

MEMORANDUM

To: Jake Clay
Korver Solar, LLC

From: Mason Kunkel
Kimley-Horn and Associates, Inc.

Date: March 31, 2026

Subject: Nunda Township, McHenry County, Illinois – Korver Solar, LLC Level 1 Wetland
Delineation Memorandum

INTRODUCTION

Kimley-Horn was contracted by Korver Solar, LLC to review the Korver 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 Nunda Township, McHenry County, Illinois. The study area is approximately 28 acres in size and is located in Section 31 of Township 44N, Range 8E. 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 McHenry, Illinois 7.5-minute topographical quadrangle depicted one road along the northeastern portion of the study area, and one intermittent stream intersecting the western portion of the study area. The study area is identified as undeveloped land. The USGS topographic map is presented as **Figure 3**.

National Wetlands Inventory (NWI)

Based on a review of the U.S. Fish and Wildlife Service (USFWS) NWI,¹ portions of one (1) wetland feature is present within the study area. The NWI-mapped riverine feature (R4SBC) is located along the west portion of the study area. The NWI-mapped features are presented on **Figure 4**.

McHenry County Advanced Identification of Wetlands (ADID)

Based on a review of the McHenry County GIS ADID Wetlands,² portions of three (3) wetland features are present within the study area. The ADID-mapped features are presented on **Figure 4**.

¹ USFWS. 2022. National Wetlands Inventory. Vector Digital Data. Published October 6, 2022.

² McHenry County GIS. Advance Identification of Wetlands. Published May 1, 2019.

USGS National Hydrography Dataset (NHD)

Based on a review of the USGS NHD,³ portions of one unnamed flowline segment transects the western portion of the study area. No waterbodies are present within the study area, several are within the study area vicinity. The NHD-mapped flowline generally aligns with NWI-mapped riverine feature. The NHD-mapped resources are presented on **Figure 4**.

2-ft LiDAR Contours

Two-foot contours⁴ were reviewed to determine if any wetland areas or drainage swales may be present on the study area. The study area generally slopes to the south and west. The 2-foot contours are presented on **Figure 5**.

McHenry County Soil Survey

A review of the McHenry County soil survey via the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Soil Survey (WSS) database⁵ identified 6 soil types within the study area. The study area is mapped with a predominantly non-hydric soils rating at or below 3 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 Inventory⁶ 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) Viewer⁷ was reviewed to determine if any FEMA 100-year floodplain is located within the project study area. Based on Panel 17111C0215J (effective November 16, 2006), the project study area is not located within a FEMA 100-year floodplain. The FEMA floodplain data are presented on **Figure 7**.

Previous Study Area Disturbance

Historic aerials from 2006 to 2023 were reviewed to determine previous land use and disturbance on the study area and are presented in **Attachment A**. Several potential wetlands and waterway/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 2015.

Table 1. Project Study Area Historic Aerial Review

Year	Land Use	3-month Antecedent Precipitation Conditions	Comments
2006	Fallow, Wooded	Normal	Study area consists of fallow land and deciduous forest. Potential linear feature located in western portion of the study area.

³ USGS. 2022. National Hydrography Dataset. Vector Digital Data. Published December 27, 2023.

⁴ USGS. 2021. USGS 1 Meter DEM Panels. Published December 8, 2022.

⁵ USDA. 2021. USDA. Web Soil Survey. Illinois. Vector Digital Data. Published August 31, 2021.

⁶ IDNR. 2023. Illinois Public Waters. Available online at

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

⁷ 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
2007	Fallow, Wooded	Normal	Same comment as above.
2008	Fallow, Wooded	Wetter than Normal	Study area consists of fallow land and deciduous forest. Cultivated garden located along southern boundary of the study area. Potential wet areas are present between wooded areas in the west-central portion of the study area.
2009	Fallow, Wooded	Wetter than Normal	Study area consists of fallow land and deciduous forest.
2010	Fallow, Wooded	Wetter than Normal	Study area consists of fallow land and deciduous forest. Potential linear feature located along north-central portion of the study area. Potential wet areas are present between wooded areas in the west-central portion of the study area.
2011	Fallow, Wooded	Wetter than Normal	Same comment as above.
2015	Agricultural, Fallow, Wooded	Normal	Study area consists of agricultural field and deciduous forest. Potential linear features located along north-central portion of the study area and west boundary. Several wet areas are located throughout the central portion of the study area.

Three (3) potential linear features and five (5) areas of soil saturation and 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 three (3) potential linear features in the north and west portions of the study area, and five (5) potential wetlands in the north, central, and south portions of 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

