



## MEMORANDUM

To: Jake Clay  
Anamite Solar, LLC  
Ashley Payne  
From: Keller Leet-Otley  
Kimley-Horn and Associates, Inc.  
Date: June 3, 2025  
Subject: Plato Township, Kane County, Illinois – Anamite Solar, LLC Level 1 Wetland  
Delineation Memorandum

---

## INTRODUCTION

Kimley-Horn was contracted by Anamite Solar, LLC to review the Anamite Solar, LLC project study area for potential wetlands and waterways. See Figure 1 for project location and Figure 2 for the project study area boundary. The project study area is located in Plato Township, Kane County, Illinois. The study area is approximately 62 acres in size and is located in Sections 23 and 24 of Township 41N, Range 7E. Kimley-Horn reviewed available background data to assist in determining if there are any potential wetlands and waterways within the study area.

## AVAILABLE BACKGROUND DATA:

Kimley-Horn reviewed available topographic maps, the National Wetlands Inventory (NWI), the National Hydrography Dataset (NHD), LiDAR, soil survey data, public waters, floodplain data, and aerial photography to identify potential wetlands or surface waters within the study area vicinity.

### *U.S. Geological Survey (USGS) Topographical Map*

A review of the Pingree Grove, Illinois 7.5-minute topographical quadrangle depicted agricultural land within the study area. The study area is identified as undeveloped land. The USGS topographical map is presented as Figure 3.

### *National Wetlands Inventory (NWI)*

Based on a review of the U.S. Fish and Wildlife Service (USFWS) NWI,<sup>1</sup> portions of two wetland features are present within the study area. The NWI-mapped features include two freshwater emergent wetlands (PEM1Ad and PEM1C). The NWI-mapped features are presented on Figure 4.

### *USGS National Hydrography Dataset (NHD)*

Based on a review of the USGS NHD,<sup>2</sup> no flowline segments or waterbodies transect the study area. The NHD-mapped resources are presented on Figure 4.

---

<sup>1</sup> USFWS. 2022. National Wetlands Inventory. Vector Digital Data. Published October 6, 2022.

<sup>2</sup> USGS. 2022. National Hydrography Dataset. Vector Digital Data. Published December 27, 2023.

### *2-ft LiDAR Contours*

Two-foot contours<sup>3</sup> were reviewed to determine if any wetland areas or drainage swales may be present on the study area. The 2-foot contours are presented on Figure 5.

### *Kane County Soil Survey*

A review of the Kane County soil survey via the Soil Survey Geographic (gSSURGO) database<sup>4</sup> identified 9 soil types within the study area. Approximately 47 percent of the study area is mapped with a predominantly hydric soils rating of 100 percent. These areas are generally located in the vicinity of NWI-mapped and NHD-mapped feature and depression identified with 2-ft contours. The remainder of the study area is mapped with a predominantly non-hydric soils rating at or below 10 percent, or a non-hydric soils rating of 0 percent. Hydric soils rating data are presented on Figure 6.

### *Illinois Department of Natural Resources (IDNR) Public Waters Inventory*

A review of the IDNR Public Waters Inventory<sup>5</sup> was completed. No IDNR Public Waters are located within the project vicinity.

### *FEMA Floodplain*

The Federal Emergency Management Agency (FEMA) National Flood Hazard Layer (NFHL) Viewer<sup>6</sup> was reviewed to determine if any FEMA 100-year floodplain is located within the project study area. Based on Panel 17089C0144H (effective August 3, 2009), the southwestern portion of the study area is located within Zone A of the FEMA 100-year floodplain. The FEMA floodplain data are presented on Figure 7.

### *Previous Study Area Disturbance*

Historic aerials from 1993 to 2021 were reviewed to determine previous land use and disturbance on the study area and are presented in Attachment A. Several potential wetlands and linear drainage features were visible on the reviewed historic aerials, see comments in Table 1. The study area has been used for agricultural purposes since at least 1993.

**Table 1. Project Study Area Historic Aerial Review**

Year	Land Use	3-month Antecedent Precipitation Conditions	Comments
1993	Agricultural	Normal	Study area consists of cropped agricultural field with a non-cropped area in the southwestern portion of the study area. A wet area is visible in northeastern portion of study area along with potential linear features in central portion of the study area.
1999	Agricultural	Normal	Study area consists of cropped agricultural field with a non-cropped area in the southwestern portion of

<sup>3</sup> USGS. 2021. USGS 1 Meter DEM Panels. Published December 8, 2022.

<sup>4</sup> NRCS. 2022. National Soil Survey Geographic (gSSURGO). Illinois. Vector Digital Data. Published September 7, 2022.

<sup>5</sup> IDNR. 2023. Illinois Public Waters. Available online at

<https://idnr.maps.arcgis.com/apps/webappviewer/index.html?id=b64decfb69504164a46badb2841ebb11>

<sup>6</sup> USGS. FEMA National Flood Hazard Layer Viewer. Available online at <https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd>

Year	Land Use	3-month Antecedent Precipitation Conditions	Comments
			the study area. A wet area is visible in the northern portion of study area.
2002	Agricultural	Drier than Normal	Study area consists of cropped agricultural field with a non-cropped area in the southwestern portion of the study area. A wet area is visible in the northeastern portion of study area along with potential linear drainage features in central portion of the study area.
2005	Agricultural	Normal	Study area consists of cropped agricultural field with a non-cropped area in the southwestern portion of the study area. Multiple wet areas are visible in the central portion of study area along with potential linear drainage features in central portion of the study area.
2006	Agricultural	Normal	Study area consists of cropped agricultural field with a non-cropped area in the southwestern portion of the study area.
2007	Agricultural	Normal	Same comment as above.
2008	Agricultural	Normal	Same comment as above.
2009	Agricultural	Wetter than Normal	Study area consists of cropped agricultural field with a non-cropped area in the southwestern portion of the study area. Multiple wet areas are visible in the central portion of study area.
2010	Agricultural	Normal	Study area consists of cropped agricultural field with a non-cropped area in the southwestern portion of the study area. A wet area is visible in the central portion of the study area.
2011	Agricultural	Wetter than Normal	Same comment as above.
2017	Agricultural	Wetter than Normal	Same comment as above.
2018	Agricultural	Normal	Study area consists of cropped agricultural field with a non-cropped area in the southwestern portion of the study area. Multiple wet areas are visible in the central portion of study area along with potential linear drainage features in central portion of the study area.
2020	Agricultural	Wetter than Normal	Same comment as above.
2021	Agricultural	Drier than Normal	Same comment as above.

