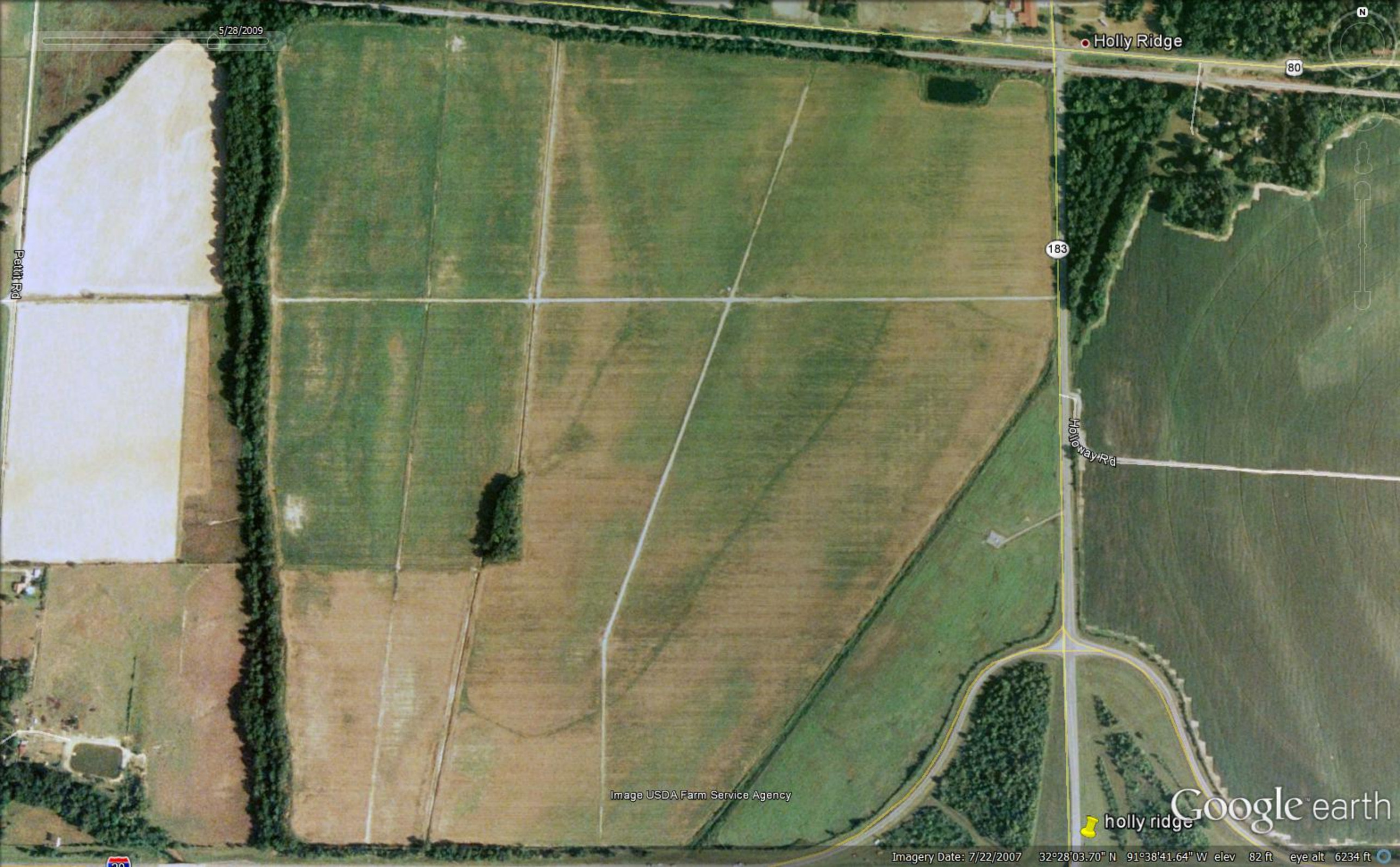
holly ridge

Google earth

Imagery Date: 2/11/1998 32°27'43.11" N 91°38'00.12" W elev 81 ft eye alt 6234 ft


9/18/2005
Holly Ridge
80
183
Pettit Rd
Holloway Rd
Image U.S. Geological Survey
holly ridge
Google earth
Imagery Date: 2/20/2004 32°28'03.75" N 91°38'41.37" W elev 82 ft eye alt 6234 ft