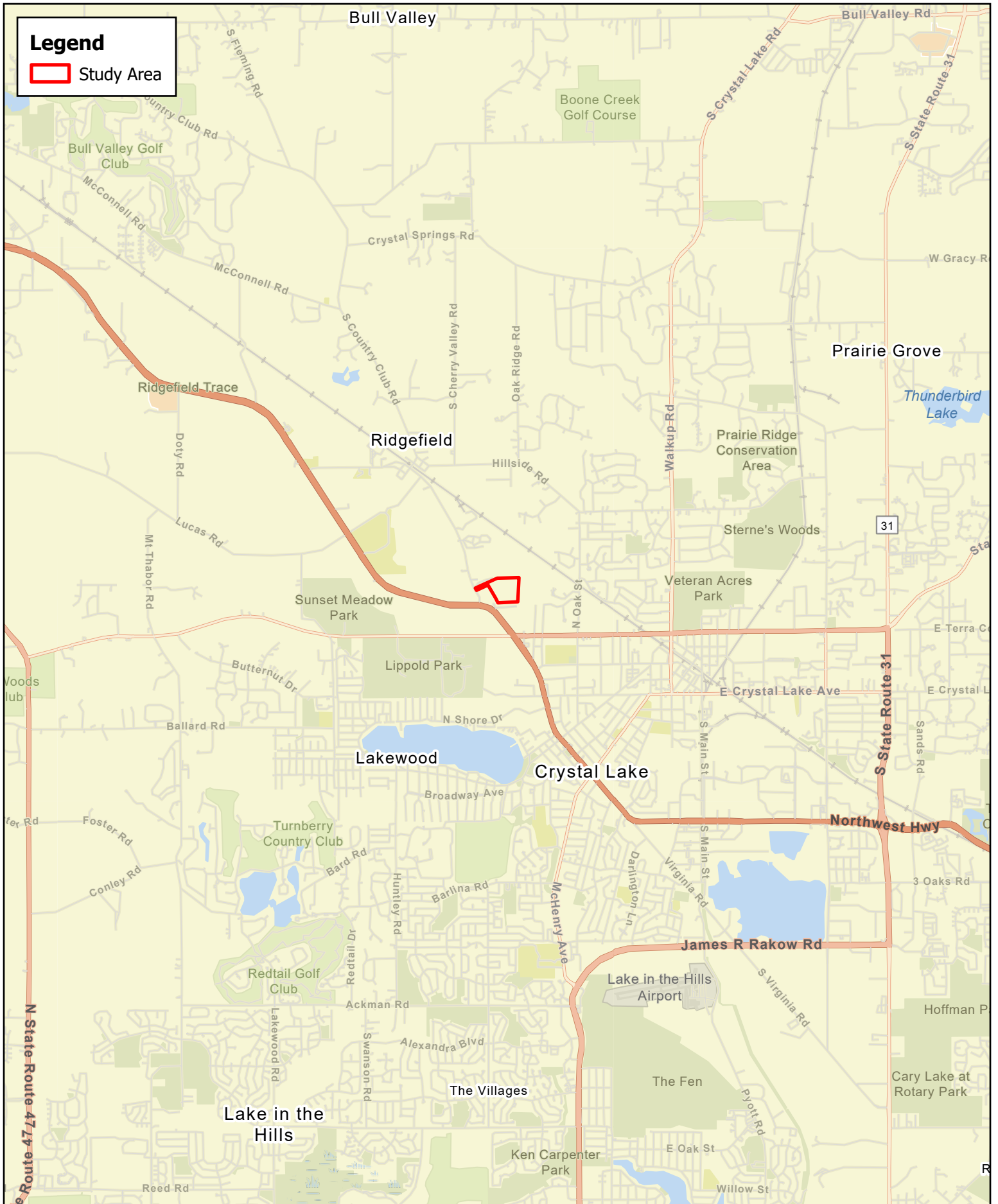
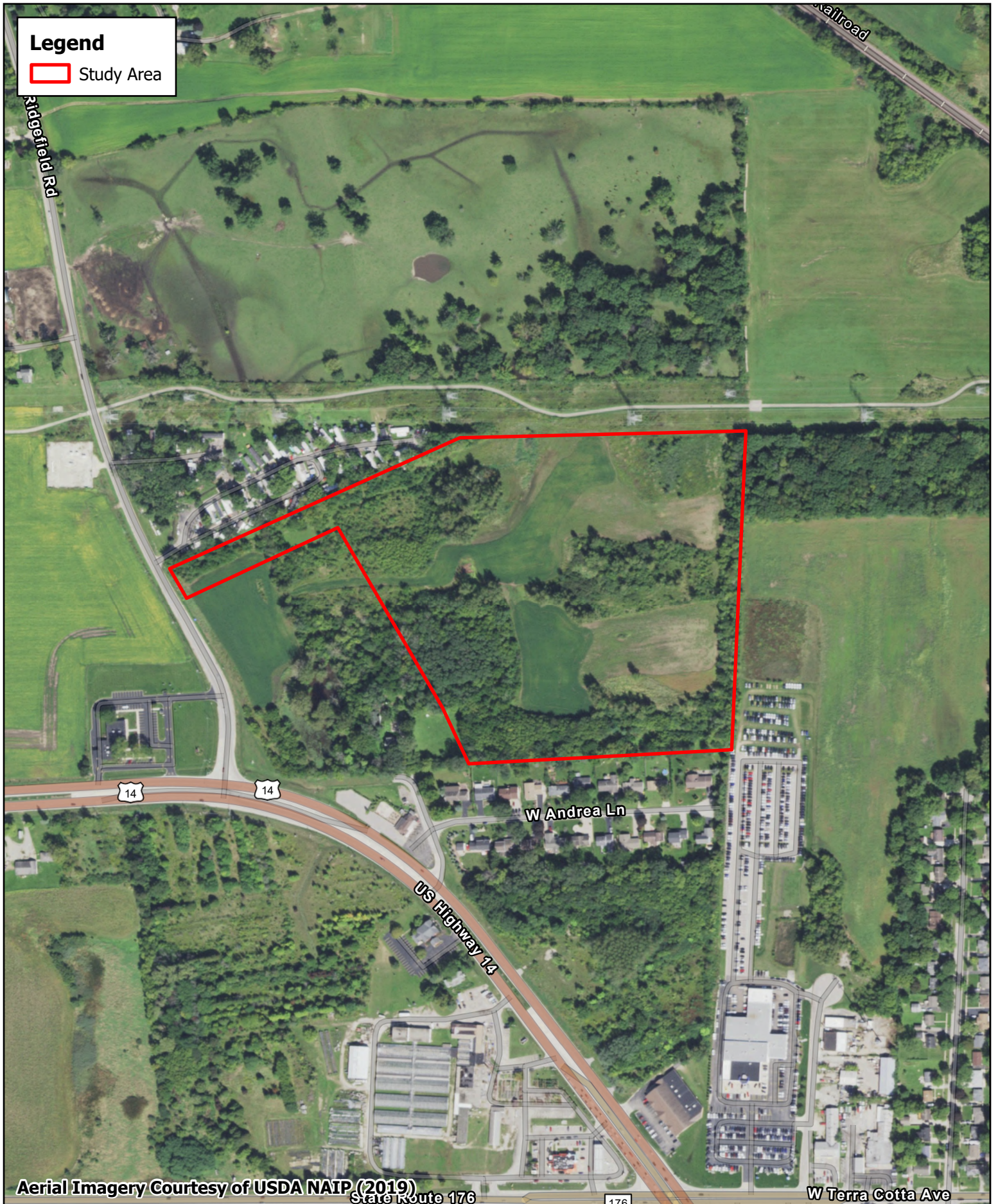