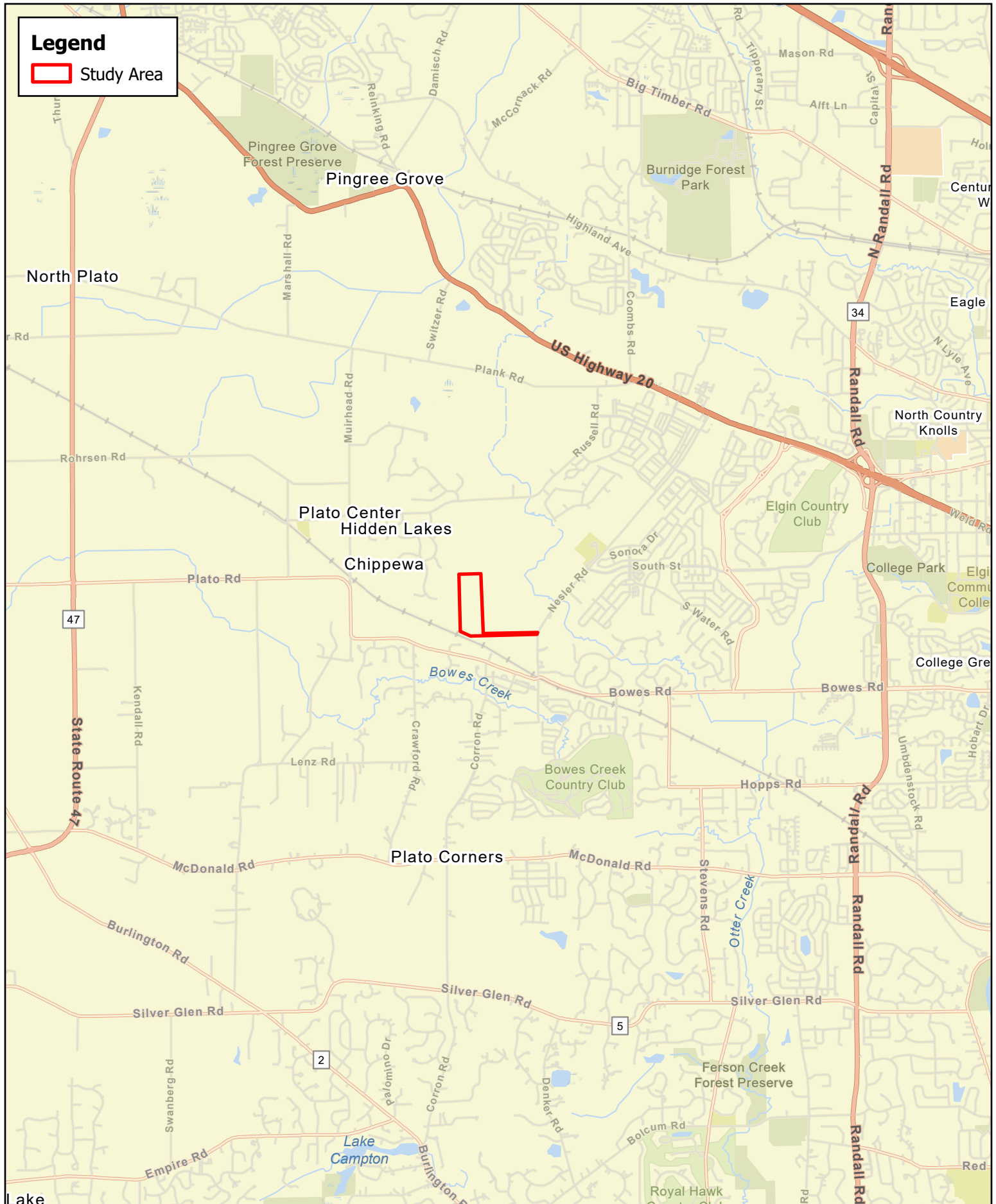
Three potential linear features and four areas of continued stunted or stressed vegetation were visible on the reviewed historic aerials.

### **CONCLUSIONS AND RECOMMENDATIONS:**

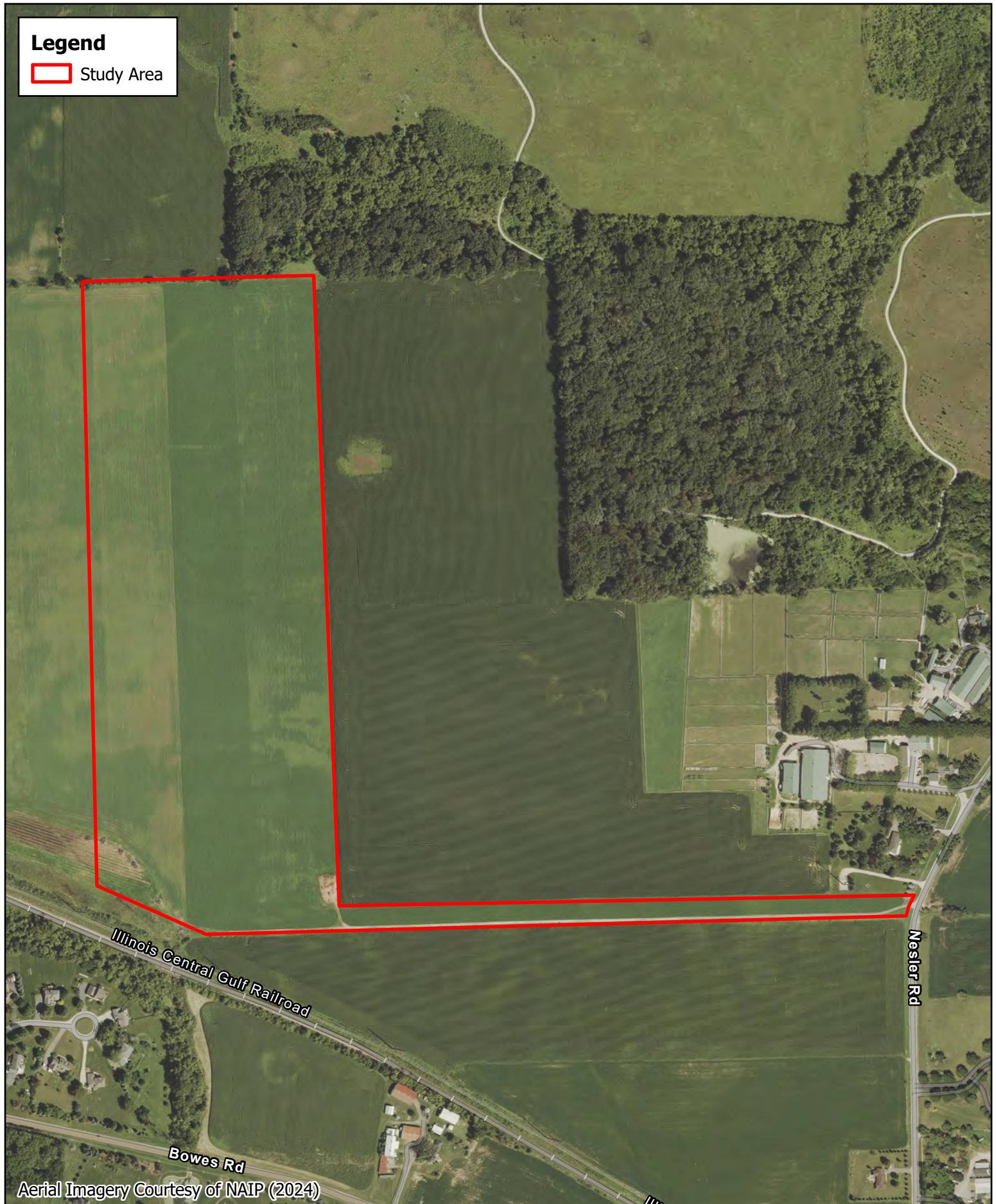
Based on the Level 1 Wetland Delineation, Kimley-Horn identified four potential linear drainage features and four potential agricultural wetlands in the study area (see Figure 8). A level 2 (field) wetland delineation is recommended to confirm the extents of wetlands and waterways within the project study area.