9/7/2007 9/7/2007
1998 2012
Holly Ridge
80
183
Pettit Rd
Holloway Rd
Image USDA Farm Service Agency
holly ridge
Google earth
Imagery Date: 6/25/2006 32°28'03.60" N 91°38'41.46" W elev 82 ft eye alt 6234 ft


5/28/2009
Holly Ridge
80
183
Pettit Rd
Holloway Rd
Image USDA Farm Service Agency
holly ridge
Google earth
Imagery Date: 7/22/2007 32°28'03.70" N 91°38'41.64" W elev 82 ft eye alt 6234 ft

11/19/2010

Holly Ridge

80

183

Pettit Rd

Holloway Rd

Image USDA Farm Service Agency

holly ridge

Google earth

Imagery Date: 5/17/2009 32°28'03.70" N 91°38'42.63" W elev 82 ft eye alt 6234 ft


8/9/2012
Holly Ridge
80
183
Pettit Rd
Holloway Rd
Image USDA Farm Service Agency
holly ridge
Google earth
Imagery Date: 12/31/2009 32°27'43.11" N 91°38'00.12" W elev 81 ft eye alt 6234 ft

11/7/2012
1998
2012
Holly Ridge
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Pettit Rd
Holloway Rd
holly ridge
Google earth
Imagery Date: 11/7/2012 32°28'04.09" N 91°38'41.23" W elev 82 ft eye alt 6234 ft

APPENDIX E

USFWS NATIONAL WETLAND MAPPING

U.S. Fish and Wildlife Service
National Wetlands Inventory

sites 2&3

Mar 27, 2013

Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

User Remarks:

APPENDIX F

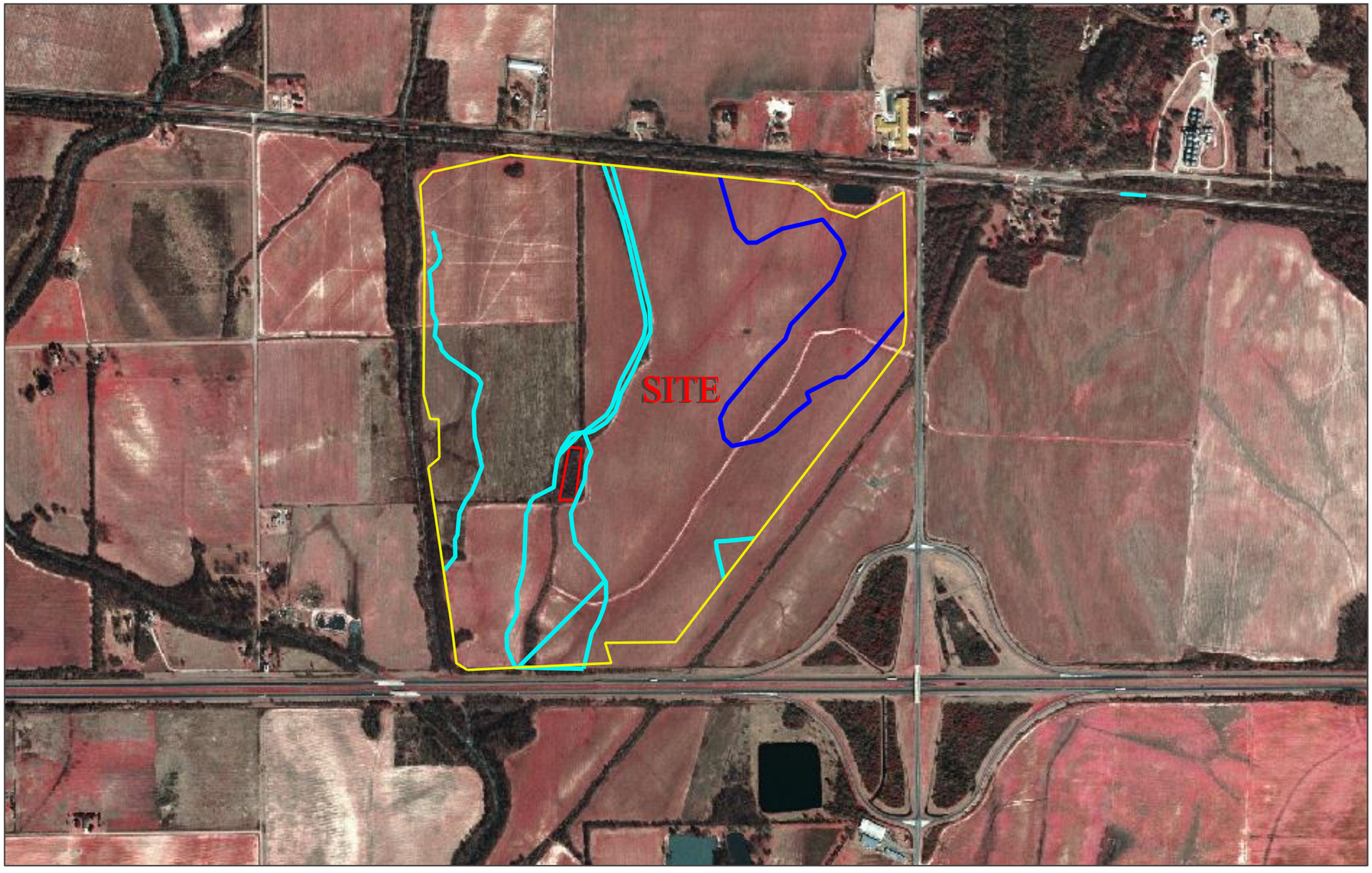
FEMA 100-YEAR FLOODPLAIN MAPS

AREA: 282.8 ACRES

WETLANDS: 1.15 ACRES

ABOVE 100 YEAR FLOOD: 34.3 ACRES

AREA ABOVE NEW FLOOD ZONE (EFFECTIVE 9/13): 232.1 ACRES



LEGEND

PROPERTY BOUNDARY

ZONE A: 100 YEAR FLOOD AREAS
NO BASE FLOOD ELEVATION DETERMINED.
SOURCE, FEMA, FLOOD INSURANCE MAP, RICHLAND PARISH, 1998

ZONE A: 100 YEAR FLOOD AREAS
NO BASE FLOOD ELEVATION DETERMINED.
SOURCE, FEMA, FLOOD INSURANCE STUDY, RICHLAND PARISH, 2009, PROJECTED EFFECTIVE, SEPT. 2013