Figure 1. Project Location
 Nunda Township, McHenry County
 Korver Solar, LLC



Aerial Imagery Courtesy of USDA NAIP (2019)

Figure 2. Study Area Boundary
Nunda Township, McHenry County
Korver Solar, LLC

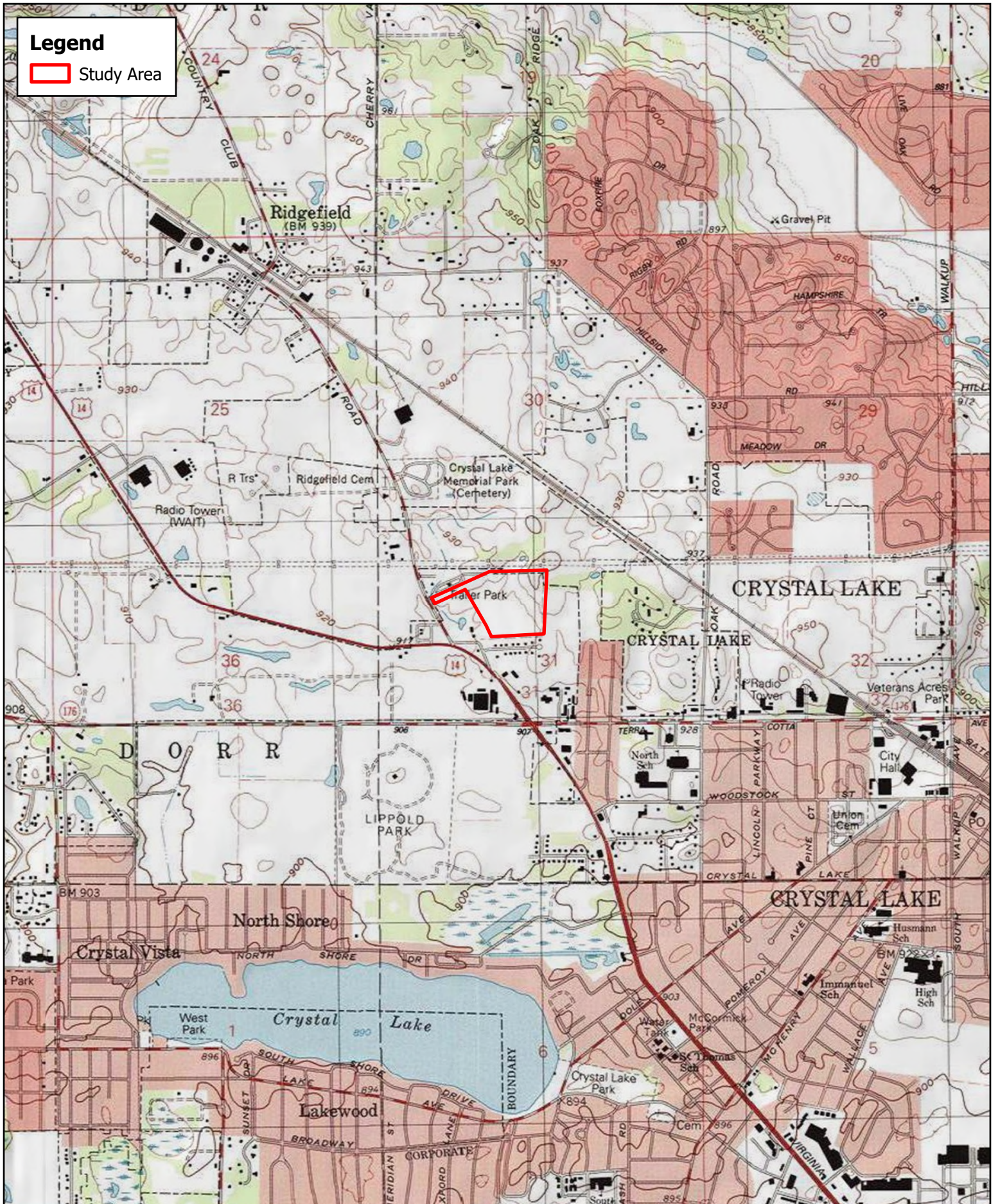
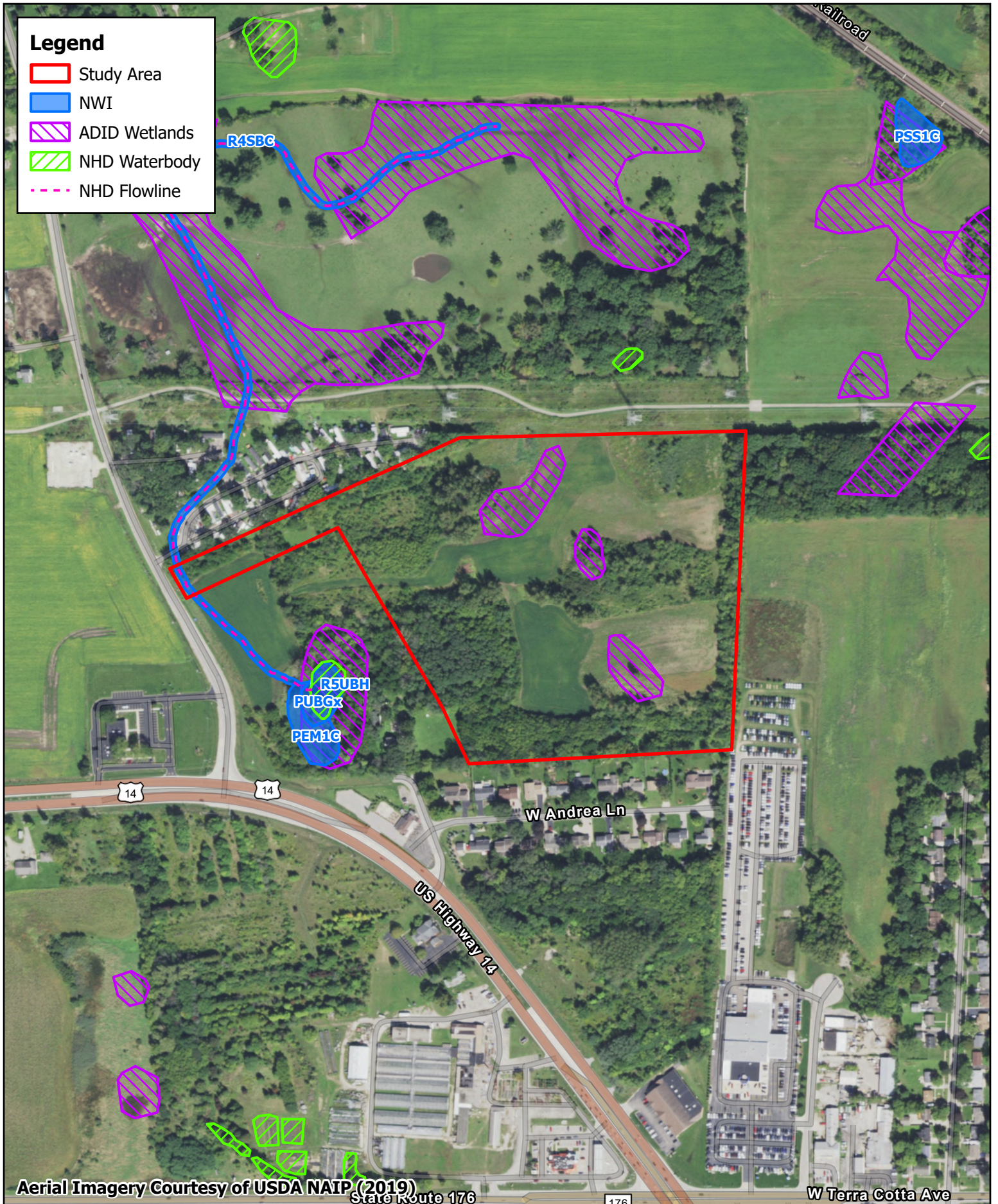
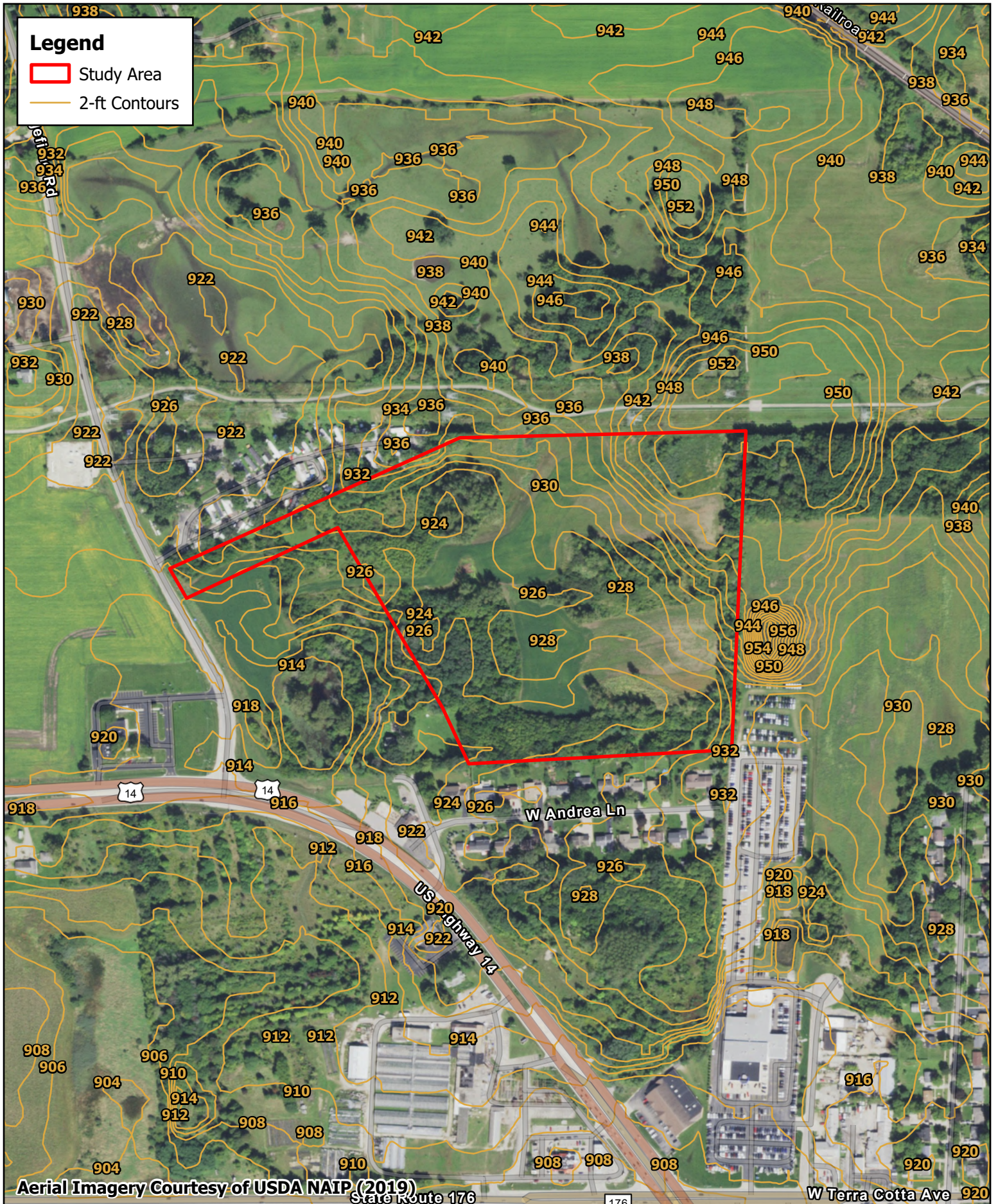