# Figures

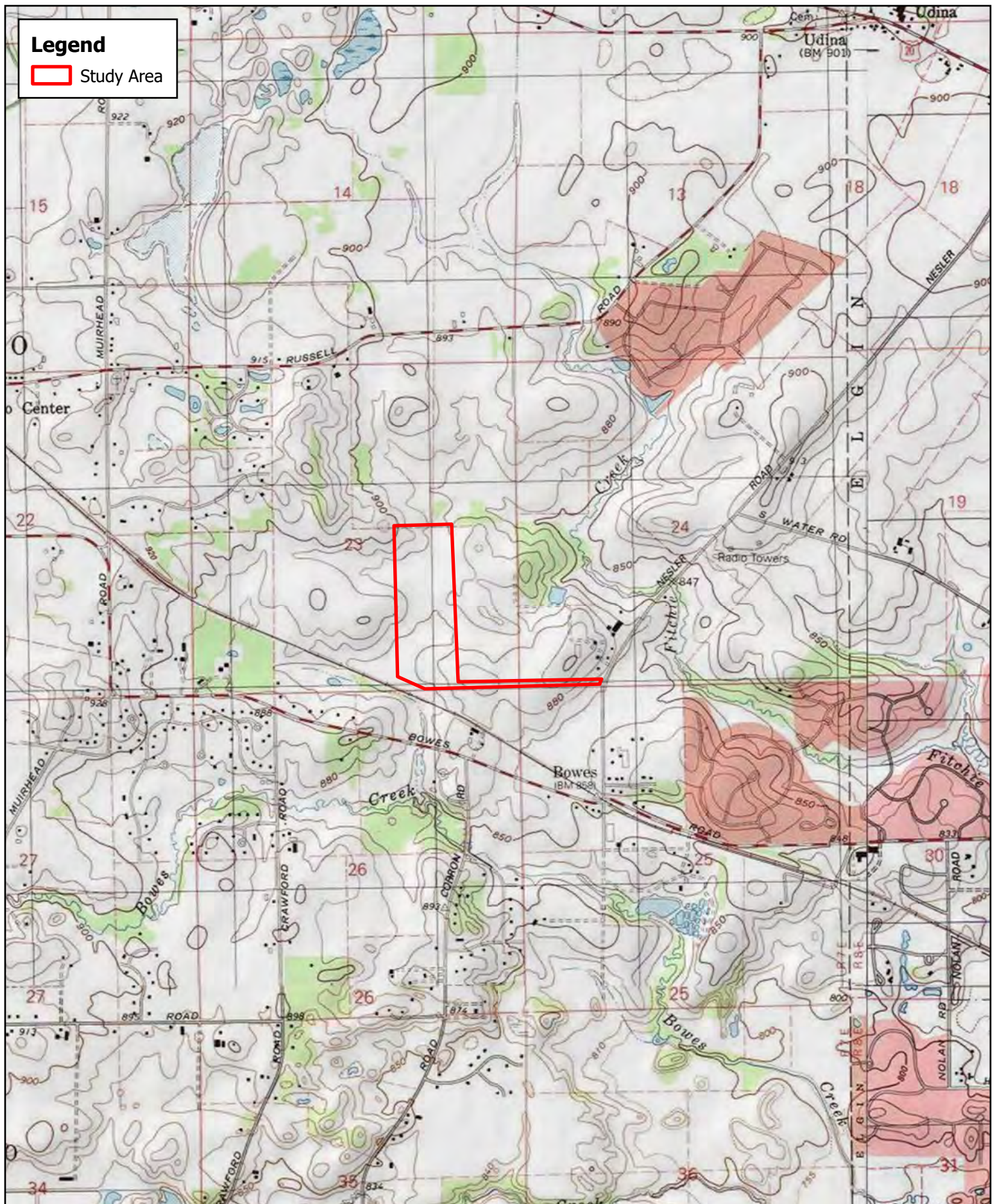




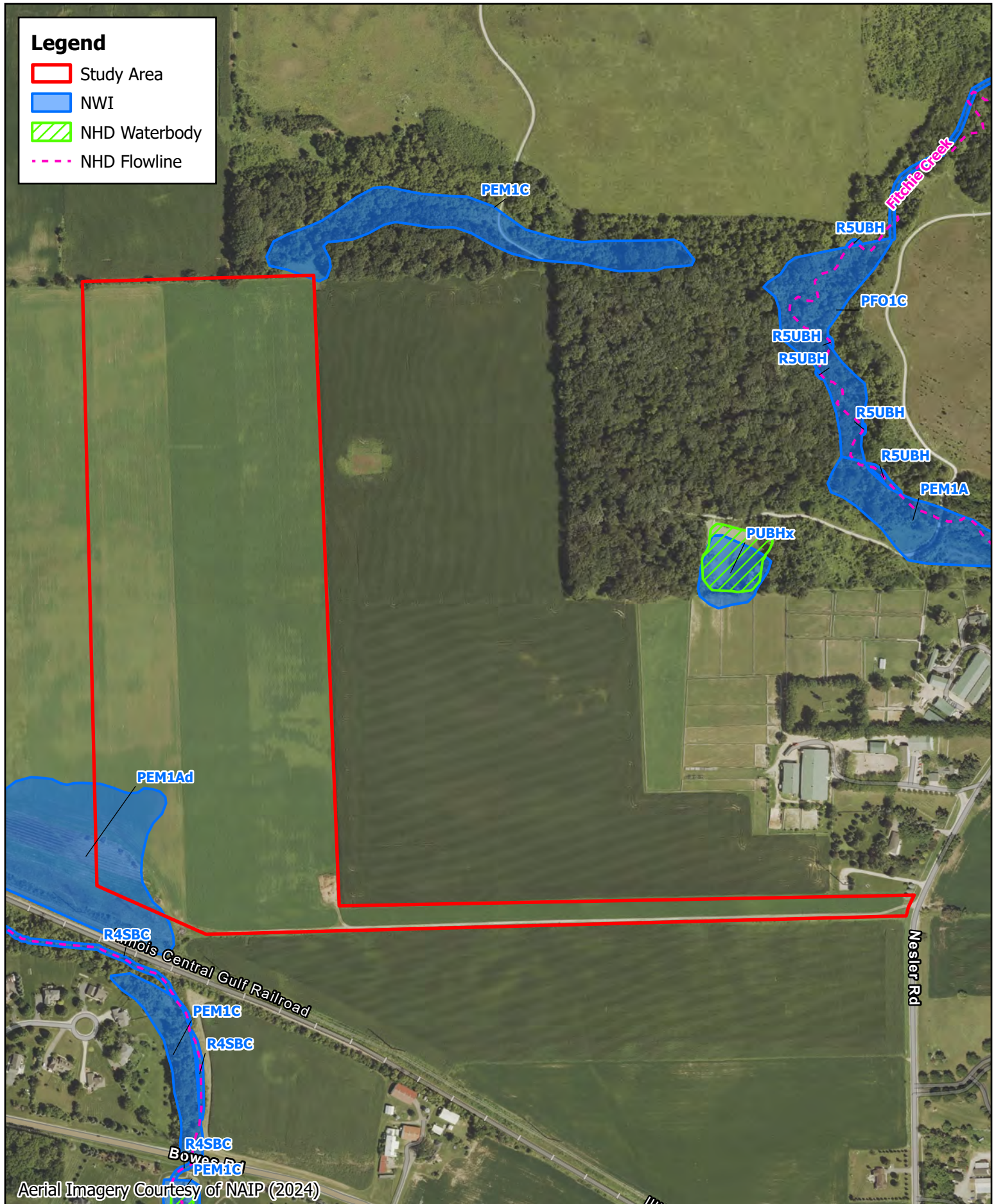


**Figure 2. Study Area Boundary**  
Plato Township, Kane County  
Anamite Solar, LLC

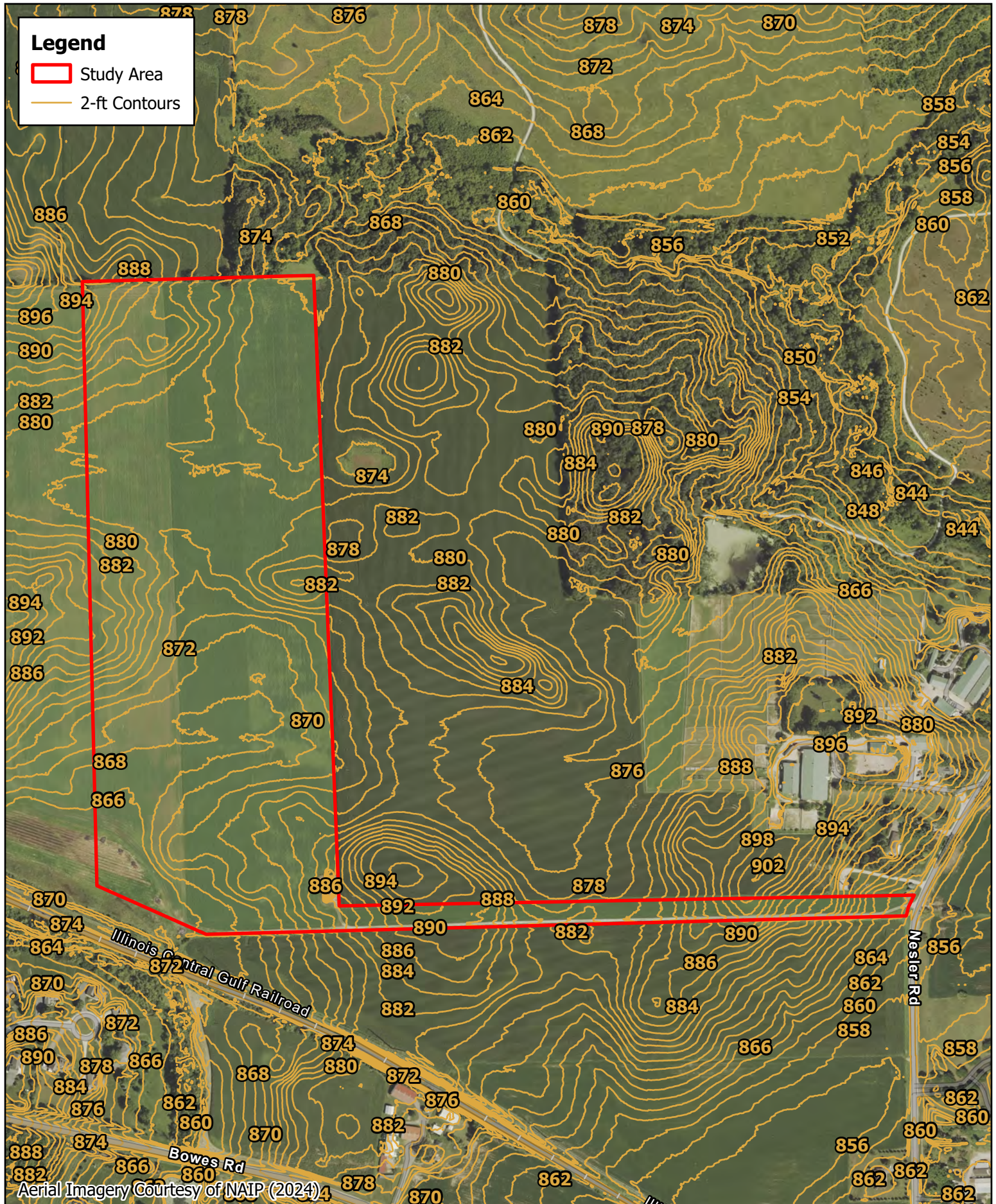














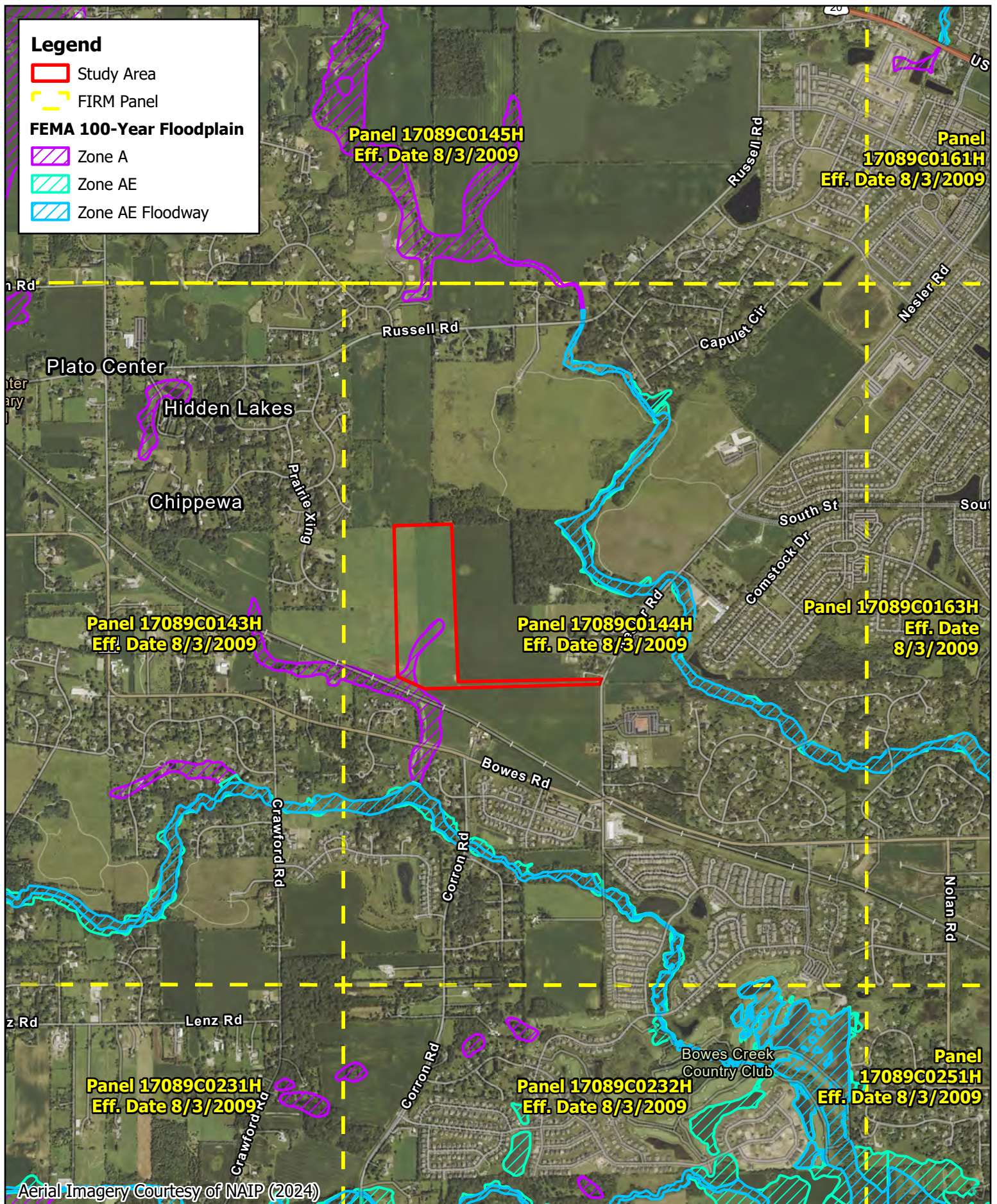


**Figure 6. Hydric Soils**  
Plato Township, Kane County  
Anamite Solar, LLC

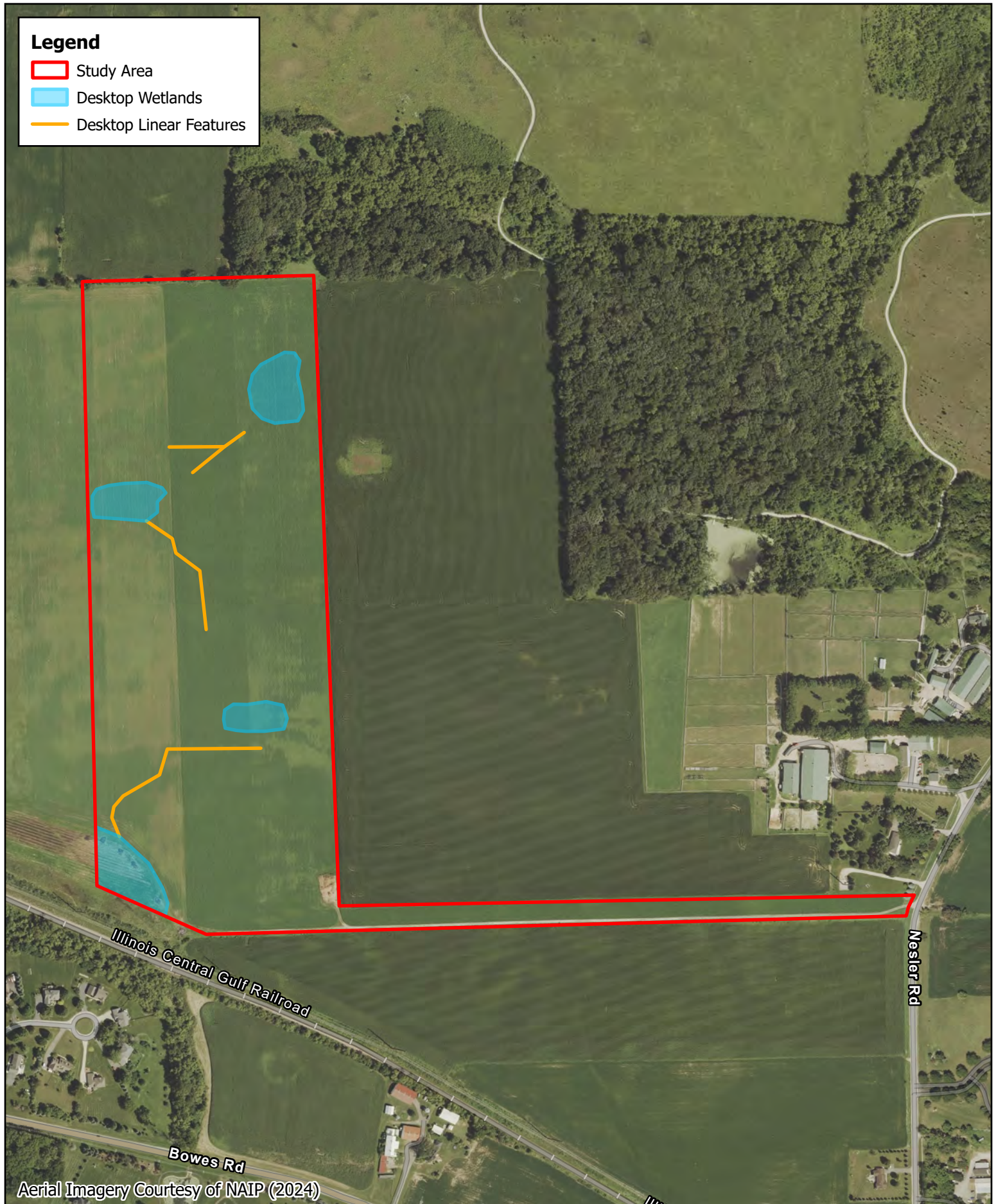
## Hydric Rating by Map Unit

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
152A	Drummer silty clay loam, 0 to 2 percent slopes	100	28.5	45.6%
210A	Lena muck, 0 to 2 percent slopes	100	0.9	1.4%
325B	Dresden silt loam, 2 to 4 percent slopes	4	9.5	15.3%
327B	Fox silt loam, 2 to 4 percent slopes	0	6.6	10.5%
327C2	Fox silt loam, 4 to 6 percent slopes, eroded	0	10.6	16.9%
348C2	Wingate silt loam, 5 to 10 percent slopes, eroded	3	2.7	4.3%
527B	Kidami silt loam, 2 to 4 percent slopes	6	1.6	2.6%
527C2	Kidami loam, 4 to 6 percent slopes, eroded	6	0.6	1.0%
527D2	Kidami loam, 6 to 12 percent slopes, eroded	6	1.5	2.5%
<b>Totals for Area of Interest</b>			<b>62.5</b>	<b>100.0%</b>