0 500' 1000' 1 MILE

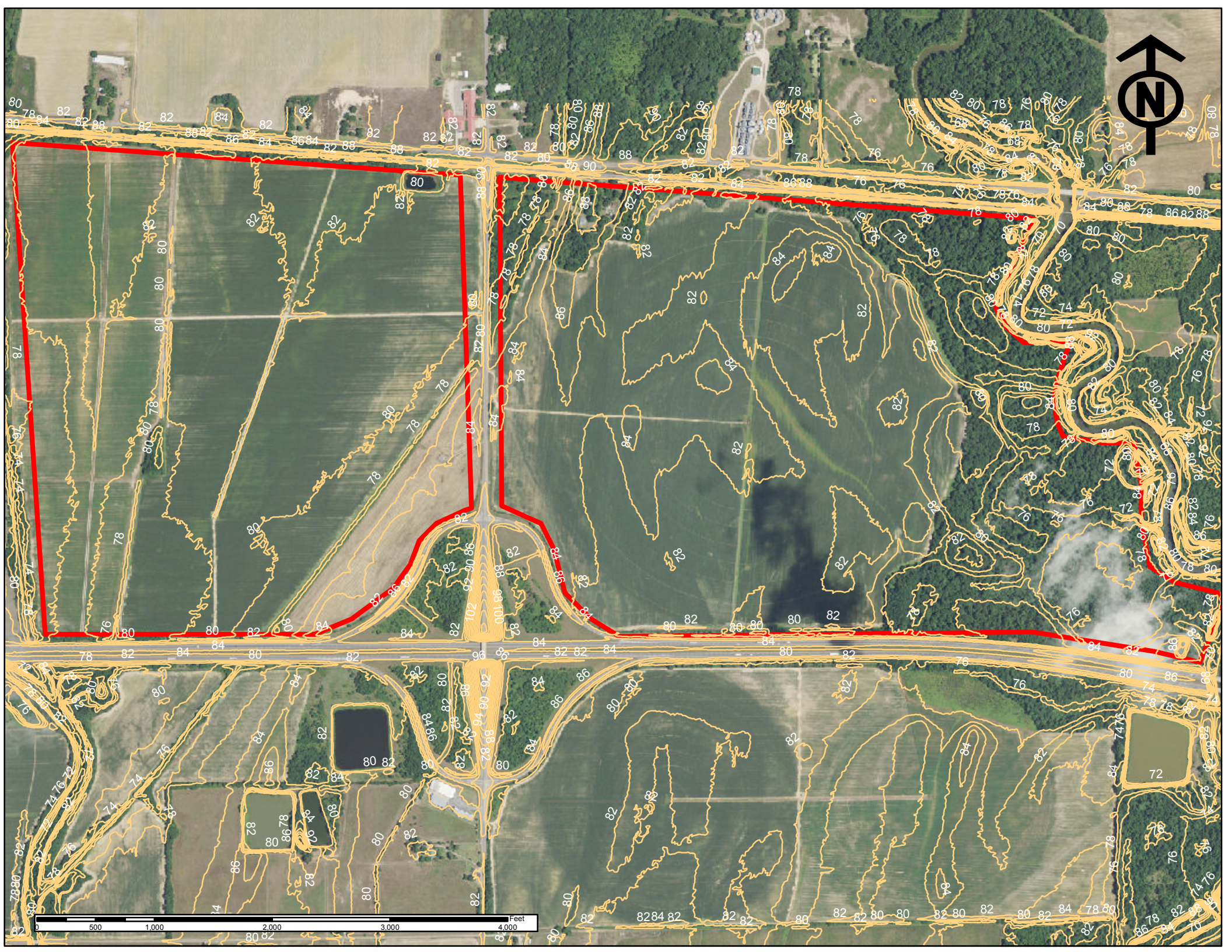
NORTHEAST LOUISIANA ECONOMIC ALLIANCE
NELEA