Figure 3. USGS Topographic Map
 Nunda Township, McHenry County
 Korver Solar, LLC



Aerial Imagery Courtesy of USDA NAIP (2019)

Figure 4. NWI, NHD, ADID
Nunda Township, McHenry County
Korver Solar, LLC



Aerial Imagery Courtesy of USDA NAIP (2019)



Figure 5. 2-ft Contours
 Nunda Township, McHenry County
 Korver Solar, LLC

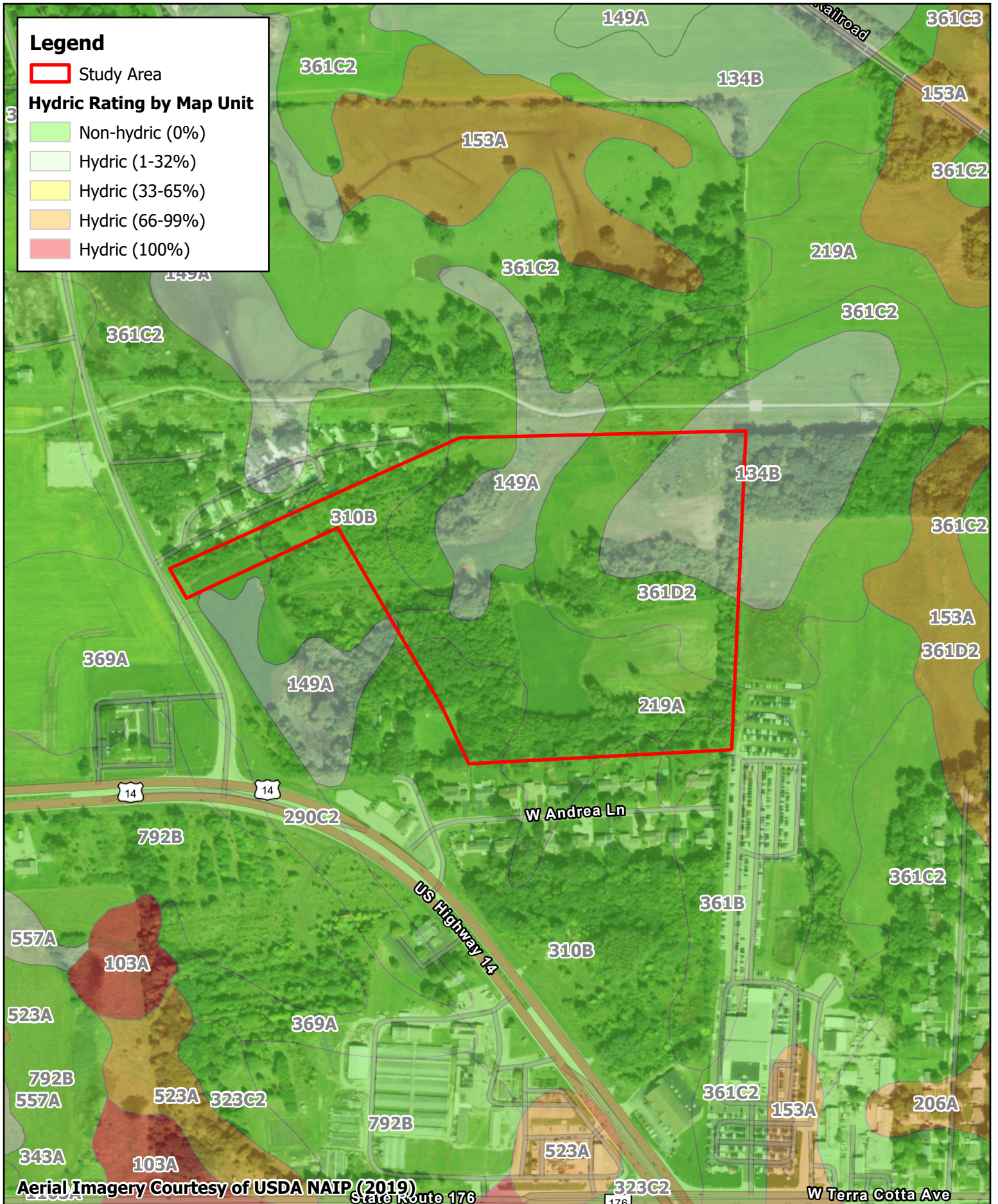
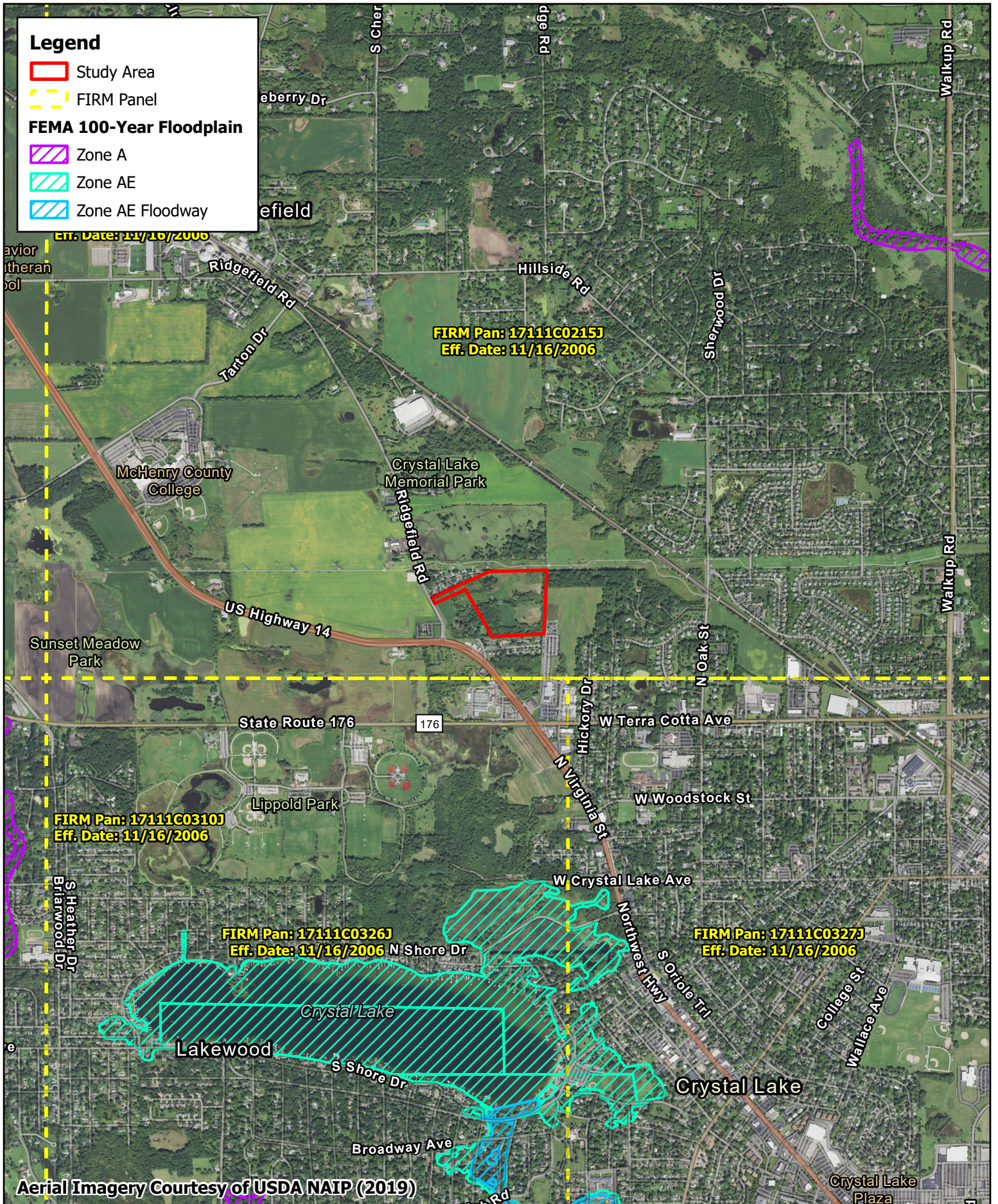
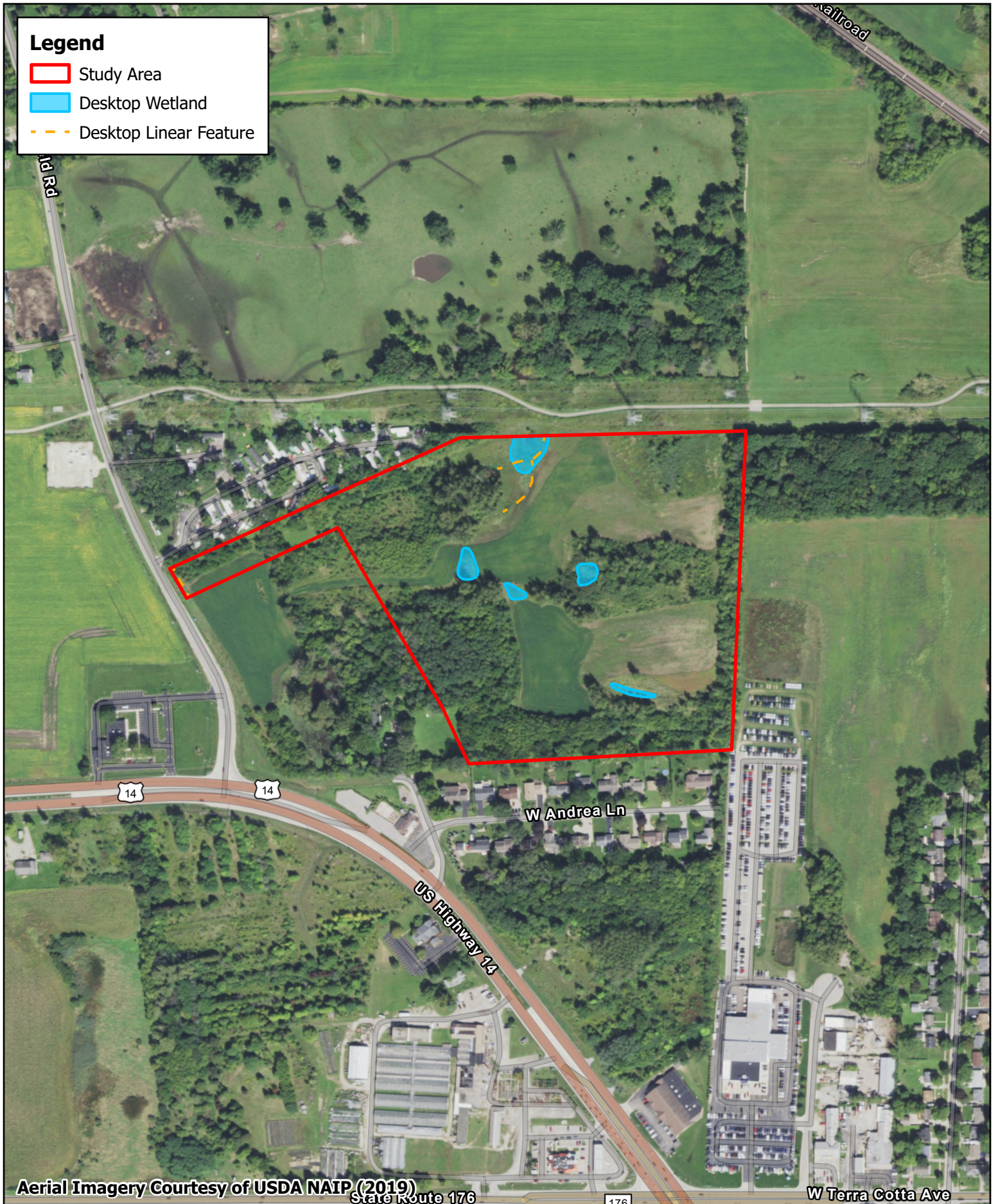


Figure 6. Hydric Soils Rating
Nunda Township, McHenry County
Korver Solar, LLC





Aerial Imagery Courtesy of USDA NAIP (2019)

Figure 8. Desktop Delineation Summary
 Nunda Township, McHenry County
 Korver 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

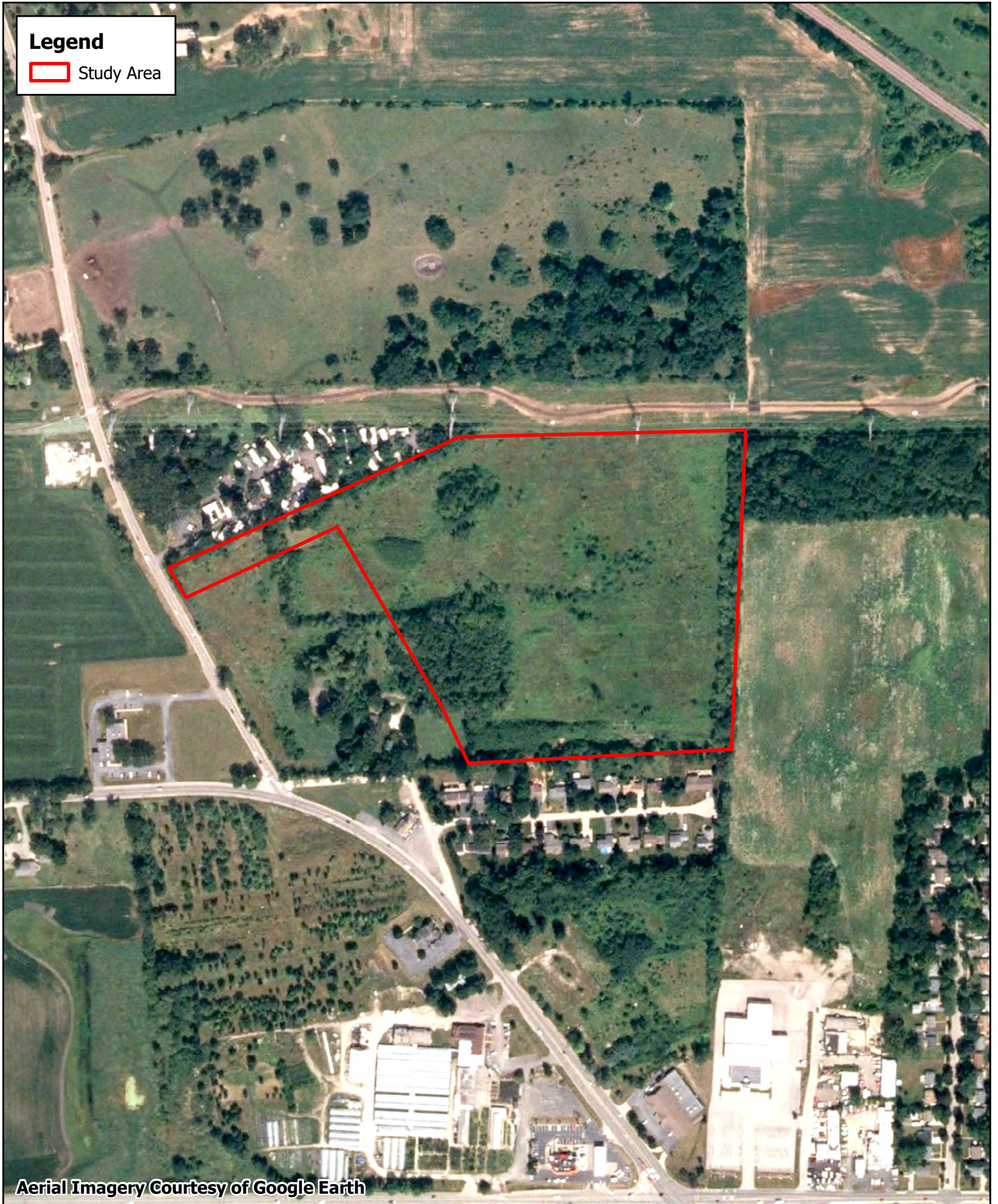


Aerial Imagery Courtesy of Google Earth



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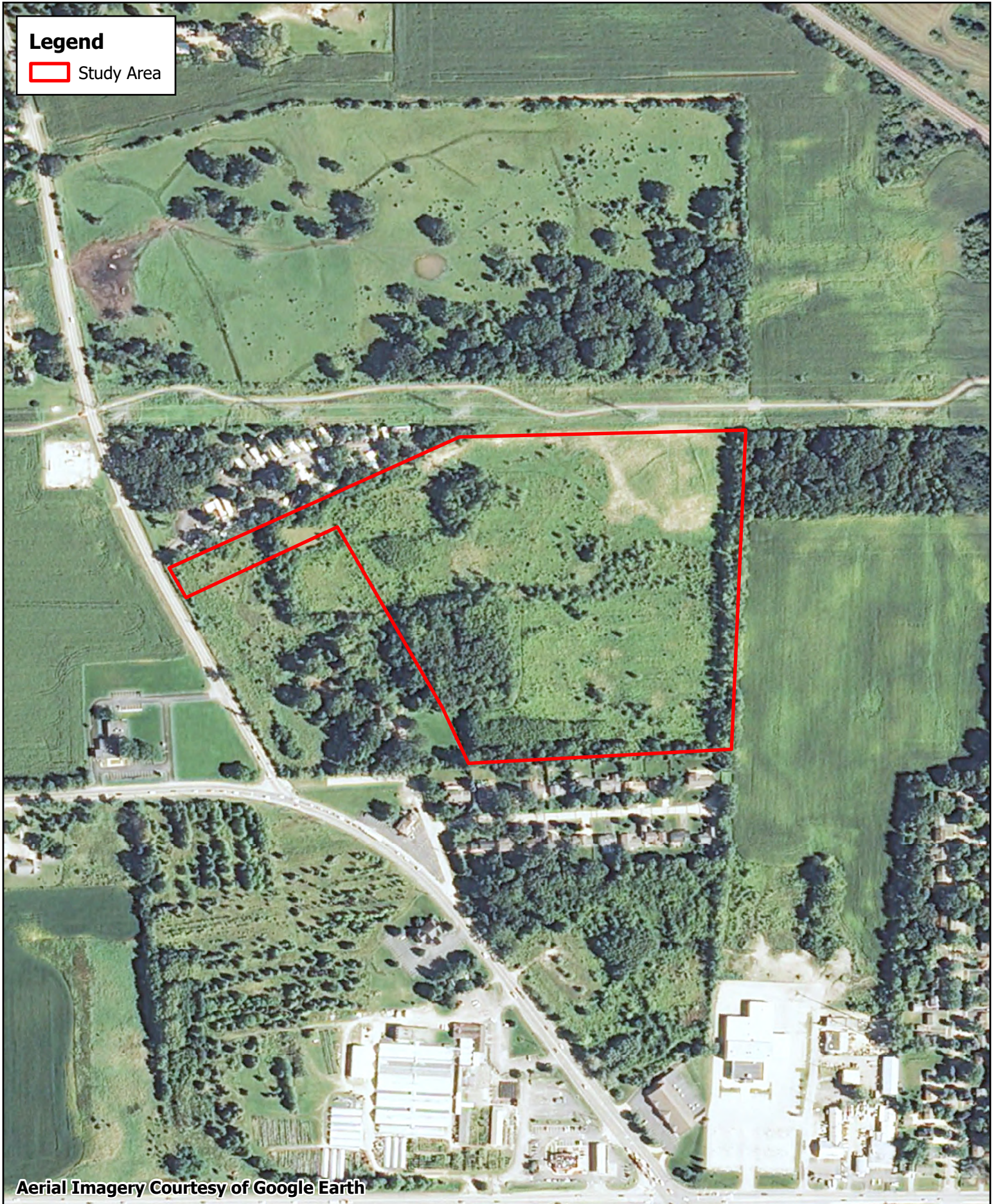


Aerial Imagery Courtesy of Google Earth



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