**Figure 8. Desktop Resources**  
Plato Township, Kane County  
Anamite Solar, LLC

# **ATTACHMENT A**

## Historic Aerials



**Legend**

 Study Area




Aerial Imagery Courtesy of Google Earth





**Legend**

 Study Area

Aerial Imagery Courtesy of Google Earth



**Legend**

 Study Area



Aerial Imagery Courtesy of Google Earth



**Legend**

 Study Area



Aerial Imagery Courtesy of Google Earth



**Legend**

 Study Area



Aerial Imagery Courtesy of Google Earth



**Legend**

 Study Area

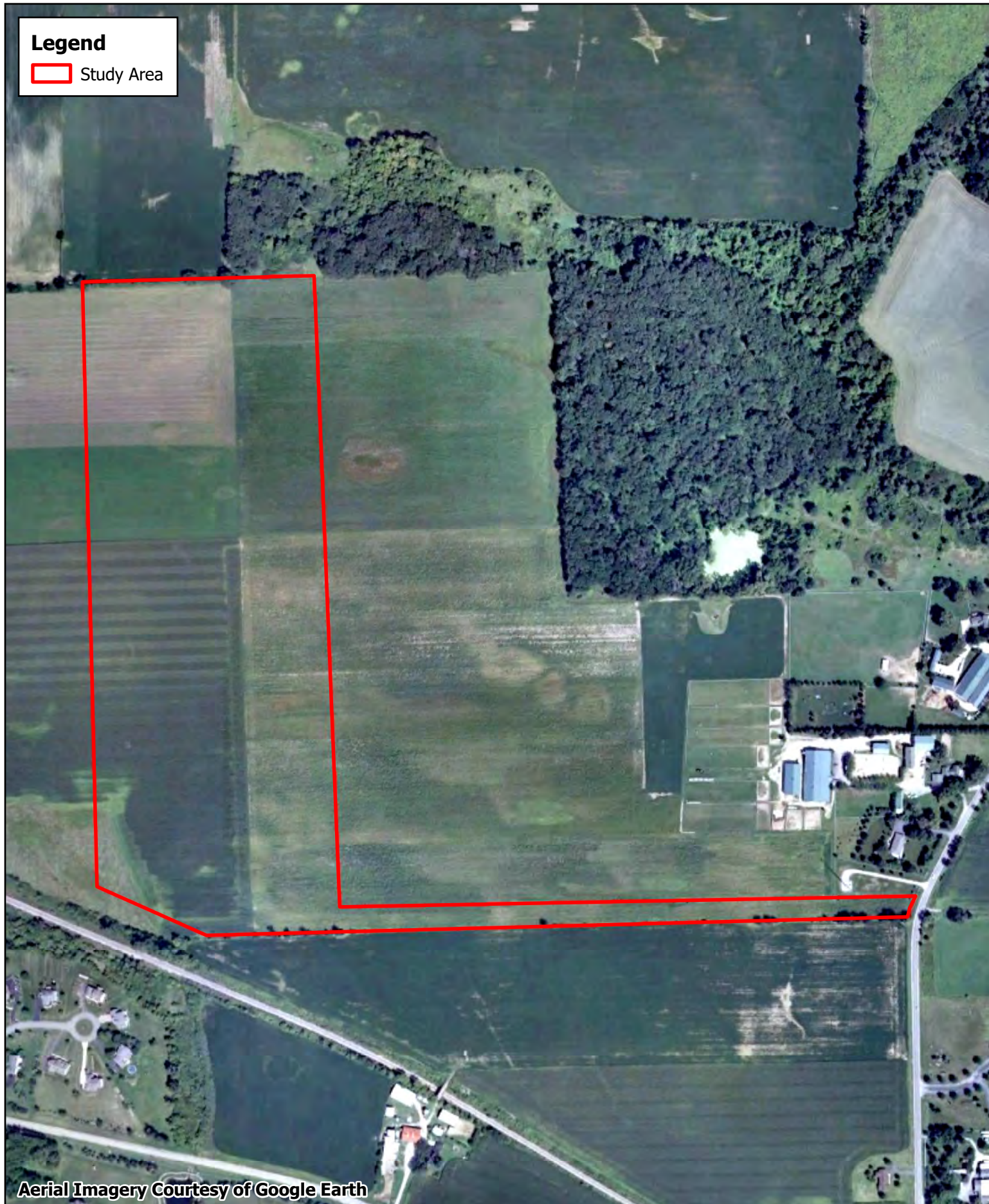


Aerial Imagery Courtesy of Google Earth



**Legend**

 Study Area



Aerial Imagery Courtesy of Google Earth



**Legend**

 Study Area

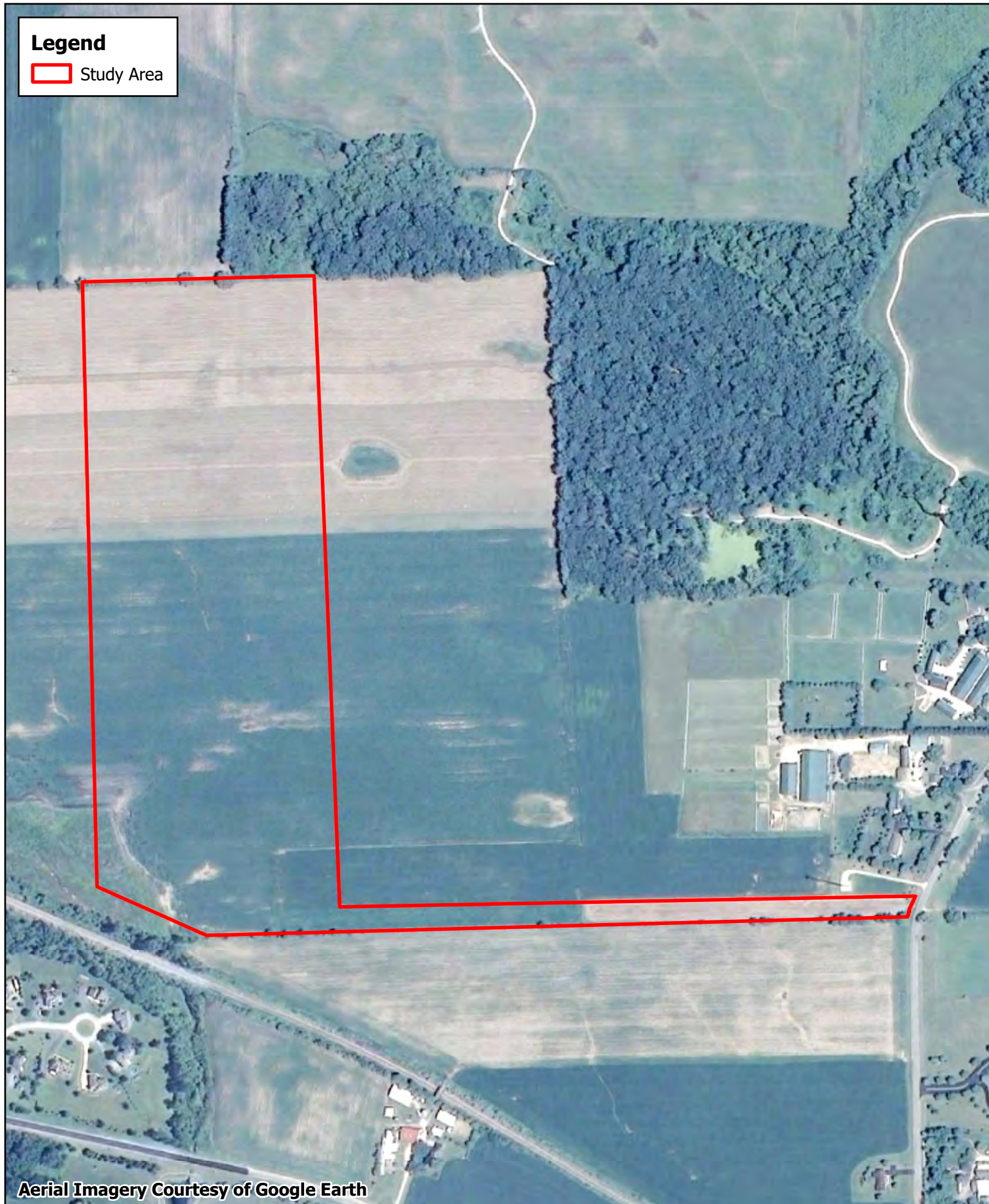


Aerial Imagery Courtesy of Google Earth



**Legend**

 Study Area

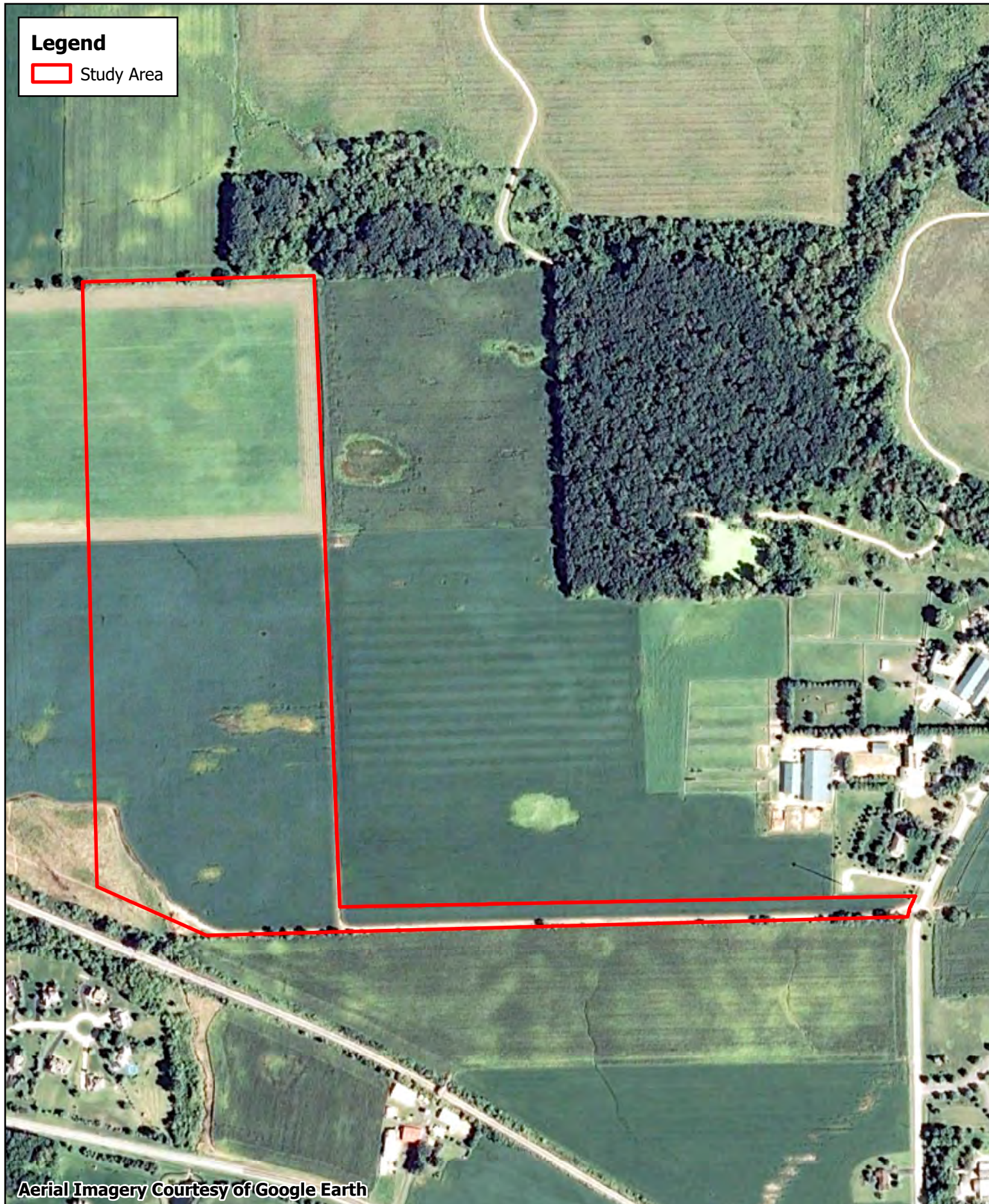


Aerial Imagery Courtesy of Google Earth



**Legend**

 Study Area



Aerial Imagery Courtesy of Google Earth



**Legend**

 Study Area

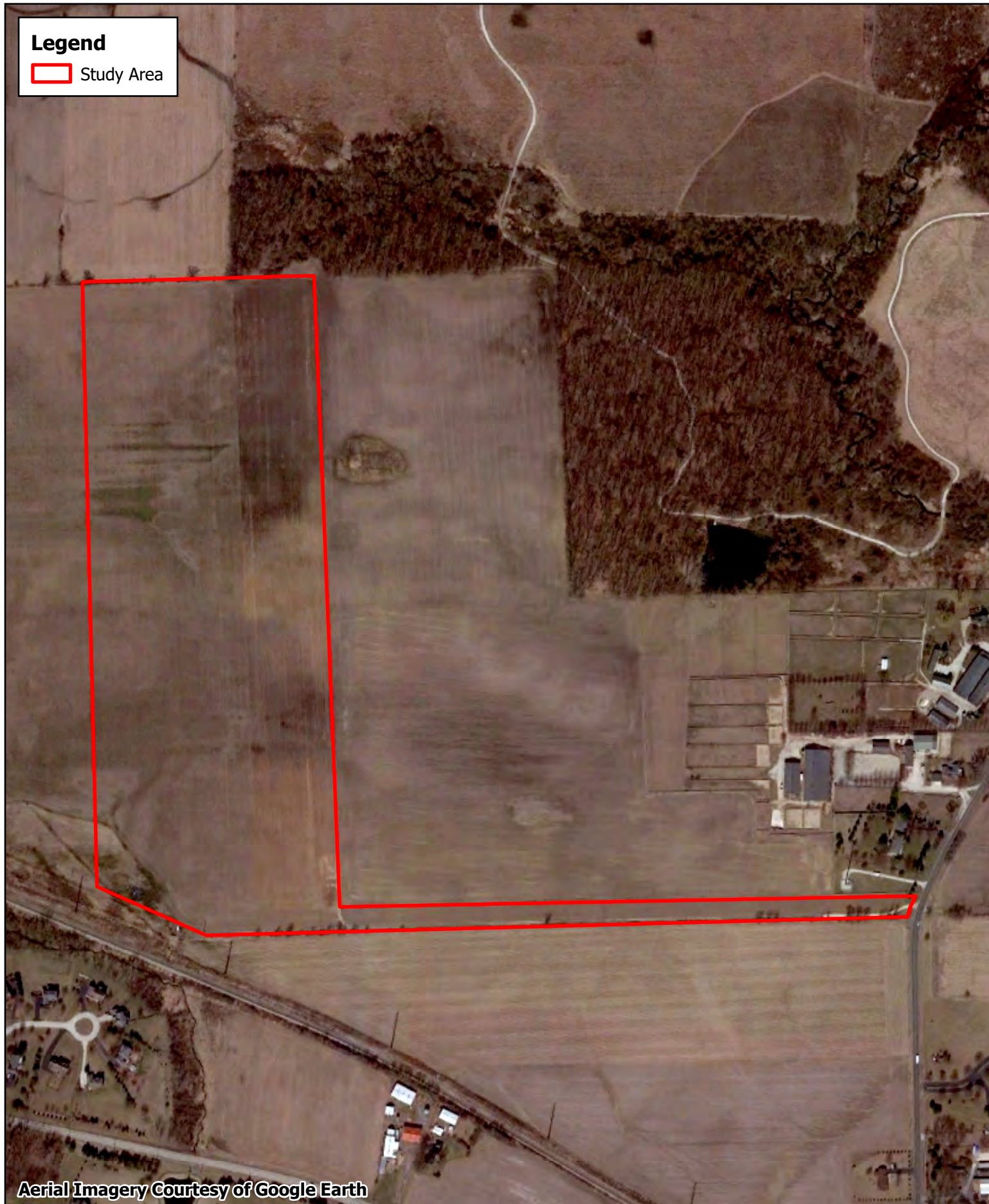


Aerial Imagery Courtesy of Google Earth



**Legend**

 Study Area




Aerial Imagery Courtesy of Google Earth





**Legend**

 Study Area

Aerial Imagery Courtesy of Google Earth



**Legend**

 Study Area



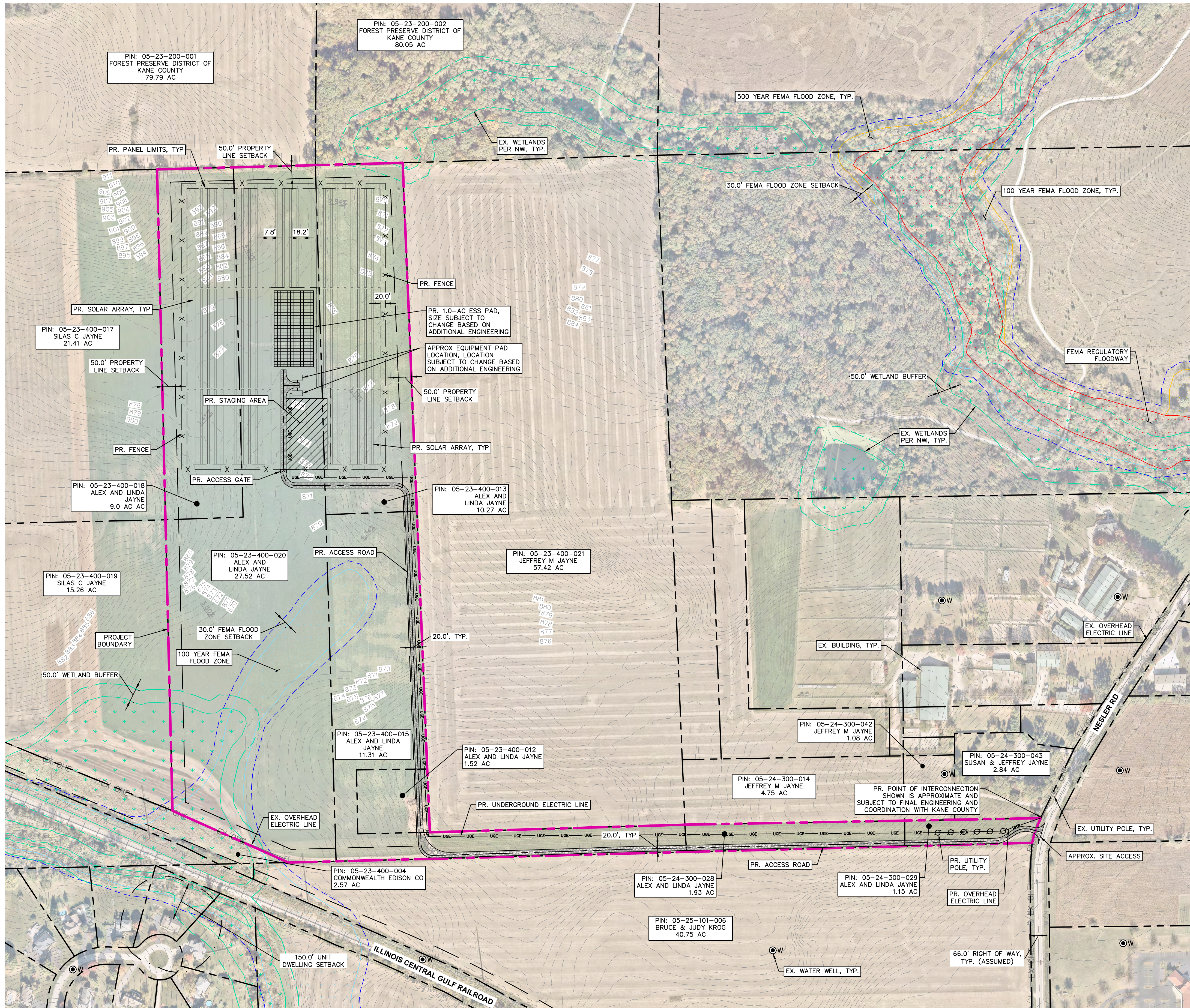
Aerial Imagery Courtesy of Google Earth

# **ATTACHMENT B**

## **Site Plan**

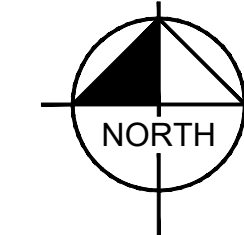


This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kinley-Horn and Associates, Inc. shall be without liability to Kinley-Horn and Associates, Inc.

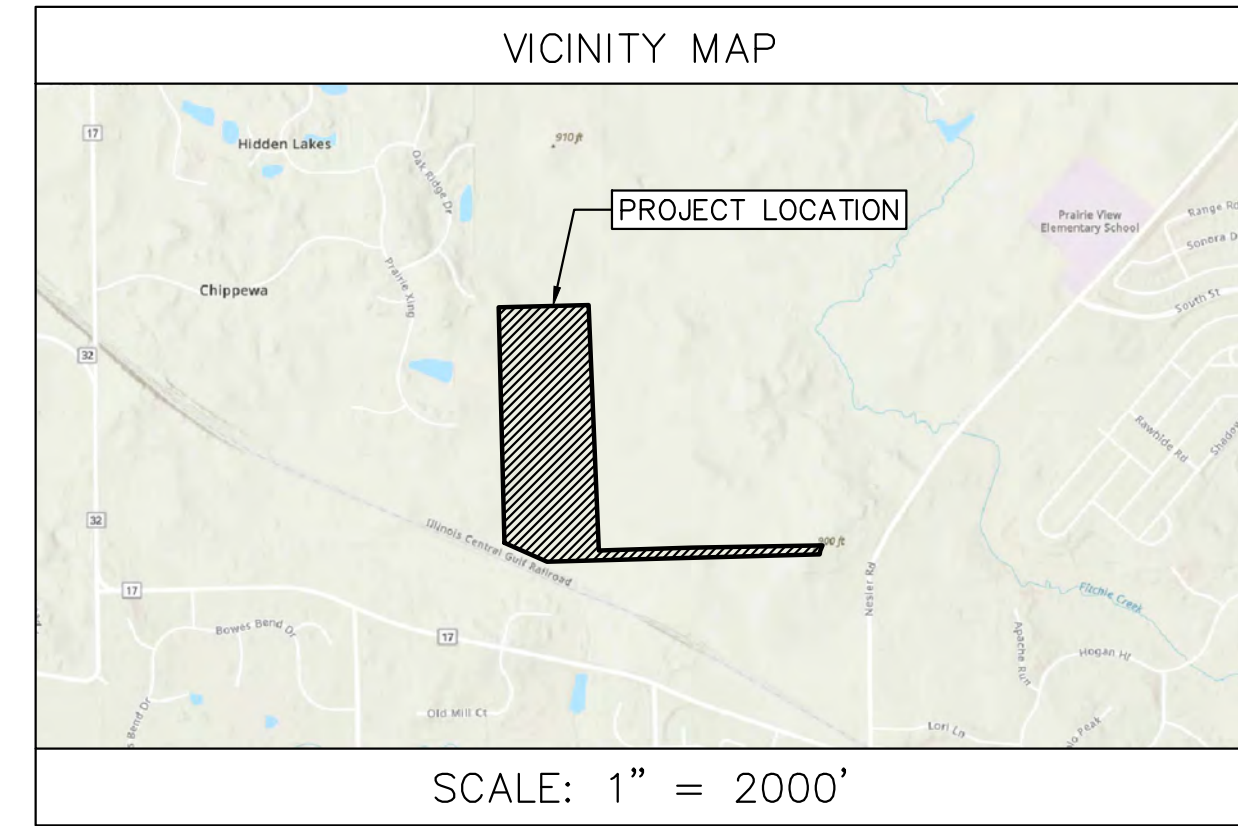


## NOTES

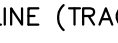


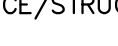

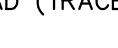
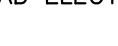























- |  |  |
|--|--|
| 1. THE PURPOSE OF THIS PLAN IS FOR SPECIAL USE PERMIT REVIEW AND APPROVAL BY KANE COUNTY TO CONSTRUCT A SOLAR ENERGY SYSTEM.   | 5. STORMWATER MANAGEMENT FACILITIES TO BE PROVIDED AS REQUIRED BY COUNTY AND/OR NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMITTING. REQUIREMENTS TO BE DETERMINED DURING FINAL ENGINEERING.  |
| 2. THIS PLAN WAS PRODUCED UTILIZING GIS RESOURCES AND INFORMATION FROM DATA SOURCES INCLUDING KANE COUNTY, GOOGLE EARTH, AND USGS TOPOGRAPHIC INFORMATION.   | 6. A SOIL EROSION AND SEDIMENT CONTROL PLAN THAT MEETS THE NPDES STANDARDS WILL BE PROVIDED TO THE COUNTY DURING FINAL ENGINEERING.  |
| 3. THE SUBJECT PROPERTY DOES LIE WITHIN A SPECIAL FLOOD HAZARD AS SHOWN ON THE FLOOD INSURANCE RATE MAP (17089C0144H) PUBLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA).   | 7. SETBACKS SHOWN ON THIS PLAN ARE BASED ON THE KANE COUNTY SOLAR ORDINANCE.   |
| 4. THE LOCATIONS OF PROPOSED IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO: FENCING, SOLAR ARRAY RACKING, INVERTER/TRANSFORMER PADS, OVERHEAD POLES AND LINES, ETC., ARE APPROXIMATE AND ARE SUBJECT TO MODIFICATION DUE TO SITE CONDITIONS, ADDITIONAL PERMITTING REQUIREMENTS, EQUIPMENT SPECIFICATIONS, AND/OR OTHER CONSTRAINTS DURING FINAL ENGINEERING. | 8. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE TO PROVIDE SIGNS, BARRICADES, WARNING LIGHTS, GUARD RAILS, AND EMPLOY FLAGGERS AS NECESSARY WHEN CONSTRUCTION ENDANGERS EITHER VEHICULAR OR PEDESTRIAN TRAFFIC. THESE DEVICES SHALL REMAIN IN PLACE UNTIL TRAFFIC MAY PROCEED NORMALLY AGAIN. |
|  | 9. SOLAR PANELS SHALL NOT EXCEED 20 FEET IN HEIGHT WHEN ORIENTED AT MAXIMUM TILT ACCORDING TO THE KANE COUNTY SOLAR ORDINANCE.   |



GRAPHIC SCALE IN FEET



## LEGEND

ROAD LABEL	
EX. ROAD CENTERLINE (TRACED PER AERIAL)	
PROJECT BOUNDARY (PER KMZ FILE PROVIDED BY CULTIVATE ON 04/01/2025)	
PRORERTY LINE (TRACED PER KANE COUNTY GIS)	
EX. RIGHT OF WAY (ASSUMED BASED ON KANE COUNTY CODE OF ORDINANCES)	
PROPERTY LINE/RIGHT-OF-WAY SETBACK (PER THE KANE COUNTY SOLAR ORDINANCE)	
EX. RESIDENCE/STRUCTURE (TRACED PER AERIAL)	
EX. OCCUPIED STRUCTURE SETBACK (PER THE KANE COUNTY SOLAR ORDINANCE)	
EX. RAILROAD (TRACED PER AERIAL)	
EX. OVERHEAD ELECTRIC (TRACED PER AERIAL)	
EX. UTILITY POLE (TRACED PER AERIAL)	
EX. WELL (PER ISGS)	
FEMA 100 YEAR STORM FLOOD ZONE (EFFECTIVE 12/03/2009)	
FEMA 500 YEAR STORM FLOOD ZONE (EFFECTIVE 12/03/2009)	
FEMA REGULATORY FLOODWAY (EFFECTIVE 12/03/2009)	
FEMA FLOOD ZONE SETBACK (ASSUMED)	
EX. WETLAND (DOWNLADED PER NWI ON 04/16/2025)	
WETLAND BUFFER (PER KANE COUNTY STORMWATER ORDINANCE)	
EX. CONTOURS	
EX. FLOW DIRECTION AND SLOPE	
PR. FENCE	
PR GRAVEL ACCESS ROAD	
PR. SOLAR	
PR. PANEL LIMITS	
PR. STAGING AREA	
PR. EQUIPMENT PAD	
PR. OVERHEAD ELECTRIC	
PR. UNDERGROUND ELECTRIC	
PR. UTILITY POLE	
PR. ESS PAD	

## SITE DATA TABLE

PIN #S:	05-23-400-012, 05-23-400-013, 05-23-400-015, 05-23-400-018 05-23-400-020, 05-24-300-028 05-24-300-029
PROPERTY OWNER	ALEX & LINDA JAYNE
SITE ADDRESS	NESLER RD, ELGIN, IL 60124
ZONING JURISDICTION	KANE COUNTY, UNINCORPORATED
CURRENT LAND USE	FARM LAND
PROPOSED LAND USE	COMMERCIAL SOLAR ENERGY FACILITY
PROJECT BOUNDARY AREA	62.9 ± AC
AREA WITHIN FENCE	19.5 ± AC
PRELIMINARY SOLAR AREA	14.8 ± AC
ADJACENT PROPERTY LINE SETBACK	50'
DWELLING UNIT SETBACK	150'
MWDC/MWAC	4.1/2.7
NUMBER OF MODULES	6,775
GCR	30%

\*ZONING SITE PLAN IS BEING SUBMITTED FOR SPECIAL USE PERMIT  
TO CONSTRUCT/OPERATE A COMMERCIAL SOLAR ENERGY FACILITY

CULTIVATE  
POWER

**Kimley»»Horn**  
© 2025 KIMLEY-HORN AND ASSOCIATES, INC.  
570 LAKE COOK RD. SUITE 200  
DEERFIELD, IL 60015  
[WWW.KIMLEY-HORN.COM](http://WWW.KIMLEY-HORN.COM)

PRELIMINARY NOT  
FOR CONSTRUCTION

# ZONING SITE PLAN

ANAMITE  
SOLAR, LLC

KANE COUNTY, IL

SHEET NUMBER

EX-1