LED LOUISIANA ECONOMIC DEVELOPMENT

Prepared By
DENMON ENGINEERING
ENGINEERS AND SURVEYORS
114 VENABLE LANE
MONROE, LOUISIANA 71203

APPENDIX G

LIDAR DATA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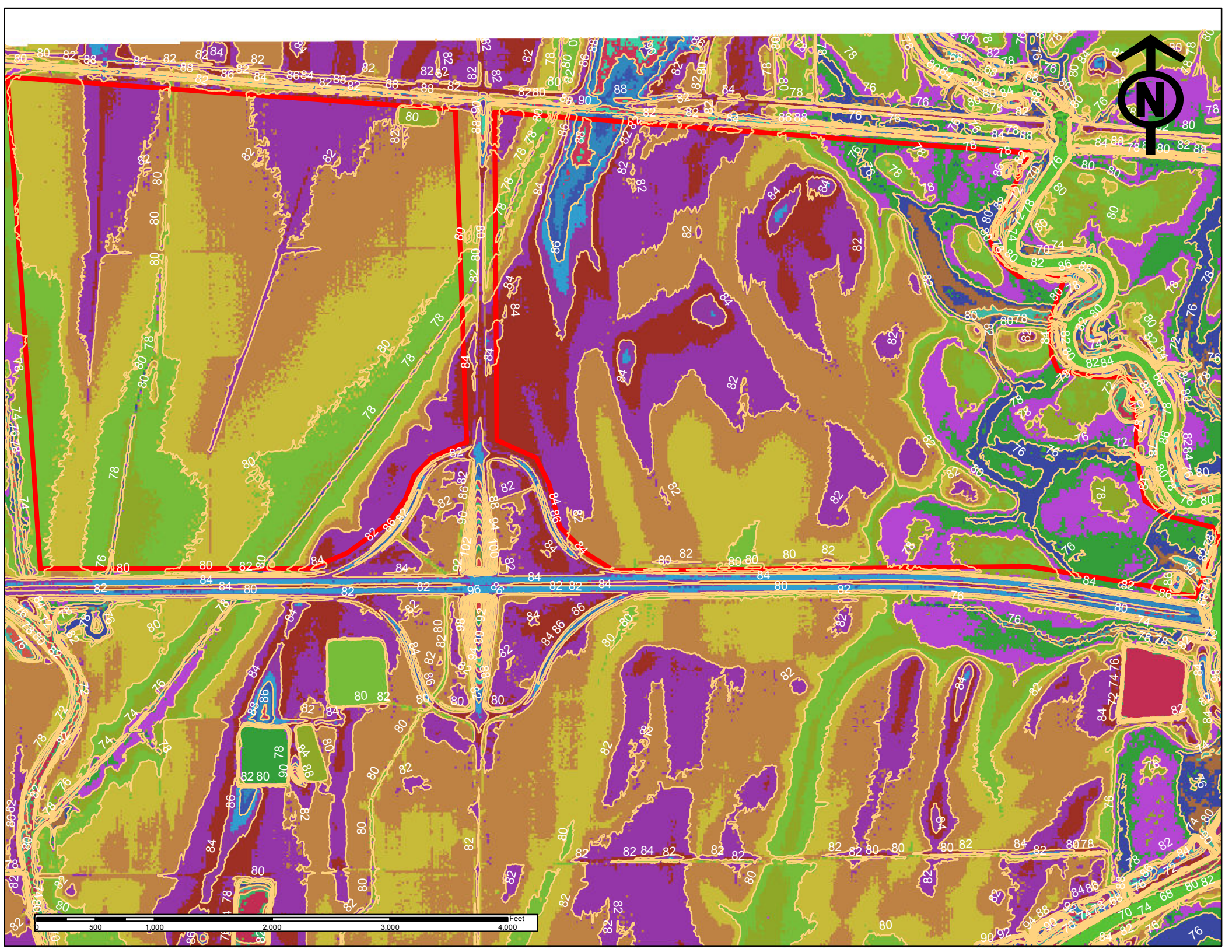
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APPENDIX H

DATA FORMS

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Holly Ridge West City/County: Richland Sampling Date: 3-28-13

Applicant/Owner: Fred Franklin State: LA Sampling Point: UP1

Investigator(s): Mr. Bill McAbee Section, Township, Range: S7 T17N R8E

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR or MLRA): _____ Lat: N32 27' 38.64" Long: W91 38' 11.47" Datum: WGS84

Soil Map Unit Name: _____ NWI classification: upland

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

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No ____

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

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

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

Remarks:

Rainfall is lower than normal for this month.

This forested block has been drained by surrounding 6' deep ditches for at least the past 5 years.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ____ No ✔ Depth (inches): _____

Water Table Present? Yes ____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes ____ No ✔

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: UP1

Tree Stratum (Plot sizes: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus nigra	25	yes	FAC
2. Celtis laevigatus	40	yes	FAC
3. Gleditsia triacanthos	15	no	FAC
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling Stratum ( )			
1. Q. nigra	5	yes	FAC
2. Juniperus virginiana	5	yes	FACU
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Shrub Stratum (30)			
1. Ligustrum sinense	25	yes	FAC
2. Sabal minor	15	yes	FACW
3. Rubus argutus	5	no	FACU
4.			
5.			
6.			
7.			
	0	= Total Cover	
Herb Stratum (30)			
1. Lonicera japonica	20	yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	65	= Total Cover	
Woody Vine Stratum ( )			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) 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, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** ✔ **No** ☐

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

SOIL

Sampling Point: UP1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR5/3	80	10YR 4/2	20	C	M	laomy silt	
8-16	10YR4/2	80	10YR5/8	20	C	M	loamy silt	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☑ **No** ☐

Remarks: