Regulated Waters Delineation Report

Caldwell Solar, Caldwell County, Kentucky

October 2021

Cardno®

Document Information

Prepared for	Caldwell Solar LLC
Client Contact	Courtney Pelissero
Project Name	Regulated Waters Delineation Report Caldwell Solar, Caldwell County, Kentucky
Project Number	E320201000
Cardno Contact	Bruce Moreira
Date	October 2021

Prepared for:

Caldwell Solar LLC
8400 Normandale Lake Boulevard, Suite 1200, Bloomington, MN 55437

Prepared by:

Cardno, Inc.
3901 Industrial Boulevard, Indianapolis, Indiana 46254

Table of Contents

Tables

Appendices

Acronyms

APA	Administrative Procedure Act
BF	Bank Full
CFR	Code of Federal Regulations
CWA	Clean Water Act
DBH	Diameter at Breast Height
DP	Data Point
EPA	U.S. Environmental Protection Agency
ETR	Endangered, Threatened, and Rare
FAC	Facultative Plant
FACU	Facultative Upland Plant
FACW	Facultative Wetland Plant
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
GIS	Geographical Information System

Acronyms (continued)

KAR	Kentucky Administrative Regulations
KDOW	Kentucky Division of Water
MS4	Municipal Separate Storm Water Sewer Systems
NHD	National Hydrography Dataset
NPDES	National Pollutant Discharge Elimination System
NRCS	U.S. Department of Agriculture Natural Resources Conservation Service
NWP	Nationwide Permit
NWPL	National Wetland Plant List
OBL	Obligate Wetland Plant
OHWM	Ordinary High Water Mark
PEM	Palustrine Emergent Wetland
PFO	Palustrine Forested Wetland
PLSS	Public Land Survey Section
PSS	Palustrine Shrub Scrub Wetland
RGP	Regional General Permit
SNE	Significant Nexus
SWANCC	Solid Waste Agency of Northern Cook County
TNW	Traditional Navigable Water
TOB	Top of Bank
UPL	Upland Plant
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WOTUS	Waters of the United States
WQC	Water Quality Certification

1 Introduction

Cardno was contracted to perform a regulated waters delineation, including wetlands and streams, which are located at the Caldwell Solar Study Area in Caldwell County, Kentucky (Figure 1, Appendix A). Field work was performed on April 6-8, 2020 and May 24-27, 2021. The total size of the Study Area was approximately 2,985.9 acres. The Study Area was primarily agricultural with some scattered woodlots. Seventy wetlands, 69 streams, and 30 ponds were identified.

This report identifies the jurisdictional status of the Study Area based on Cardno's best professional understanding and interpretation of the Corps of Engineers' Wetland Delineation Manual (Environmental Laboratory, 1987) and U.S. Army Corps of Engineers' (USACE) guidance documents and regulations. Jurisdictional determinations for other "waters of the U.S." were made based on definitions and guidance found in 33 CFR 328.3, USACE Regulatory Guidance Letters, and the wetland delineation manual. The USACE administers Section 404 of the Clean Water Act (CWA), which regulates the discharge of fill or dredged material into all "waters of the U.S.," and is the regulatory authority that must make the final determination as to the jurisdictional status of the Study Area.

2 Regulatory Definitions

2.1 Waters of the United States

“Waters of the U.S.” are within the jurisdiction of the USACE under the CWA. “Waters of the U.S.” is a broad term, which includes waters that are used or could be used for interstate commerce. This includes wetlands, ponds, lakes, territorial seas, rivers, tributary streams including any definable intermittent waterways, and some ditches below the ordinary high water mark (OHWM). Also included are manmade water bodies such as quarries and ponds, which are no longer actively being mined or constructed and are connected to other “waters”. Wetlands, mudflats, vegetated shallows, riffle and pool complexes, coral reefs, sanctuaries, and refuges are all considered special aquatic sites which involve more rigorous regulatory permitting requirements. A specific, detailed definition of “waters of the U.S.” can be found in the Federal Register (33 CFR 328.3).

On January 9, 2001, the U.S. Supreme Court issued a decision, Solid Waste Agency of Northern Cook County (SWANCC) v. U.S. Army Corps of Engineers (No. 99-1178). The decision reduced the regulation of isolated wetlands under Section 404 of the CWA, which assigned the USACE authority to issue permits for the discharge of dredge or fill material into "waters of the U.S.". Prior to the SWANCC decision, the USACE had adopted a regulatory definition of "waters of the U.S." that afforded federal protection for almost all of the nation's wetlands. The Supreme Court decision interpreted that the USACE’s jurisdiction was restricted to navigable waters, their tributaries, and wetlands that are adjacent to these navigable waterways and tributaries. The decision leaves the majority of "isolated" wetlands unregulated by the CWA. Therefore, most wetlands that are not adjacent to, or contiguous with, any other “waters of the U.S.” via a surface drain such as a swale, ditch, or stream are considered isolated and thus no longer jurisdictional by the USACE.

On June 19, 2006, the U.S. Supreme Court issued decisions in regards to John A. Rapanos v. United States (No. 04-1034) and June Carabell v. United States (04-1384), et al. The plurality decision created two ‘tests’ for determining CWA jurisdiction: the permanent flow of water test (set out by Justice Scalia) and the “significant nexus” test (set out by Justice Kennedy). On June 5, 2007 the USACE and U.S. Environmental Protection Agency (EPA) issued joint guidance on how to interpret and apply the Court’s ruling. According to this guidance, the USACE will assert jurisdiction over traditionally navigable waters, adjacent wetlands, and non-navigable tributaries of traditionally navigable waters that have “relatively permanent” flow, and wetlands that border these waters, regardless of whether or not they are separated by roads, berms, and similar barriers. In addition, the USACE will use a case-by-case “significant nexus” analysis to determine whether waters and their adjacent wetlands are jurisdictional. A “significant nexus” can be found where waters, including adjacent wetlands, alter the physical, biological, or chemical integrity of the traditionally navigable water based on consideration of several factors.

On June 29, 2015 a new Clean Water Rule was entered into the Federal Register (40 CFR Parts 110, 112, 116, et al. Clean Water Rule: Definition of ‘‘waters of the United States’’; Final Rule). This report will refer to this Rule as “June 29, 2015 WOTUS Rule”. This Rule included exact distances as it relates to jurisdictional adjacent waters, including the following: waters within 100 ft. of jurisdictional waters; waters within the 100-year floodplain to a maximum of 1,500 feet from

the OHWM; waters within the 100-year floodplain with a significant nexus (SNE) to a traditionally navigable water (TNW); and waters with a SNE within 4,000 ft. of jurisdictional waters.

The June 29, 2015 WOTUS Rule was partially stayed on October 9, 2015, and this resulted in a patchwork of states which used the June 29, 2015 rule and some states that returned to the previous jurisdictional interpretations (post-Rappanos).

On October 22, 2019 the EPA and the USACE published a rule to formally rescind the June 29, 2015 WOTUS Rule (40 CFR Parts 110, et.al. Definition of "Waters of the United States" – Recodification of Pre-Existing Rules). This action restored the regulatory environment which was in place prior to 2015.

On April 21, 2020, the EPA and USACE published the Navigable Waters Protection Rule to define "waters of the United States" (WOTUS) in the Federal Register. This rule becomes effective on June 22, 2020. The rule limits the federal regulatory authority to wetlands adjacent to or directly abutting a jurisdictional stream, and to only streams considered perennial or intermittent.

On August 30, 2021, the previous April 21, 2020 WOTUS was stayed nationwide in federal court. The USACE has returned to using pre-2015 WOTUS standards for jurisdictional determinations until further guidance is issued.

2.2 Waters of the Commonwealth (Kentucky)

"Waters of the Commonwealth" are within the jurisdiction of the Kentucky Division of Water (KDOW). They are defined as any and all rivers, streams, creeks, lakes, ponds, impounding reservoirs, springs, wells, marshes, and all other bodies of surface or underground water, natural or artificial, situated wholly or partly within or bordering upon the Commonwealth or within its jurisdiction. Under Commonwealth water quality standards, however, only "surface waters" are regulated and subterranean waters are limited to those flowing in well-defined channels and having a demonstrable hydrologic connection with the surface.

KDOW relies on the USACE decision regarding wetland determinations and delineations including whether or not a wetland is isolated or non-isolated. Isolated wetlands do not have a permitting mechanism in the Commonwealth and in theory would still fall under the Commonwealth's anti-degradation standards, but in practice isolated wetlands are not regulated.

Special-use waters are waters listed in Kentucky Administrative Regulations (KAR) that are worthy of additional protection. These special-uses include cold water aquatic habitats, outstanding state resource waters, outstanding national resource waters, exceptional waters, reference reach waters, state wild rivers and federal wild and scenic rivers. Outstanding National Resource Water and Exceptional Water are anti-degradation categories that apply to some waters, and convey additional protections to these resources. Additional information on these categories can be found in Section 401 KAR.

2.3 Wetlands

Wetlands are a category of "waters of the U.S." for which a specific identification methodology has been developed. As described in detail in the *Corps of Engineers Wetland Delineation Manual*

(Environmental Laboratory, 1987), wetland boundaries are delineated using three criteria: hydrophytic vegetation, hydric soils, and wetland hydrology. In addition to the criteria defined in the 1987 Manual, the procedures described in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region* (Environmental Laboratory, 2010) were used to evaluate the Study Area for the presence of wetlands.

2.3.1 Hydrophytic Vegetation

On June 1, 2012, the National Wetland Plant List (NWPL), formerly called the National List of Plant Species that Occur in Wetlands (Reed 1988), went into effect after being released by the U.S. Army Corps of Engineers (USACE) as part of an interagency effort with the U.S. Fish and Wildlife Service (USFWS), the U.S. EPA, and the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) (Lichvar and Kartesz, 2009). This list is periodically updated, with the most recently published list dated 2018. The NWPL, along with the information implied by its wetland plant species status ratings, provides general botanical information about wetland plants and is used extensively in wetland delineation, restoration, and mitigation efforts. The NWPL consists of a comprehensive list of wetland plant species that occur within the United States along with their respective wetland indicator statuses by region. An indicator status reflects the likelihood that a particular plant species occurs in a wetland or upland (Lichvar et al. 2012). Definitions of the five indicator categories are presented below.

OBL (Obligate Wetland Plants): almost always occur in wetlands. With few exceptions, these plants (herbaceous or woody) are found in standing water or seasonally saturated soils (14 or more consecutive days) near the surface. These plants are of four types: submerged, floating, floating-leaved, and emergent.

FACW (Facultative Wetland Plants): usually occur in wetlands, but may occur in non-wetlands. These plants predominately occur with hydric soils, often in geomorphic settings where water saturates the soils or floods the soil surface at least seasonally.

FAC (Facultative Plants): occur in wetlands and non-wetlands. These plants can grow in hydric, mesic, or xeric habitats. The occurrence of these plants in different habitats represents responses to a variety of environmental variables other than just hydrology, such as shade tolerance, soil pH, and elevation, and they have a wide tolerance of soil moisture conditions.

FACU (Facultative Upland Plants): usually occur in non-wetlands, but may occur in wetlands. These plants predominately occur on drier or more mesic sites in geomorphic settings where water rarely saturates the soils or floods the soil surface seasonally.

UPL (Upland Plants): almost never occur in wetlands. These plants occupy mesic to xeric non-wetland habitats. They almost never occur in standing water or saturated soils. Typical growth forms include herbaceous, shrubs, woody vines, and trees.

According to the USACE's Eastern Mountains and Piedmont Regional Supplement, plants that are rated as FAC, FACW, or OBL are classified as wetland plant species. The percentage of dominant wetland species in each of the four vegetation strata (tree, shrub/sapling, herbaceous, and woody vine) in the sample area determines the hydrophytic (wetland) status of the plant community. Dominant species are chosen independently from each stratum of the community. In general, dominants are the most abundant species that individually or collectively account for

more than 50 percent of the total coverage of vegetation in the stratum, plus any other species that, by itself, accounts for at least 20 percent of the total.

For the purposes of determining dominant plant species, the four vegetation strata are defined. Trees consist of woody species 3 inches or greater in diameter at breast height (DBH). Shrubs and saplings are woody species that are over 1 meter in height and less than 3 inches DBH. Herbaceous species consist of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants less than 1 meter tall. Woody vines consist of vine species greater than 1 meter in height, such as wild grapes.

2.3.2 Hydric Soils

Hydric soils are defined as soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part. In general, hydric soils are flooded, ponded, or saturated for a week or more during the growing season when soil temperatures are above 32 degrees Fahrenheit. The anaerobic conditions created by repeated or prolonged saturation or flooding result in permanent changes in soil color and chemistry, which are used to differentiate hydric from non-hydric soils.

In this report, soil colors are described using the Munsell notation system. This method of describing soil color consists of separate notations for hue, value, and chroma that are combined in that order to form the color designation. The hue notation of a color indicates its relation to red, yellow, green, blue, and purple; the value notation indicates its lightness, and the chroma notation indicates its strength or departure from a neutral of the same lightness.

The symbol for hue consists of a number from 1 to 10, followed by the letter abbreviation of the color. Within each letter range, the hue becomes more yellow and less red as the numbers increase. The notation for value consists of numbers from 0 for absolute black, to 10 for absolute white. The notation for chroma consists of numbers beginning with /0 for neutral grays and increasing at equal intervals. A soil described as 10YR 3/1 soil is more gray than a soil designated 10YR 3/6.

2.3.3 Wetland Hydrology

Wetland hydrology is defined as the presence of water for a significant period of time at or near the surface (within the root zone) during the growing season. Wetland hydrology is present only seasonally in many cases, and is often inferred by indirect evidence. Hydrology is controlled by such factors as seasonal and long-term rainfall patterns, local geology and topography, soil type, local water table conditions, and drainage. Primary indicators of hydrology are inundation, soil saturation in the upper 12 inches of the soil, watermarks, sediment deposits, and drainage patterns. Secondary indicators such as oxidized root channels in the upper 12 inches of the soil, water-stained leaves, local soil survey data, and the FAC-neutral vegetation test are sometimes used to identify hydrology. A primary indicator or two or more secondary indicators are required to establish a positive indication of hydrology.

2.3.4 Wetland Definition Summary

In general, an area must meet all three criteria to be classified as a wetland. In certain problem areas such as seasonal wetlands, which are not wet at all times, or in recently disturbed (atypical) situations, areas may be considered a wetland if only two criteria are met. In special situations, an area that meets the wetland definition may not be within the USACE's jurisdiction due to a specific regulatory exemption.

2.4 Streams, Rivers, Watercourses & Jurisdictional Ditches

With non-tidal waters, in the absence of adjacent wetlands, the extent of the USACE's jurisdiction is defined by the OHWM. USACE regulations define the term "ordinary high water mark" for purposes of the CWA lateral jurisdiction at 33 CFR 328.3(e), which 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.

Streams, rivers, watercourse, and ditches within the Study Area were evaluated using the above definition and documented. Waterways that did exhibit an OHWM were recorded and evaluated using the Kentucky Department of Water's stream assessment form. The scores are listed in the summary table in section 6 and the data sheets are included in Appendix D.

3 Background Information

3.1 Existing Maps

Several sources of information were consulted to identify potential wetlands and wetland soil units on the site. These include the USFWS's *National Wetland Inventory* (NWI), the USGS's *National Hydrography Dataset* (NHD), and the NRCS *Soil Survey* for this county. These maps identify potential wetlands and wetland soil units on the site. The NHD maps are used to identify low-lying areas, historical waterways, drainage patterns, and potential surface waters. The NHD maps are not field verified, and do not always account for human alteration such as ditching and tiling. The NWI maps were prepared from high altitude photography and in most cases were not field checked. Because of this, wetlands are sometimes erroneously identified, missed, or misidentified. Additionally, the criteria used in identifying these wetlands were different from those currently used by the USACE. The county soil maps, on the other hand, were developed from actual field investigations. However, they address only one of the three required wetland criteria and may reflect historical conditions rather than current site conditions. The resolution of the soil maps limits their accuracy as well. The mapping units are often generalized based on topography and many mapping units contain inclusions of other soil types for up to 15 percent of the area of the unit. The USACE does not accept the use of either of these maps to make wetland determinations.

3.1.1 National Wetland Inventory

The NWI map of the area (Figure 2) identified 67 wetland complexes within the Study Area.

3.1.2 National Flood Hazard Layer

The FEMA FIRMette map of the area (Figure 3) identified a 100-year floodplain associated with Skin Frame Creek, Tinsley Creek, Hewlett Creek, and several unnamed tributaries to Skin Frame Creek.

3.1.3 Stream Stats Basin Analysis

The Study Area is within an excluded area polygon in the StreamStats web application due to the Karst topography and closed drainage basins with subsurface flow (Figure 3).

3.1.4 National Hydrography Dataset

The NHD map of the area (Figure 4) identified 34 surface waters within the Study Area.

3.1.5 Soil Survey

The NRCS Soil Survey of Caldwell County identified 21 soil series on the site (Figure 4). The following table identifies the soil unit symbol, soil unit name, and whether or not the soil type contains components that meet the hydric soil criteria.

Table 3-1 Soil Types Within the Caldwell Solar Study Area

Symbol	Description	Hydric
CrA	Crider silt loam, 0 to 2 percent slopes	No
CrB2	Crider silt loam, 2 to 6 percent slopes, eroded	No
CrC2	Crider silt loam, 6 to 12 percent slopes, eroded	No
CrC3	Crider silt loam, 6 to 12 percent slopes, severely eroded	No
CrD2	Crider silt loam, 12 to 20 percent slopes, eroded	No
CtE3	Crider-Baxter complex, 12 to 30 percent slopes, severely eroded	No
EkB	Elk silt loam, 1 to 4 percent slopes, rarely flooded	No
FvD2	Fredonia-Vertrees complex, 12 to 20 percent slopes, eroded, rocky	No
He	Henshaw silt loam, 0 to 2 percent slopes, rarely flooded	No
Ld	Lindside silt loam, occasionally flooded	No
Lp	Lindside silt loam, ponded	No
Me	Melvin silt loam, occasionally flooded	Yes
Ne	Newark silt loam, occasionally flooded	No
NhB2	Nicholson silt loam, 2 to 6 percent slopes, eroded	No
NhC2	Nicholson silt loam, 6 to 12 percent slopes, eroded	No
NhC3	Nicholson silt loam, 6 to 12 percent slopes, severely eroded	No
No	Nolin silt loam, occasionally flooded	No
Np	Nolin silt loam, ponded	No
OtB2	Otwood silt loam, 2 to 6 percent slopes, eroded	No
Pq	Pits, quarry	No
W	Water	No

3.2 Climate Data

A "typical year" considers the normal periodic range of precipitation and other climactic variables for that waterbody. Factors utilized in determining if conditions meet the definition of "typical year" includes comparing precipitation, drought and other climatic factors from a period of interest (e.g., from the past season or year) with the normal range of those factors that would be expected, based on the past 30 years of data. The data below provides information on drought conditions at the time of the field survey and antecedent precipitation.

The April 7, 2020 US Drought Monitor map for Kentucky indicated that the Study Area was not exhibiting drought conditions during the April 2020 field survey (US Drought Monitor 2020).

The May 25, 2021 US Drought Monitor map for Kentucky indicated that the Study Area was not exhibiting drought conditions during the May 2021 field survey (US Drought Monitor 2021).

The USACE's Antecedent Precipitation Tool (version 1.0.19) compiles information from weather stations within 30 miles of the Study Area to determine if conditions were dry, normal, or wet using antecedent precipitation conditions

Table 3-2: Calculation of Normal Weather Conditions (WET) for April 8, 2020

30 Days Ending	<30%	>30%	Actual	Condition	Condition Value	Month Weight Value	Condition Value X Month Weight
2020-04-08	3.85	5.28	4.69	Normal	2	3	6
2020-03-09	3.17	6.02	6.20	Wet	3	2	6
2020-02-08	2.17	4.29	6.98	Wet	3	1	3
						***Sum:**	**15**

*6 to 9: drier than normal
10 to 14: normal
15 to 18: wetter than normal

condition values:
(1) Dry
(2) Normal
(3) Wet

No precipitation occurred during the field survey from April 6 through 8, 2020. A total of 0.19 inches of precipitation occurred the seven (7) days prior to the field survey and the most recent rain event (0.01 inches) occurred on 4/1/2020.

Conditions observed within the Study Area during the delineation completed from April 6 through 8, 2020 were considered to be wetter than normal for this time of year.

Table 3-3: Calculation of Normal Weather Conditions (WET) for May 27, 2021

30 Days Ending	<30%	>30%	Actual	Condition	Condition Value	Month Weight Value	Condition Value X Month Weight
2021-05-27	3.96	6.01	4.35	Nornal	2	3	6
2021-04-27	4.06	5.59	2.78	Dry	1	2	2
2021-03-28	3.29	4.81	5.65	Wet	3	1	3
						***Sum:**	**11**

*6 to 9: drier than normal
10 to 14: normal
15 to 18: wetter than normal

condition values:
(1) Dry
(2) Normal
(3) Wet

No precipitation occurred during the field survey from May 24 through 27, 2021. A total of 0.43 inches of precipitation occurred the seven (7) days prior to the field survey and the most recent rain event (0.02 inches) occurred on 5/20/2021.

Conditions observed within the Study Area during the delineation completed from May 24 through 27, 2021 were considered to be normal for this time of year.

4 Methodology and Description

4.1 Regulated Waters Investigation

The delineation of regulated waters within the Study Area was based on the methodology described in the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region* (Environmental Laboratory, 2010) as required by current USACE policy.

Prior to the field work, the background information was reviewed to establish the probability and potential location of wetlands and regulated waters on the site. Next, a general reconnaissance of the Study Area was conducted to determine site conditions. The site was then walked with the specific intent of determining wetland and jurisdictional stream boundaries. Data stations were established at locations within and near the wetland areas to document soil characteristics, evidence of hydrology and dominant vegetation. Note that no attempt was made to examine a full soil profile to confirm any soil series designations. However, when possible, soils were examined to a depth of at least 16 inches to assess soil characteristics and site hydrology. Complete descriptions of typical soil series can be found in the soil survey for this county.

4.1.1 Site Photographs

Photographs of the site are located in Appendix B. These photographs are the visual documentation of site conditions at the time of inspection. The photographs are intended to provide representative visual samples of any wetlands or other special features found on the site.

4.1.2 Delineation Data Sheets

Where stations represent a wetland boundary point they are typically presented as paired data points, one each documenting the wetland and upland sides of the wetland boundary. The routine wetland delineation data sheets used in the jurisdictional delineation process are located in Appendix C. These forms are the written documentation of how representative sample stations met or did not meet each of the wetland criteria. For plant species included on the National Wetlands Plant List, nomenclature will follow their lead. For all other plants not listed in the NWPL, nomenclature will follow the USDA's Plants Database. Data point locations are shown on Figure 5.

4.2 Technical Descriptions

Complete field data sheets from the site investigation are located in Appendix D. The site is located in Caldwell County, Kentucky, southeast of the Town of Fredonia, southwest of Marion Road (SR91) (Figure 1). The area investigated was approximately 2,985.9 acres. The Study Area was primarily agricultural with some scattered woodlots.

4.2.1 Data Point and Wetland Descriptions

Wetland 0001 (w0001) (1.31 Acres)

This wetland was an emergent wetland located in a depression in an agricultural field. This wetland appeared to be recovering from past habitat disturbance. No surface water connection with any "waters of the United States" was observed. Unless a direct groundwater connection to a jurisdictional feature is assumed by the USACE, it is likely that this wetland is not regulated. See Figures 5.29 and 5.30.

Wetland Data Point

Data Point 0001 (DP0001)

Dominant vegetation in the vicinity of DP0001 included Creeping-Jenny (*Lysimachia nummularia*, FACW). In addition, non-dominant vegetation at the data point included Cress-Leaf Groundsel (*Packera glabella*, OBL), and Blunt Broom Sedge (*Carex tribuloides*, FACW). This met the rapid test for hydrophytic vegetation. The soil from 0-20 inches had a matrix soil color of 10YR 4/1 with concentrations in the matrix at 15 percent, and a texture of Silt Loam. The soil at the data point was mapped as Crider silt loam, 6 to 12 percent slopes, severely eroded, and met the Depleted Matrix (F3) hydric soil criterion. The indicators of hydrology observed included Surface Water (A1), Saturation (A3), Algal Mat or Crust (B4), Aquatic Fauna (B13), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Upland Data Point

Data Point 0002 (DP0002)

Dominant vegetation in the vicinity of DP0002 included Kentucky Blue Grass (*Poa pratensis*, FACU), and Tall False Rye Grass (*Schedonorus arundinaceus*, FACU). In addition, non-dominant vegetation at the data point included Common Dandelion (*Taraxacum officinale*, FACU), and Common Chickweed (*Stellaria media*, UPL). This did not meet any indicators for hydrophytic vegetation. The soil from 0-20 inches had a matrix soil color of 5YR 5/6 with a texture of Silt Loam. The soil at the data point was mapped as Crider silt loam, 6 to 12 percent slopes, severely eroded and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Upland Data Point

Data Point 0003 (DP0003)

Dominant vegetation in the vicinity of DP0003 included Sugar-Berry (*Celtis laevigata*, FACW), Honey-Locust (*Gleditsia triacanthos*, FAC), Common Blue Violet (*Viola sororia*, FAC), and Virginia Wild Rye (*Elymus virginicus*, FACW). In addition, non-dominant vegetation at the data point included White Mulberry (*Morus alba*, UPL), Black Cherry *(Prunus serotina*, FACU), Black Walnut (*Juglans nigra*, FACU), Great Ragweed (*Ambrosia trifida*, FAC), and Poison-Hemlock (*Conium maculatum*, FACW). The dominance test is greater than 50 percent, which qualifies as a hydrophytic vegetation indicator. The soil from 0-20 inches had a matrix soil color of 10YR 4/4

with a texture of Silt Loam. The soil at the data point was mapped as Crider silt loam, 6 to 12 percent slopes, severely eroded and did not meet any hydric soil criteria. The indicators of hydrology observed included Drift Deposits (B3), Drainage Patterns (B10), and the FAC-Neutral Test (D5). This data point did not qualify as a wetland.

Wetland 0002 (w0002) (0.06 Acre)

This wetland was a forested wetland located in a depression in a woodlot. No evidence of habitat disturbance was observed. No surface water connection with any "waters of the United States" was observed. Unless a direct groundwater connection to a jurisdictional feature is assumed by the USACE, it is likely that this wetland is not regulated. See Figure 5.24.

Wetland Data Point

Data Point 0004 (DP0004)

Dominant vegetation in the vicinity of DP0004 included Sugar-Berry (FACW), American Elm (*Ulmus americana*, FACW), American Sycamore (*Platanus occidentalis*, FACW), White Panicled American-Aster (*Symphyotrichum lanceolatum*, FACW), and Cress-Leaf Groundsel (OBL). This met the rapid test for hydrophytic vegetation. The soil from 0-20 inches had a matrix soil color of 10yr 4/1 with concentrations in the matrix at 15 percent, and a texture of Silt Loam. The soil at the data point was mapped as Crider silt loam, 2 to 6 percent slopes, eroded, and met the Depleted Matrix (F3) hydric soil criterion. The indicators of hydrology observed included Saturation (A3), Drift Deposits (B3), Water-Stained Leaves (B9), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Upland Data Point

Data Point 0005 (DP0005)

Dominant vegetation in the vicinity of DP0005 included Honey-Locust (FAC), Sugar-Berry (FACW), and Virginia Wild Rye (FACW). In addition, non-dominant vegetation at the data point included White Mulberry (UPL), Poison-Hemlock (FACW), Common Chickweed (UPL), Sticky-Willy (*Galium aparine*, FACU), and Purple Deadnettle (*Lamium purpureum*, UPL). The dominance test is greater than 50 percent, which qualifies as a hydrophytic vegetation indicator. The soil from 0-20 inches had a matrix soil color of 10YR 4/4 with a texture of Silt Loam. The soil at the data point was mapped as Crider silt loam, 6 to 12 percent slopes, severely eroded and did not meet any hydric soil criteria. The only indicator of hydrology observed included the secondary indicator of the FAC-Neutral Test (D5). This data point did not qualify as a wetland.

Wetland 0003 (w0003) (0.49 Acre)

This wetland was a forested wetland located in a depression in a woodlot. No evidence of habitat disturbance was observed. No surface water connection with any "waters of the United States" was observed. Unless a direct groundwater connection to a jurisdictional feature is assumed by the USACE, it is likely that this wetland is not regulated. See Figure 5.29.

Wetland Data Point

Data Point 0006 (DP0006)

Dominant vegetation in the vicinity of DP0006 included American Sycamore (FACW), Sugar-Berry (FACW), Common Buttonbush (*Cephalanthus occidentalis*, OBL), Sugar-Berry (FACW), Ash-Leaf Maple (*Acer negundo*, FAC), White Panicled American-Aster (FACW), and Common Blue Violet (FAC). The dominance test is greater than 50 percent, which qualifies as a hydrophytic vegetation indicator. The soil from 0-20 inches had a matrix soil color of 10YR 4/1 with concentrations in the matrix at 15 percent, and a texture of Silt Loam. The soil at the data point was mapped as Crider silt loam, 12 to 20 percent slopes, eroded, and met the Depleted Matrix (F3) hydric soil criterion. The indicators of hydrology observed included Surface Water (A1), Drift Deposits (B3), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Upland Data Point

Data Point 0007 (DP0007)

Dominant vegetation in the vicinity of DP0007 included Sugar Maple (*Acer saccharum*, FACU), Sugar-Berry (FACW), American Elm (FACW), Coral-Berry (*Symphoricarpos orbiculatus*, FACU), Dwarf Larkspur (*Delphinium tricorne*, UPL), Common Blue Violet (FAC), Downy Yellow Violet (*Viola pubescens*, FACU), Spreading Chervil (*Chaerophyllum procumbens*, FACW), Inflated Narrow-Leaf Sedge (*Carex grisea*, FACU), Virginia Wild Rye (FACW), and Eastern Poison Ivy (*Toxicodendron radicans*, FAC). In addition, non-dominant vegetation at the data point included Virginia Springbeauty (*Claytonia virginica*, FAC). The dominance test is greater than 50 percent, which qualifies as a hydrophytic vegetation indicator. The soil from 0-4 inches had a matrix soil color of 10yr 4/3 with a texture of Silt Loam. The soil from 4-20 inches had a matrix soil color of 10yr 4/4 with a texture of Silt loam. The soil at the data point was mapped as Crider silt loam, 12 to 20 percent slopes, eroded and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Wetland 0004 (w0004) (0.05 Acre)

This wetland was a forested wetland located in a depression in a woodlot. No evidence of habitat disturbance was observed. No surface water connection with any “waters of the United States” was observed. Unless a direct groundwater connection to a jurisdictional feature is assumed by the USACE, it is likely that this wetland is not regulated. See Figure 5.29.

Wetland Data Point

Data Point 0008 (DP0008)

Dominant vegetation in the vicinity of DP0008 included American Elm (FACW), Ash-Leaf Maple (FAC), Blunt Broom Sedge (FACW), White Panicled American-Aster (FACW), and Creeping-Jenny (FACW). The dominance test is greater than 50 percent, which qualifies as a hydrophytic vegetation indicator. The soil from 0-20 inches had a matrix soil color of 10YR 4/1 with concentrations in the matrix at 15 percent, and a texture of Silt Loam. The soil at the data point

was mapped as Crider silt loam, 12 to 20 percent slopes, eroded, and met the Depleted Matrix (F3) hydric soil criterion. The indicators of hydrology observed included Drift Deposits (B3), Surface Soil Cracks (B6), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Wetland 0005 (w0005) (0.21 Acre)

This wetland was an emergent wetland located in a depression in an agricultural field. This wetland appeared to be recovering from past habitat disturbance. No surface water connection with any "waters of the United States" was observed. Unless a direct groundwater connection to a jurisdictional feature is assumed by the USACE, it is likely that this wetland is not regulated. See Figure 5.29.

Wetland Data Point

Data Point 0009 (DP0009)

Dominant vegetation in the vicinity of DP0009 included Rough Cockleburr (*Xanthium strumarium*, FAC) and White Panicled American-Aster (FACW). The dominance test is greater than 50 percent, which qualifies as a hydrophytic vegetation indicator. The soil from 0-20 inches had a matrix soil color of 10YR 4/1 with concentrations in the matrix at 5 percent, and a texture of Silty Clay Loam. The soil at the data point was mapped as Crider silt loam, 12 to 20 percent slopes, eroded, and met the Depleted Matrix (F3) hydric soil criterion. The indicators of hydrology observed included Drift Deposits (B3), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Upland Data Point

Data Point 0010 (DP0010)

Dominant vegetation in the vicinity of DP0010 included Sugar-Berry (FACW), Black Walnut (FACU), American Elm (FACW), Inflated Narrow-Leaf Sedge (FACU), and Common Blue Violet (FAC). In addition, non-dominant vegetation at the data point included White Panicled American-Aster (FACW) and Virginia Wild Rye (FACW). The dominance test is greater than 50 percent, which qualifies as a hydrophytic vegetation indicator. The soil from 0-20 inches had a matrix soil color of 10YR 3/3 with a texture of Silt Loam. The soil at the data point was mapped as Crider silt loam, 6 to 12 percent slopes, severely eroded and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Upland Data Point

Data Point 0011 (DP0011)

Dominant vegetation in the vicinity of DP0011 included Lesser Poverty Rush (*Juncus tenuis*, FAC) This did not meet any indicators for hydrophytic vegetation. There was no vegetation at this data point. The soil from 0-20 inches had a matrix soil color of 7.5YR 4/3 with a texture of Silty Clay.

The soil at the data point was mapped as Crider silt loam, 2 to 6 percent slopes, eroded and did not meet any hydric soil criteria. The only indicator of hydrology observed included the secondary indicator of Geomorphic Position (D2). This data point did not qualify as a wetland.

Wetland 0006 (w0006) (0.07 Acre)

This wetland was an emergent wetland located in a depression in an agricultural field. This wetland appeared to be recovering from past habitat disturbance. No surface water connection with any "waters of the United States" was observed. Unless a direct groundwater connection to a jurisdictional feature is assumed by the USACE, it is likely that this wetland is not regulated. See Figure 5.34.

Wetland Data Point

Data Point 0012 (DP0012)

Dominant vegetation in the vicinity of DP0012 included American Water-Plantain (*Alisma subcordatum*, OBL), Creeping-Jenny (FACW), and Blunt Broom Sedge (FACW). This met the rapid test for hydrophytic vegetation. The soil from 0-20 inches had a matrix soil color of 10YR 5/1 with concentrations in the matrix at 15 percent, and a texture of Silty Clay. The soil at the data point was mapped as Crider silt loam, 2 to 6 percent slopes, eroded, and met the Depleted Matrix (F3) hydric soil criterion. The indicators of hydrology observed included Surface Water (A1), Saturation (A3), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Upland Data Point

Data Point 0013 (DP0013)

Dominant vegetation in the vicinity of DP0013 included Sugar Maple (FACU), Sugar-Berry (FACW), Ohio Buckeye (*Aesculus glabra*, FACU), Coral-Berry (FACU), Common Blue Violet (FAC), Canadian Honewort (*Cryptotaenia canadensis*, FAC), and Rock Polypody (*Polypodium virginianum*, UPL). In addition, non-dominant vegetation at the data point included American Elm (FACW). This did not meet any indicators for hydrophytic vegetation. The soil from 0-3 inches had a matrix soil color of 10YR 3/3 with a texture of Silty Clay. The soil from 3-20 inches had a matrix soil color of 10YR 3/4 with a texture of Silty clay. The soil at the data point was mapped as Nolin silt loam, occasionally flooded and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Wetland 0007 (w0007) (1.35 Acres)

This wetland was a scrub-shrub wetland located in a depression in a scrub-shrub lot. This wetland appeared to have recovered from past habitat disturbance. No surface water connection with any "waters of the United States" was observed. Unless a direct groundwater connection to a jurisdictional feature is assumed by the USACE, it is likely that this wetland is not regulated. See Figure 5.46 and 5.53.

Wetland Data Point

Data Point 0014 (DP0014)

Dominant vegetation in the vicinity of DP0014 included Lamp Rush (*Juncus effusus*, FACW). In addition, non-dominant vegetation at the data point included Blunt Broom Sedge (FACW) and Tall False Rye Grass (FACU). This met the rapid test for hydrophytic vegetation. The soil from 0-20 inches had a matrix soil color of 10YR 6/1 with concentrations in the matrix at 10 percent, and a texture of Silt Loam. The soil at the data point was mapped as Otwood silt loam, 2 to 6 percent slopes, eroded, and met the Depleted Matrix (F3) hydric soil criterion. The indicators of hydrology observed included Saturation (A3), Drainage patterns (B10), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Wetland Data Point

Data Point 0015 (DP0015)

Dominant vegetation in the vicinity of DP0015 included Swamp Rose (*Rosa palustris*, OBL), American Elm (FACW), Lamp Rush (FACW), Blunt Broom Sedge (FACW), and Tall False Rye Grass (FACU). In addition, non-dominant vegetation at the data point included Red Maple (*Acer rubrum*, FAC), Late Goldenrod (*Solidago gigantea*, FACW), Devil's-Darning-Needles (*Clematis virginiana*, FAC), and Seedbox (*Ludwigia alternifolia*, FACW). The dominance test is greater than 50 percent, which qualifies as a hydrophytic vegetation indicator. The soil from 0-20 inches had a matrix soil color of 10YR 5/2 with concentrations in the matrix at 10 percent, and a texture of Silt Loam. The soil at the data point was mapped as Henshaw silt loam, 0 to 2 percent slopes, rarely flooded, and met the Depleted Matrix (F3) hydric soil criterion. The indicators of hydrology observed included Saturation (A3), Drainage Patterns (B10), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Upland Data Point

Data Point 0016 (DP0016)

Dominant vegetation in the vicinity of DP0016 included Common Chickweed (UPL), Annual Blue Grass (FACU), and Henbit Deadnettle (*Lamium amplexicaule*, UPL). In addition, non-dominant vegetation at the data point included Hairy Bittercress (*Cardamine hirsuta*, FACU), and Purple Deadnettle (UPL). This did not meet any indicators for hydrophytic vegetation. The soil from 0-20 inches had a matrix soil color of 10YR 5/6 with a texture of Silt Loam. The soil at the data point was mapped as Nicholson silt loam, 2 to 6 percent slopes, eroded and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Wetland 0008 (w0008) (0.07 Acre)

This wetland was a forested wetland located in a depression within the riparian corridor. No evidence of habitat disturbance was observed. This wetland has a surface water connection with Skin Frame Creek (Stream 003) which flows into the Cumberland River, a Traditional Navigable

Water. Due to this connection, this wetland should be considered a “waters of the United States”. See Figures 5.43 and 5.44.

Wetland Data Point

Data Point 0017 (DP0017)

Dominant vegetation in the vicinity of DP0017 included Rough Cockleburr (FAC). In addition, non-dominant vegetation at the data point included Common Blue Violet (FAC) and Fowl Manna Grass (*Glyceria striata*, OBL). The dominance test is greater than 50 percent, which qualifies as a hydrophytic vegetation indicator. The soil from 0-20 inches had a matrix soil color of 10YR 4/2 with concentrations in the matrix at 5 percent, and a texture of Silt Loam. The soil at the data point was mapped as Nolin silt loam, occasionally flooded, and met the Depleted Matrix (F3) hydric soil criterion. The indicators of hydrology observed included Surface Water (A1), Sediment Deposits (B2), and Geomorphic Position (D2). This data point qualified as a wetland.

Upland Data Point

Data Point 0018 (DP0018)

Dominant vegetation in the vicinity of DP0018 included Sugar-Berry (FACW), Sugar Maple (FACU), White Ash (*Fraxinus americana*, FACU), Ohio Buckeye (FACU), and Canadian Wood-Nettle (*Laportea canadensis*, FAC). In addition, non-dominant vegetation at the data point included Black Walnut (FACU), Ash-Leaf Maple (FAC), Northern Spicebush (*Lindera benzoin*, FAC), Wild Blue Phlox (*Phlox divaricata*, FACU), Eastern False Rue-Anemone (*Enemion biternatum*, FACU), largeleaf waterleaf (*Hydrophyllum macrophyllum*, UPL), Kentucky Blue Grass (FACU), Virginia Springbeauty (FAC), and Sleepydick (*Ornithogalum umbellatum*, FACU). This did not meet any indicators for hydrophytic vegetation. The soil from 0-4 inches had a matrix soil color of 10YR 3/3 with a texture of Silt Loam. The soil from 4-20 inches had a matrix soil color of 10YR 3/4 with a texture of Silt loam. The soil at the data point was mapped as Nolin silt loam, occasionally flooded and did not meet any hydric soil criteria. The primary indicator of hydrology observed was Drift Deposits (B3). This data point did not qualify as a wetland.

Upland Data Point

Data Point 0019 (DP0019)

Dominant vegetation in the vicinity of DP0019 included Sugar-Berry (FACW), American Sycamore (FACW), American Elm (FACW), Black Elder (*Sambucus nigra*, FAC), and Canadian Honewort (FAC). In addition, non-dominant vegetation at the data point included Common Blue Violet (FAC) and White Panicled American-Aster (FACW). The dominance test is greater than 50 percent, which qualifies as a hydrophytic vegetation indicator. The soil from 0-4 inches had a matrix soil color of 10YR 3/3 with a texture of Silt Loam. The soil from 4-20 inches had a matrix soil color of 7.5YR 4/4 with a texture of Silt loam. The soil at the data point was mapped as Crider silt loam, 6 to 12 percent slopes, severely eroded and did not meet any hydric soil criteria. The indicators of hydrology observed included Sediment Deposits (B2), Drift Deposits (B3), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point did not qualify as a wetland.

Upland Data Point

Data Point 0020 (DP0020)

Dominant vegetation in the vicinity of DP0020 included American Elm (FACW) and Sugar-Berry (FACW). In addition, non-dominant vegetation at the data point included American Sycamore (FACW) and American Elm (FACW). This met the rapid test for hydrophytic vegetation. The soil from 0-4 inches had a matrix soil color of 10YR 3/3 with a texture of Silt Loam. The soil from 4-20 inches had a mixed matrix of 7.5YR 5/4 at 50 percent and 10yr 4/4 at 50 percent with a soil texture of Silty Clay Loam. The soil at the data point was mapped as Crider silt loam, 6 to 12 percent slopes, severely eroded and did not meet any hydric soil criteria. The indicators of hydrology observed included Sediment Deposits (B2), Drift Deposits (B3), Surface Soil Cracks (B6), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point did not qualify as a wetland.

Wetland 0009 (w0009) (0.81 Acre)

This wetland was a forested wetland located in a depression in a woodlot. No evidence of habitat disturbance was observed. No surface water connection with any “waters of the United States” was observed. Unless a direct groundwater connection to a jurisdictional feature is assumed by the USACE, it is likely that this wetland is not regulated. See Figures 5.35 and 5.36.

Wetland Data Point

Data Point 0021 (DP0021)

Dominant vegetation in the vicinity of DP0021 included American Elm (FACW), Sugar-Berry (FACW), and Blunt Broom Sedge (FACW). In addition, non-dominant vegetation at the data point included Dotted Smartweed (*Persicaria punctata*, OBL). This met the rapid test for hydrophytic vegetation. The soil from 0-20 inches had a matrix soil color of 10yr 5/2 with concentrations in the matrix at 10 percent, and a texture of Silty Clay Loam. The soil at the data point was mapped as Crider silt loam, 6 to 12 percent slopes, eroded, and met the Depleted Matrix (F3) hydric soil criterion. The indicators of hydrology observed included Surface Water (A1), Sediment Deposits (B2), Algal Mat or Crust (B4), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Wetland 0010 (w0010) (0.16 Acre)

This wetland was a forested wetland located in a depression in a woodlot. No evidence of habitat disturbance was observed. No surface water connection with any “waters of the United States” was observed. Unless a direct groundwater connection to a jurisdictional feature is assumed by the USACE, it is likely that this wetland is not regulated. See Figure 5.36.

Wetland Data Point

Data Point 0022 (DP0022)

Dominant vegetation in the vicinity of DP0022 included American Elm (FACW), Sugar-Berry (FACW), Blunt Broom Sedge (FACW), and White Panicled American-Aster (FACW). This met the rapid test for hydrophytic vegetation. The soil from 0-20 inches had a matrix soil color of 10YR 5/1 with concentrations in the matrix at 15 percent, and a texture of Silty Clay. The soil at the data point was mapped as Crider silt loam, 6 to 12 percent slopes, severely eroded, and met the Depleted Matrix (F3) hydric soil criterion. The indicators of hydrology observed included Surface Water (A1), Drift Deposits (B3), Algal Mat or Crust (B4), Water-Stained Leaves (B9), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Upland Data Point

Data Point 0023 (DP0023)

Dominant vegetation in the vicinity of DP0023 included Northern Red Oak (*Quercus rubra*, FACU), Sugar Maple (FACU), Sugar-Berry (FACW), James' sedge (*Carex jamesii*, UPL), and Coral-Berry (FACU). In addition, non-dominant vegetation at the data point included White Ash (FACU), American Elm (FACW), Sticky-Willy (FACU), Hairy Sweet-Cicely (*Osmorhiza claytonii*, FACU), and Downy Yellow Violet (FACU). This did not meet any indicators for hydrophytic vegetation. The soil from 0-2 inches had a matrix soil color of 2.5YR 3/3 with a texture of Clay Loam. The soil from 2-20 inches had a matrix soil color of 2.5YR 5/8 with a texture of Clay Loam. The soil at the data point was mapped as Crider silt loam, 12 to 20 percent slopes, eroded and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Wetland 0011 (w0011) (0.03 Acre)

This wetland was a forested wetland located in a depression in a woodlot. No evidence of habitat disturbance was observed. No surface water connection with any “waters of the United States” was observed. Unless a direct groundwater connection to a jurisdictional feature is assumed by the USACE, it is likely that this wetland is not regulated. See Figure 5.36.

Wetland Data Point

Data Point 0024 (DP0024)

Dominant vegetation in the vicinity of DP0024 included Sugar-Berry (FACW) in multiple strata. This met the rapid test for hydrophytic vegetation. The soil from 0-20 inches had a matrix soil color of 10YR 4/2 with concentrations in the matrix at 15 percent, and a texture of Silty Clay. The soil at the data point was mapped as Crider silt loam, 6 to 12 percent slopes, severely eroded, and met the Depleted Matrix (F3) hydric soil criterion. The indicators of hydrology observed included Surface Water (A1), Sediment Deposits (B2), Drift Deposits (B3), Water-Stained Leaves (B9), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Upland Data Point

Data Point 0025 (DP0025)

Dominant vegetation in the vicinity of DP0025 included Sugar-Berry (FACW), Coral-Berry (FACU), Inflated Narrow-Leaf Sedge (FACU), Virginia Wild Rye (FACW), and White Panicled American-Aster (FACW). In addition, non-dominant vegetation at the data point included Ash-Leaf Maple (FAC), Ground Ivy (*Glechoma hederacea*, FACU), White Avens (*Geum canadense*, FACU), and Downy Yellow Violet (FACU). The dominance test is greater than 50 percent, which qualifies as a hydrophytic vegetation indicator. The soil from 0-20 inches had a matrix soil color of 10YR 6/4 with concentrations in the matrix at 15 percent, and a texture of Clay Loam. The soil at the data point was mapped as Crider silt loam, 6 to 12 percent slopes, severely eroded and did not meet any hydric soil criteria. The indicators of hydrology observed included Drift Deposits (B3), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point did not qualify as a wetland.

Upland Data Point

Data Point 0101 (DP0101)

Dominant vegetation in the vicinity of DP0101 included Tall False Rye Grass (FACU) and Common Wheat (*Triticum aestivum*, UPL). In addition, non-dominant vegetation at the data point included King's-Cureall (*Oenothera biennis*, FACU), Curly Dock (*Rumex crispus*, FAC), and Great Ragweed (FAC). This did not meet any indicators for hydrophytic vegetation. The soil from 0-4 inches had a matrix soil color of 10YR 3/4 with concentrations in the matrix at 3 percent, and a texture of Loam. The soil from 4-20 inches had a matrix soil color of 10YR 3/4 with concentrations in the matrix at 5 percent, and a texture of Loam. The soil at the data point was mapped as Crider silt loam, 2 to 6 percent slopes, eroded and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Upland Data Point

Data Point 0102 (DP0102)

Dominant vegetation in the vicinity of DP0102 included Curly Dock (FAC) and Virginia Wild Rye (FACW). In addition, non-dominant vegetation at the data point included Spreading Chervil (FACW) and Great Ragweed (FAC). The dominance test is greater than 50 percent, which qualifies as a hydrophytic vegetation indicator. The soil from 0-20 inches had a matrix soil color of 10YR 4/4 with concentrations in the matrix at 10 percent, and a texture of Loam. The soil at the data point was mapped as Nolin silt loam, occasionally flooded and did not meet any hydric soil criteria. The only indicator of hydrology observed included the secondary indicator of the FAC-Neutral Test (D5). This data point did not qualify as a wetland.

Upland Data Point

Data Point 0103 (DP0103)

Dominant vegetation in the vicinity of DP0103 included Tall False Rye Grass (FACU). In addition, non-dominant vegetation at the data point included Reed Canary Grass (*Phalaris arundinacea*, FACW). This did not meet any indicators for hydrophytic vegetation. The soil from 0-20 inches had a matrix soil color of 10YR 4/3 with concentrations in the matrix at 5 percent, and a texture of Clay Loam. The soil at the data point was mapped as Crider silt loam, 2 to 6 percent slopes, eroded and did not meet any hydric soil criteria. The primary indicator of hydrology observed was Drift Deposits (B3). This data point did not qualify as a wetland.

Upland Data Point

Data Point 0104 (DP0104)

Dominant vegetation in the vicinity of DP0104 included Cress-Leaf Groundsel (OBL), Curly Dock (FAC), and Eyebane (*Euphorbia maculata*, FACU). The dominance test is greater than 50 percent, which qualifies as a hydrophytic vegetation indicator. The soil from 0-2 inches had a matrix soil color of 10YR 4/4 with a texture of Clay Loam. The soil from 2-20 inches had a matrix soil color of 10YR 4/4 with concentrations in the matrix at 3 percent, and a texture of Clay loam. The soil at the data point was mapped as Crider silt loam, 0 to 2 percent slopes and did not meet any hydric soil criteria. The secondary indicators of hydrology observed included Geomorphic Position (D2). This data point did not qualify as a wetland.

Upland Data Point

Data Point 0105 (DP0105)

Dominant vegetation in the vicinity of DP0105 included Tall False Rye Grass (FACU) and Great Ragweed (FAC). In addition, non-dominant vegetation at the data point included Kentucky Blue Grass (FACU), Cress-Leaf Groundsel (OBL), Canadian Goldenrod (*Solidago canadensis*, FACU), and Hairy Bittercress (FACU). This did not meet any indicators for hydrophytic vegetation. The soil from 0-2 inches had a matrix soil color of 10YR 4/4 with a texture of Clay Loam. The soil from 2-20 inches had a matrix soil color of 10YR 4/4 with concentrations in the matrix at 3 percent, and a texture of Clay loam. The soil at the data point was mapped as Crider silt loam, 2 to 6 percent slopes, eroded and did not meet any hydric soil criteria. The primary indicator of hydrology observed was Drift Deposits (B3). This data point did not qualify as a wetland.

Upland Data Point

Data Point 0106 (DP0106)

Dominant vegetation in the vicinity of DP0106 included Great Ragweed (FAC). In addition, non-dominant vegetation at the data point included Ash-Leaf Maple (FAC), Blunt Broom Sedge (FACW), Virginia Wild Rye (FACW), and Curly Dock (FAC). The dominance test is greater than 50 percent, which qualifies as a hydrophytic vegetation indicator. The soil from 0-6 inches had a mixed matrix of 10YR 4/3 at 50 percent and 10YR 3/4 at 50 percent with a soil texture of Clay

Loam. The soil from 6-20 inches had a matrix soil color of 10YR 4/3 with concentrations in the matrix at 3 percent, and a texture of Clay Loam. The soil at the data point was mapped as Crider silt loam, 2 to 6 percent slopes, eroded and did not meet any hydric soil criteria. The indicators of hydrology observed included Sediment Deposits (B2), and Geomorphic Position (D2). This data point did not qualify as a wetland.

Upland Data Point

Data Point 0110 (DP0110)

Dominant vegetation in the vicinity of DP0110 included Black Elder (FAC), Dock-Leaf Smartweed (*Persicaria lapathifolia*, FACW), Wand Panic Grass (*Panicum virgatum*, FAC), and black mustard (*Brassica nigra*, UPL). In addition, non-dominant vegetation at the data point included White Vervain (*Verbena urticifolia*, FAC), Japanese Bristle Grass (*Setaria faberi*, UPL), Curly Dock (FAC), Soybean (*Glycine max*, UPL), and Virginia Wild Rye (FACW). The dominance test is greater than 50 percent, which qualifies as a hydrophytic vegetation indicator. The soil from 0-4 inches had a matrix soil color of 10YR 4/3 with a texture of Clay Loam. The soil from 4-20 inches had a matrix soil color of 10YR 4/4 with concentrations in the matrix at 5 percent, and a texture of Clay loam. The soil at the data point was mapped as Crider silt loam, 6 to 12 percent slopes, severely eroded and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Wetland 0101 (w0101) (0.04 Acre)

This wetland was an emergent wetland located in a depression in an agricultural field. No evidence of habitat disturbance was observed. No surface water connection with any “waters of the United States” was observed. Unless a direct groundwater connection to a jurisdictional feature is assumed by the USACE, it is likely that this wetland is not regulated. See Figure 5.10.

Wetland Data Point

Data Point 0111 (DP0111)

Dominant vegetation in the vicinity of DP0111 included Black Elder (FAC), Virginia Wild Rye (FACW), and Curly Dock (FAC). In addition, non-dominant vegetation at the data point included Great Ragweed (FAC). The dominance test is greater than 50 percent, which qualifies as a hydrophytic vegetation indicator. The soil from 0-5 inches had a matrix soil color of 10YR 4/4 with a texture of Clay loam. The soil from 5-20 inches had a matrix soil color of 10YR 4/2 with concentrations in the matrix at 5 percent, and a texture of Clay Loam. The soil at the data point was mapped as Crider silt loam, 6 to 12 percent slopes, severely eroded, and met the Depleted Matrix (F3) hydric soil criterion. The secondary indicators of hydrology observed included Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Upland Data Point

Data Point 0112 (DP0112)

Dominant vegetation in the vicinity of DP0112 included Curly Dock (FAC). In addition, non-dominant vegetation at the data point included Great Ragweed (FAC). The dominance test is greater than 50 percent, which qualifies as a hydrophytic vegetation indicator. The soil from 0-5 inches had a matrix soil color of 10YR 4/4 with a texture of Clay Loam. The soil from 5-20 inches had a matrix soil color of 10YR 4/2 with concentrations in the matrix at 5 percent, and a texture of Clay loam. The soil at the data point was mapped as Crider silt loam, 6 to 12 percent slopes, severely eroded, and met the Depleted Matrix (F3) hydric soil criterion. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Upland Data Point

Data Point 0113 (DP0113)

Dominant vegetation in the vicinity of DP0113 included Honey-Locust (FAC), Sugar-Berry (FACW), Purple Deadnettle (UPL), and Japanese Honeysuckle (*Lonicera japonica*, FAC). In addition, non-dominant vegetation at the data point included Curly Dock (FAC), Bull Thistle (*Cirsium vulgare*, FACU), Canadian Goldenrod (FACU), Hairy Bittercress (FACU), Carolina Geranium (*Geranium carolinianum*, UPL), Meadow Garlic (*Allium canadense*, FACU), Henbit Deadnettle (UPL), and Cress-Leaf Groundsel (OBL). The dominance test is greater than 50 percent, which qualifies as a hydrophytic vegetation indicator. The soil from 0-20 inches had a matrix soil color of 10YR 4/4 with concentrations in the matrix at 10 percent, and a texture of Clay Loam. The soil at the data point was mapped as Crider silt loam, 2 to 6 percent slopes, eroded and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Upland Data Point

Data Point 0114 (DP0114)

Dominant vegetation in the vicinity of DP0114 included Northern White Oak (*Quercus alba*, FACU), Sugar-Berry (FACW) in multiple strata, Black Walnut (FACU), Slippery Elm (*Ulmus rubra*, FAC) in multiple strata, White Avens (FACU), and Coral-Berry (FACU). In addition, non-dominant vegetation at the data point included Black Locust (*Robinia pseudoacacia*, FACU), Eastern Red-Cedar (*Juniperus virginiana*, FACU), Coral-Berry (FACU), Rambler Rose (*Rosa multiflora*, FACU), White Ash (FACU), Purple Deadnettle (UPL), Eastern Woodland Sedge (*Carex blanda*, FAC), Japanese Honeysuckle (FAC), Sticky-Willy (FACU), Philadelphia Fleabane (*Erigeron philadelphicus*, FACU), Eastern Poison Ivy (FAC), and Wild Comfrey (*Cynoglossum virginianum*, UPL). This did not meet any indicators for hydrophytic vegetation. The soil from 0-4 inches had a matrix soil color of 10YR 4/4 with a texture of Clay Loam. The soil from 4-20 inches had a matrix soil color of 5YR 4/6 with concentrations in the matrix at 2 percent, and a texture of Clay loam. The soil at the data point was mapped as Crider silt loam, 6 to 12 percent slopes, eroded and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Wetland 0102 (w0102) (0.02 Acre)

This wetland was an emergent wetland located in a depression in a woodlot. No evidence of habitat disturbance was observed. No surface water connection with any "waters of the United States" was observed. Unless a direct groundwater connection to a jurisdictional feature is assumed by the USACE, it is likely that this wetland is not regulated. See Figure 5.17.

Wetland Data Point

Data Point 0115 (DP0115)

Dominant vegetation in the vicinity of DP0115 included Slippery Elm (FAC) and Common Fox Sedge (*Carex vulpinoidea*, OBL). In addition, non-dominant vegetation at the data point included Curly Dock (FAC), Hairy Woodland Brome (*Bromus pubescens*, FACU), and Canadian Goldenrod (FACU). The dominance test is greater than 50 percent, which qualifies as a hydrophytic vegetation indicator. The soil from 0-2 inches had a matrix soil color of 10YR 3/2 with a texture of Loam. The soil from 2-20 inches had a matrix soil color of 10YR 4/1 with concentrations in the matrix at 3 percent, and a texture of Clay Loam. The soil at the data point was mapped as Crider silt loam, 2 to 6 percent slopes, eroded, and met the Depleted Matrix (F3) hydric soil criterion. The secondary indicators of hydrology observed included Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Upland Data Point

Data Point 0116 (DP0116)

Dominant vegetation in the vicinity of DP0116 included Honey-Locust (FAC), Black Cherry (FACU), Eastern Red-Cedar (FACU), Tall False Rye Grass (FACU), and Japanese Honeysuckle (FAC). In addition, non-dominant vegetation at the data point included Purple Deadnettle (UPL), Beaked Cornsalad (*Valerianella radiata*, FAC), Queen Anne's-Lace (*Daucus carota*, UPL), Kentucky Blue Grass (FACU), Black-Seed Plantain (*Plantago rugelii*, FACU), Common Yellow Oxalis (*Oxalis stricta*, FACU), and White Clover (*Trifolium repens*, FACU). This did not meet any indicators for hydrophytic vegetation. The soil from 0-20 inches had a matrix soil color of 5YR 4/6 with a texture of Loam. The soil at the data point was mapped as Crider silt loam, 2 to 6 percent slopes, eroded and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Wetland 0103 (w0103) (0.03 Acre)

This wetland was a scrub-shrub wetland located in a depression in a woodlot. No evidence of habitat disturbance was observed. No surface water connection with any "waters of the United States" was observed. Unless a direct groundwater connection to a jurisdictional feature is assumed by the USACE, it is likely that this wetland is not regulated. See Figure 5.13.

Wetland Data Point

Data Point 0117 (DP0117)

Dominant vegetation in the vicinity of DP0117 included Green Ash (*Fraxinus pennsylvanica*, FACW), Sugar-Berry (FACW), Sugar-Berry (FACW), Philadelphia Fleabane (FACU), and Black-Seed Plantain (FACU). The dominance test is greater than 50 percent, which qualifies as a hydrophytic vegetation indicator. The soil from 0-20 inches had a matrix soil color of 5Y 5/1 with concentrations in the matrix at 3 percent, and a texture of Clay. The soil at the data point was mapped as Fredonia-Vertrees complex, 12 to 20 percent slopes, eroded, rocky, and met the Depleted Matrix (F3) hydric soil criterion. The indicators of hydrology observed included Water-Stained Leaves (B9), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Upland Data Point

Data Point 0118 (DP0118)

Dominant vegetation in the vicinity of DP0118 included Redbud (*Cercis canadensis*, FACU), Sugar-Berry (FACW), Northern White Oak (FACU), Sugar-Berry (FACW), Devil's-Walkingstick (*Aralia spinosa*, FAC), Aniseroot (*Osmorhiza longistylis*, FACU), Virginia-Creeper (*Parthenocissus quinquefolia*, FACU), and Coral-Berry (FACU). In addition, non-dominant vegetation at the data point included Eastern Red-Cedar (FACU) and American Elm (FACW). This did not meet any indicators for hydrophytic vegetation. The soil from 0-20 inches had a matrix soil color of 5Y 5/1 with concentrations in the matrix at 3 percent, and a texture of Clay. The soil at the data point was mapped as Fredonia-Vertrees complex, 12 to 20 percent slopes, eroded, rocky, and met the Depleted Matrix (F3) hydric soil criterion. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Wetland 0104 (w0104) (0.21 Acre)

This wetland was an emergent wetland located in a depression in a fallow field. This wetland appeared to be recovering from past habitat disturbance. No surface water connection with any “waters of the United States” was observed. Unless a direct groundwater connection to a jurisdictional feature is assumed by the USACE, it is likely that this wetland is not regulated. See Figure 5.10.

Wetland Data Point

Data Point 0119 (DP0119)

Dominant vegetation in the vicinity of DP0119 included Common Spike-Rush (*Eleocharis palustris*, OBL). In addition, non-dominant vegetation at the data point included Chufa (*Cyperus esculentus*, FACW). This met the rapid test for hydrophytic vegetation. The soil from 0-2 inches had a matrix soil color of 10YR 4/4 with a texture of Silty Clay Loam. The soil from 2-20 inches had a matrix soil color of 10yr 4/4 with concentrations in the matrix at 5 percent, and a texture of Silty clay loam. The soil at the data point was mapped as Crider silt loam, 6 to 12 percent slopes, severely eroded, and met the Redox Depressions (F8) hydric soil criterion. The indicators of

hydrology observed included Algal Mat or Crust (B4), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Upland Data Point

Data Point 0120 (DP0120)

Dominant vegetation in the vicinity of DP0120 included Annual Blue Grass (FACU) and Philadelphia Fleabane (FACU). In addition, non-dominant vegetation at the data point included Great Plantain (*Plantago major*, FACU), Henbit Deadnettle (UPL), Carolina Geranium (UPL), and Eastern Woodland Sedge (FAC). This did not meet any indicators for hydrophytic vegetation. The soil from 0-20 inches had a matrix soil color of 10YR 4/4 with concentrations in the matrix at 10 percent, and a texture of Clay Loam. The soil at the data point was mapped as Crider silt loam, 6 to 12 percent slopes, severely eroded and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Upland Data Point

Data Point 0121 (DP0121)

Dominant vegetation in the vicinity of DP0121 included Common Spike-Rush (OBL) and Chufa (FACW). This met the rapid test for hydrophytic vegetation. The soil from 0-2 inches had a matrix soil color of 10YR 4/4 with a texture of Silty Clay Loam. The soil from 2-20 inches had a matrix soil color of 10YR 4/4 with concentrations in the matrix at 5 percent, and a texture of Silty Clay Loam. The soil at the data point was mapped as Crider silt loam, 6 to 12 percent slopes, severely eroded and did not meet any hydric soil criteria. The indicators of hydrology observed included Surface Water (A1), Algal Mat or Crust (B4), and the FAC-Neutral Test (D5). This data point did not qualify as a wetland.

Wetland 0105 (w0105) (0.05 Acre)

This wetland was an emergent wetland located in a depression in a fallow field. This wetland appeared to have recovered from past habitat disturbance. No surface water connection with any "waters of the United States" was observed. Unless a direct groundwater connection to a jurisdictional feature is assumed by the USACE, it is likely that this wetland is not regulated. See Figure 5.6.

Wetland Data Point

Data Point 0122 (DP0122)

Dominant vegetation in the vicinity of DP0122 included Common Spike-Rush (OBL) and Shallow Sedge (*Carex lurida*, OBL). This met the rapid test for hydrophytic vegetation. The soil from 0-20 inches had a matrix soil color of 10YR 5/2 with concentrations in the matrix at 10 percent, and a texture of Clay Loam. The soil at the data point was mapped as Crider silt loam, 2 to 6 percent slopes, eroded, and met the Depleted Matrix (F3), and Redox Depressions (F8) hydric soil criteria.

The indicators of hydrology observed included Algal Mat or Crust (B4), Surface Soil Cracks (B6), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Upland Data Point

Data Point 0123 (DP0123)

Dominant vegetation in the vicinity of DP0123 included Annual Blue Grass (FACU). In addition, non-dominant vegetation at the data point included White Clover (FACU), Annual Ragweed (*Ambrosia artemisiifolia*, FACU), English Plantain (*Plantago lanceolata*, UPL), Tall False Rye Grass (FACU), and Queen Anne's-Lace (UPL). This did not meet any indicators for hydrophytic vegetation. The soil from 0-2 inches had a matrix soil color of 10YR 3/4 with a texture of Silty Clay Loam. The soil from 2-20 inches had a matrix soil color of 10YR 3/4 with concentrations in the matrix at 5 percent, and a texture of Silty clay loam. The soil at the data point was mapped as Crider silt loam, 2 to 6 percent slopes, eroded and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Upland Data Point

Data Point 0124 (DP0124)

Dominant vegetation in the vicinity of DP0124 included Coral-Berry (FACU) and Red Fescue (*Festuca rubra*, FACU). In addition, non-dominant vegetation at the data point included Tall False Rye Grass (FACU), Canadian Goldenrod (FACU), Beaked Cornsalad (FAC), and Shepherd's-Purse (*Capsella bursa-pastoris,* FACU). This did not meet any indicators for hydrophytic vegetation. The soil from 0-2 inches had a matrix soil color of 10YR 4/3 with a texture of Clay Loam. The soil from 2-20 inches had a matrix soil color of 10YR 4/4 with a texture of Clay Loam. The soil at the data point was mapped as Crider silt loam, 6 to 12 percent slopes, severely eroded and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Upland Data Point

Data Point 0201 (DP0201)

Dominant vegetation in the vicinity of DP0201 included Honey-Locust (FAC), American Sycamore (FACW), Common Chickweed (UPL), and Purple Deadnettle (UPL). In addition, non-dominant vegetation at the data point included Rambler Rose (FACU). This did not meet any indicators for hydrophytic vegetation. The soil from 0-16 inches had a matrix soil color of 10YR 4/3 with concentrations in the matrix at 3 percent, and a texture of Silt Loam. The soil at the data point was mapped as Nolin silt loam, ponded (No) and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Wetland 0201 (W0201) (0.03 Acre)

This wetland was a forested wetland located in a depression in a woodlot. No evidence of habitat disturbance was observed. This wetland has a surface water connection with Stream 201 which flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this wetland should be considered a "waters of the United States". See Figures 5.45 and 5.52.

Wetland Data Point

Data Point 0202 (DP0202)

Dominant vegetation in the vicinity of DP0202 included Sugar-Berry (FACW) in multiple strata, Eastern Cottonwood (*Populus deltoides*, FAC), Ash-Leaf Maple (FAC), Late Goldenrod (FACW), and Eastern Woodland Sedge (FAC). In addition, non-dominant vegetation at the data point included Virginia Wild Rye (FACW), Ash-Leaf Maple (FAC), Japanese Honeysuckle (FAC), Common Blue Violet (FAC), and White Avens (FACU). The dominance test is greater than 50 percent, which qualifies as a hydrophytic vegetation indicator. The soil from 0-16 inches had a matrix soil color of 10YR 4/3 with concentrations in the matrix at 10 percent, and a texture of Silt Loam. The soil at the data point was mapped as Otwood silt loam, 2 to 6 percent slopes, eroded (OtB2), and met the Redox Depressions (F8) hydric soil criterion. The indicators of hydrology observed included Surface Water (A1), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Wetland 0202 (w0202) (0.64 Acre)

This wetland was an emergent wetland located in a depression in a fallow field. This wetland appeared to have recovered from past habitat disturbance. No surface water connection with any "waters of the United States" was observed. Unless a direct groundwater connection to a jurisdictional feature is assumed by the USACE, it is likely that this wetland is not regulated. See Figure 5.51.

Wetland Data Point

Data Point 0203 (DP0203)

Dominant vegetation in the vicinity of DP0203 included Stalk-Grain Sedge (*Carex stipata*, OBL). In addition, non-dominant vegetation at the data point included Swamp Milkweed (*Asclepias incarnata*, OBL), Virginia Wild Rye (FACW), and Lamp Rush (FACW). This met the rapid test for hydrophytic vegetation. The soil from 0-16 inches had a matrix soil color of 10YR 4/3 with concentrations in the matrix at 5 percent, and a texture of Silt Loam. The soil at the data point was mapped as Crider silt loam, 6 to 12 percent slopes, severely eroded (CrC3), and met the Redox Depressions (F8) hydric soil criterion. The indicators of hydrology observed included Inundation Visible on Aerial Imagery (B7), Crayfish Burrows (C8), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Upland Data Point

Data Point 0204 (DP0204)

Dominant vegetation in the vicinity of DP0204 included Tall Goldenrod (*Solidago altissima*, FACU) and Kentucky Blue Grass (FACU). In addition, non-dominant vegetation at the data point included Common Mouse-Ear Chickweed (*Cerastium fontanum*, FACU), large yellow vetch (*Vicia grandiflora*, UPL), White Clover (FACU), Meadow Garlic (FACU), Stiff Marsh Bedstraw (*Galium tinctorium*, OBL), and Common Milkweed (*Asclepias syriaca*, FACU). This did not meet any indicators for hydrophytic vegetation. The soil from 0-16 inches had a matrix soil color of 10YR 5/3 with concentrations in the matrix at 3 percent, and a texture of Silt Loam. The soil at the data point was mapped as Crider silt loam, 6 to 12 percent slopes, severely eroded (CrC3) and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Wetland 0203 (w0203) (0.62 Acre)

This wetland was an emergent wetland located in a depression in a fallow field. This wetland appeared to have recovered from past habitat disturbance. No surface water connection with any "waters of the United States" was observed. Unless a direct groundwater connection to a jurisdictional feature is assumed by the USACE, it is likely that this wetland is not regulated. See Figure 5.51.

Wetland Data Point

Data Point 0205 (DP0205)

Dominant vegetation in the vicinity of DP0205 included Fowl Manna Grass (OBL) and Dock-Leaf Smartweed (FACW). In addition, non-dominant vegetation at the data point included Giant Ironweed (FAC). This met the rapid test for hydrophytic vegetation. The soil from 0-16 inches had a matrix soil color of 10YR 5/3 with concentrations in the matrix at 15 percent, and a texture of Silt Loam. The soil at the data point was mapped as Crider silt loam, 6 to 12 percent slopes, severely eroded (CrC3), and met the Redox Depressions (F8) hydric soil criterion. The indicators of hydrology observed included Inundation Visible on Aerial Imagery (B7), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Upland Data Point

Data Point 0206 (DP0206)

Dominant vegetation in the vicinity of DP0206 included Japanese Bristle Grass (UPL) and Giant Ironweed (FAC). In addition, non-dominant vegetation at the data point included Sandbar Willow (*Salix interior*, FACW), and Bull Thistle (FACU). This did not meet any indicators for hydrophytic vegetation. The soil from 0-16 inches had a matrix soil color of 10YR 5/3 with concentrations in the matrix at 10 percent, and a texture of Silt Loam. The soil at the data point was mapped as Crider silt loam, 6 to 12 percent slopes, severely eroded (CrC3) and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Upland Data Point

Data Point 0207 (DP0207)

Dominant vegetation in the vicinity of DP0207 included Common Timothy (*Phleum pratense*, FACU) and Kentucky Blue Grass (FACU). In addition, non-dominant vegetation at the data point included Rambler Rose (FACU), Large Yellow Vetch (UPL), Curly Dock (FAC), Meadow Garlic (FACU), Tall Goldenrod (FACU), and Queen Anne's-Lace (UPL). This did not meet any indicators for hydrophytic vegetation. The soil from 0-16 inches had a matrix soil color of 10YR 5/4 with a texture of Silt Loam. The soil at the data point was mapped as Crider silt loam, 6 to 12 percent slopes, severely eroded (CrC3) and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Upland Data Point

Data Point 0208 (DP0208)

Dominant vegetation in the vicinity of DP0208 included Common Wheat (UPL) and Henbit Deadnettle (UPL). In addition, non-dominant vegetation at the data point included Common Chickweed (UPL) and Purple Deadnettle (UPL). This did not meet any indicators for hydrophytic vegetation. The soil from 0-16 inches had a matrix soil color of 10YR 5/4 with a texture of Silt Loam. The soil at the data point was mapped as Crider silt loam, 2 to 6 percent slopes, eroded (CrB2) and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Upland Data Point

Data Point 0209 (DP0209)

Dominant vegetation in the vicinity of DP0209 included Common Wheat (UPL) and Henbit Deadnettle (UPL). In addition, non-dominant vegetation at the data point included Great Ragweed (FAC). This did not meet any indicators for hydrophytic vegetation. The soil from 0-16 inches had a matrix soil color of 10YR 5/4 with a texture of Silt Loam. The soil at the data point was mapped as Crider silt loam, 2 to 6 percent slopes, eroded (CrB2) and did not meet any hydric soil criteria. The only indicator of hydrology observed included the secondary indicator of Surface Soil Cracks (B6). This data point did not qualify as a wetland.

Wetland 0204 (w0204) (0.73 Acre)

This wetland was an emergent wetland located in a depression in a fallow field. This wetland appeared to have recovered from past habitat disturbance. No surface water connection with any “waters of the United States” was observed. Unless a direct groundwater connection to a jurisdictional feature is assumed by the USACE, it is likely that this wetland is not regulated. See Figure 5.14 and 5.18.

Wetland Data Point

Data Point 0210 (DP0210)

Dominant vegetation in the vicinity of DP0210 included Sandbar Willow (FACW) and Stalk-Grain Sedge (OBL). In addition, non-dominant vegetation at the data point included Tufted Meadow-Foxtail (*Alopecurus carolinianus*, FACW), Pinkweed (*Persicaria pensylvanica*, FACW), and Curly Dock (FAC). This met the rapid test for hydrophytic vegetation. The soil from 0-16 inches had a matrix soil color of 7.5YR 4/4 with concentrations in the matrix at 20 percent, and a texture of Silty Clay Loam. The soil at the data point was mapped as Crider silt loam, 2 to 6 percent slopes, eroded (CrB2), and met the Redox Depressions (F8) hydric soil criterion. The indicators of hydrology observed included Saturation (A3), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Upland Data Point

Data Point 0211 (DP0211)

Dominant vegetation in the vicinity of DP0211 included Sugar-Berry (FACW) and Kentucky Blue Grass (FACU). In addition, non-dominant vegetation at the data point included Tall Goldenrod (FACU), Purple Deadnettle (UPL), Stalk-Grain Sedge (OBL), and Queen Anne's-Lace (UPL). This did not meet any indicators for hydrophytic vegetation. The soil from 0-3 inches had a matrix soil color of 10YR 4/3 with a texture of Silt Loam. The soil from 3-16 inches had a matrix soil color of 7.5YR 4/4 with concentrations in the matrix at 20 percent, and a texture of Silty Clay Loam. The soil at the data point was mapped as Crider silt loam, 2 to 6 percent slopes, eroded (CrB2) and did not meet any hydric soil criteria. The only indicator of hydrology observed included the secondary indicator of the FAC-Neutral Test (D5). This data point did not qualify as a wetland.

Wetland 1001 (w1001) (0.06 acres)

This wetland was an emergent wetland located in a depression. No surface water connection with any “waters of the United States” was observed. It is likely that this wetland is not regulated. See Figures 5.24 and 5.32.

Wetland Data Point

Data Point 1001 (DP1001)

Dominant vegetation in the vicinity of DP1001 included Large Barnyard Grass (*Echinochloa crus-galli*, FAC) and Rough-Fruit Amaranth (*Amaranthus tuberculatus*, FACW). In addition, non-dominant vegetation at the data point included common wheat (UPL). The dominance test is greater than 50%, which qualifies as a hydrophytic vegetation indicator. The soil from 0-18” had a matrix soil color of 10YR 5/2 with concentrations in the matrix at 10%, and a texture of Clay Loam. The soil at the data point was mapped as Crider silt loam, 2 to 6 percent slopes, eroded (CrB2), and met the Depleted Matrix (F3), and Redox Depressions (F8) hydric soil criteria. The secondary indicators of hydrology observed included Surface Soil Cracks (B6), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Wetland 1002 (w1002) (1.25 acres)

This wetland was an emergent wetland located in a swale. A surface water connection with an unnamed tributary to Skinframe Creek, which flows into the Cumberland River, a Traditional Navigable Water, was observed. Due to this connection, this wetland should be considered a "waters of the United States". See Figure 5.75.

Wetland Data Point

Data Point 1002 (DP1002)

Dominant vegetation in the vicinity of DP1002 included Tall False Rye Grass (FACU), Black Bent (*Agrostis gigantea*, FACW), and Common Fox Sedge (OBL). In addition, non-dominant vegetation at the data point included Lesser Poverty Rush (FAC), Troublesome Sedge (*Carex molesta*, FAC), Limestone-Meadow Sedge (*Carex granularis*, FACW), and Giant Ironweed (*Vernonia gigantea*, FAC). The dominance test is greater than 50%, which qualifies as a hydrophytic vegetation indicator. The soil from 0-18" had a matrix soil color of 10YR 5/2 with concentrations in the pore linings at 5%, and a texture of Silty Clay. The soil at the data point was mapped as Lindside silt loam, occasionally flooded (Ld), and met the Depleted Matrix (F3) hydric soil criterion. The secondary indicators of hydrology observed included Drainage Patterns (B10), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Upland Data Point

Data Point 1003 (DP1003)

Dominant vegetation in the vicinity of DP1003 included Tall False Rye Grass (FACU) and Black Medick (*Medicago lupulina*, FACU). In addition, non-dominant vegetation at the data point included Alsike Clover (*Trifolium hybridum*, FACU), Kentucky Blue Grass (FACU), Philadelphia Fleabane (FACU), Field Brome (*Bromus arvensis*, FACU), and Orchard Grass (*Dactylis glomerata*, FACU). This did not meet any indicators for hydrophytic vegetation. The soil from 0-18" had a matrix soil color of 10YR 5/3 with a texture of Silt Loam. The soil at the data point was mapped as Lindside silt loam, occasionally flooded (Ld) and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Wetland 1003 (w1003) (0.16 acres)

This wetland was an emergent wetland located in a swale. A surface water connection with an unnamed tributary to Skinframe Creek, which flows into the Cumberland River, a Traditional Navigable Water, was observed. Due to this connection, this wetland should be considered a "waters of the United States". See Figure 5.77.

Wetland Data Point

Data Point 1004 (DP1004)

Dominant vegetation in the vicinity of DP1004 included Common Fox Sedge (OBL) and Rice Cut Grass (*Leersia oryzoides*, OBL). In addition, non-dominant vegetation at the data point included Fowl Manna Grass (OBL), Spotted Touch-Me-Not (*Impatiens capensis*, FACW), and Tall False Rye Grass (FACU). This met the rapid test for hydrophytic vegetation. The soil from 0-18" had a matrix soil color of 10YR 5/2 with concentrations in the pore linings at 5%, and a texture of Silty Clay. The soil at the data point was mapped as Lindside silt loam, occasionally flooded (Ld), and met the Depleted Matrix (F3) hydric soil criterion. The indicators of hydrology observed included Saturation (A3), Drainage Patterns (B10), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Wetland 1004 (w1004) (<0.01 acres)

This wetland was an emergent wetland located in a depression. No surface water connection with any "waters of the United States" was observed. It is likely that this wetland is not regulated. See Figure 5.78.

Wetland Data Point

Data Point 1005 (DP1005)

Dominant vegetation in the vicinity of DP1005 included Frank's Sedge (*Carex frankii*, OBL), blunt spikerush (*Eleocharis obtusa*, OBL), and St. Anthony's-Turnip (*Ranunculus bulbosus*, FAC). In addition, non-dominant vegetation at the data point included Tufted Meadow-Foxtail (FACW) and Field Brome (FACU). The dominance test is greater than 50%, which qualifies as a hydrophytic vegetation indicator. The soil from 0-18" had a matrix soil color of 10YR 4/2 with concentrations in the matrix at 10%, and a texture of Silty Clay. The soil at the data point was mapped as Crider-Baxter complex, 12 to 30 percent slopes, severely eroded (CtE3), and met the Depleted Matrix (F3), and Redox Depressions (F8) hydric soil criteria. The secondary indicators of hydrology observed included Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Wetland 1005 (w1005) (0.92 acres forested, 0.61 acres emergent)

This wetland was a forested wetland located along Tinsley Creek and an emergent wetland in adjacent swales. A surface water connection with Tinsley Creek, which flows into the Cumberland River, a Traditional Navigable Water, was observed. Due to this connection, this wetland should be considered a "waters of the United States". See Figures 5.77, 5.78, and 5.80.

Wetland Data Point

Data Point 1006 (DP1006)

Dominant vegetation in the vicinity of DP1006 included Common Fox Sedge (OBL) and Dark-Green Bulrush (*Scirpus atrovirens*, OBL). In addition, non-dominant vegetation at the data point

included Rice Cut Grass (OBL) and St. Anthony's-Turnip (FAC). This met the rapid test for hydrophytic vegetation. The soil from 0-18” had a matrix soil color of 10YR 6/2 with concentrations in the matrix at 10%, and a texture of Silty Clay. The soil at the data point was mapped as Lindside silt loam, occasionally flooded (Ld), and met the Depleted Matrix (F3) hydric soil criterion. The indicators of hydrology observed included Saturation (A3), Drainage Patterns (B10), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Upland Data Point

Data Point 1007 (DP1007)

Dominant vegetation in the vicinity of DP1007 included Tall False Rye Grass (FACU). In addition, non-dominant vegetation at the data point included midland sedge (*Carex mesochorea*, UPL), Frank's Sedge (OBL), Alsike Clover (FACU), Lesser Poverty Rush (FAC), and Common Fox Sedge (OBL). This did not meet any indicators for hydrophytic vegetation. The soil from 0-18” had a matrix soil color of 10YR 5/3 with concentrations in the matrix at 5%, and a texture of Silt Loam. The soil at the data point was mapped as Lindside silt loam, occasionally flooded (Ld) and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Wetland Data Point

Data Point 1008 (DP1008)

Dominant vegetation in the vicinity of DP1008 included Black Willow (*Salix nigra*, OBL), Green Ash (FACW), Rambler Rose (FACU), and Spotted Touch-Me-Not (FACW). In addition, non-dominant vegetation at the data point included Dark-Green Bulrush (OBL), Fowl Manna Grass (OBL), and Common Fox Sedge (OBL). The dominance test is greater than 50%, which qualifies as a hydrophytic vegetation indicator. The soil from 0-18” had a matrix soil color of 10YR 6/2 with concentrations in the matrix at 10%, and a texture of Silty Clay. The soil at the data point was mapped as Lindside silt loam, occasionally flooded (Ld), and met the Depleted Matrix (F3) hydric soil criterion. The indicators of hydrology observed included Surface Water (A1), Drainage Patterns (B10), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Upland Data Point

Data Point 1009 (DP1009)

Dominant vegetation in the vicinity of DP1009 included Tall False Rye Grass (FACU) and St. Anthony's-Turnip (FAC). In addition, non-dominant vegetation at the data point included Lesser Poverty Rush (FAC), Orchard Grass (FACU), Little Barley (*Hordeum pusillum*, FAC), and Black-Seed Plantain (FACU). This did not meet any indicators for hydrophytic vegetation. The soil from 0-18” had a matrix soil color of 10YR 5/4 with a texture of Silt Loam. The soil at the data point was mapped as Crider-Baxter complex, 12 to 30 percent slopes, severely eroded (CtE3) and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Wetland 1006 (w1006) (0.27 acres)

This wetland was a forested wetland located in the inlet to a pond. A surface water connection with Tinsley Creek, which flows into the Cumberland River, a Traditional Navigable Water, was observed. Due to this connection, this wetland should be considered a “waters of the United States”. See Figure 5.78.

Wetland Data Point

Data Point 1010 (DP1010)

Dominant vegetation in the vicinity of DP1010 included Black Willow (OBL), Green Ash (FACW), Common Fox Sedge (OBL), and Narrow-Leaf Blue-Eyed-Grass (*Sisyrinchium angustifolium*, FACW). In addition, non-dominant vegetation at the data point included American Sycamore (FACW), Frank's Sedge (OBL), and Rice Cut Grass (OBL). This met the rapid test for hydrophytic vegetation. The soil from 0-18” had a matrix soil color of 10YR 6/2 with concentrations in the matrix at 10%, and a texture of Silty Clay. The soil at the data point was mapped as Crider-Baxter complex, 12 to 30 percent slopes, severely eroded (CtE3), and met the Depleted Matrix (F3) hydric soil criterion. The indicators of hydrology observed included Surface Water (A1), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Upland Data Point

Data Point 1011 (DP1011)

Dominant vegetation in the vicinity of DP1011 included Lesser Poverty Rush (FAC). In addition, non-dominant vegetation at the data point included Little Barley (FAC), and Tall False Rye Grass (FACU). The dominance test is greater than 50%, which qualifies as a hydrophytic vegetation indicator. The soil from 0-18” had a matrix soil color of 10YR 5/6 with a texture of Silty Clay. The soil at the data point was mapped as Crider-Baxter complex, 12 to 30 percent slopes, severely eroded (CtE3) and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Upland Data Point

Data Point 1012 (DP1012)

Dominant vegetation in the vicinity of DP1012 included Tall False Rye Grass (FACU), Troublesome Sedge (FAC), and Common Fox Sedge (OBL). In addition, non-dominant vegetation at the data point included White Clover (FACU) and St. Anthony's-Turnip (FAC). The dominance test is greater than 50%, which qualifies as a hydrophytic vegetation indicator. The soil from 0-18” had a matrix soil color of 10YR 6/3 with concentrations in the matrix at 5%, and a texture of Silt Loam. The soil at the data point was mapped as Otwood silt loam, 2 to 6 percent slopes, eroded (OtB2) and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Wetland 1007 (w1007) (0.25 acres)

This wetland was an emergent wetland located in a swale. No surface water connection with any "waters of the United States" was observed. It is likely that this wetland is not regulated. See Figure 5.77.

Wetland Data Point

Data Point 1013 (DP1013)

Dominant vegetation in the vicinity of DP1013 included Troublesome Sedge (FAC) and Common Fox Sedge (OBL). In addition, non-dominant vegetation at the data point included Dark-Green Bulrush (OBL) and Tall False Rye Grass (FACU). The dominance test is greater than 50%, which qualifies as a hydrophytic vegetation indicator. The soil from 0-6" had a matrix soil color of 10YR 4/1 with concentrations in the matrix at 5%, and a texture of Silt Loam. The soil from 6-16" had a matrix soil color of 10YR 6/3 with concentrations in the matrix at 5%, and a texture of Silt Loam. The soil at the data point was mapped as Otwood silt loam, 2 to 6 percent slopes, eroded (OtB2), and met the Depleted Matrix (F3) and Redox Depressions (F8) hydric soil criteria. The secondary indicators of hydrology observed included Geomorphic Position (D2) and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Wetland 1008 (w1008) (0.01 acres)

This wetland was an emergent wetland located in a depression. No surface water connection with any "waters of the United States" was observed. It is likely that this wetland is not regulated. See Figure 5.71 and 5.76.

Wetland Data Point

Data Point 1014 (DP1014)

Dominant vegetation in the vicinity of DP1014 included Dark-Green Bulrush (OBL). In addition, non-dominant vegetation at the data point included Common Fox Sedge (OBL), Fowl Manna Grass (OBL), and Tall False Rye Grass (FACU). This met the rapid test for hydrophytic vegetation. The soil from 0-6" had a matrix soil color of 10YR 6/2 with concentrations in the matrix at 10%, and a texture of Silt Loam. The soil from 6-18" had a matrix soil color of 10yr 5/6 with a texture of Silt Loam. The soil at the data point was mapped as Nicholson silt loam, 2 to 6 percent slopes, eroded (NhB2), and met the Depleted Matrix (F3) and Redox Depressions (F8) hydric soil criteria. The secondary indicators of hydrology observed included Geomorphic Position (D2) and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Upland Data Point

Data Point 1015 (DP1015)

Dominant vegetation in the vicinity of DP1015 included Tall False Rye Grass (FACU), Orchard Grass (FACU), and Alsike Clover (FACU). In addition, non-dominant vegetation at the data point included English Plantain (UPL) and Kentucky Blue Grass (FACU). This did not meet any

indicators for hydrophytic vegetation. The soil from 0-18” had a matrix soil color of 10YR 6/3 with a texture of Silt Loam. The soil at the data point was mapped as Crider silt loam, 2 to 6 percent slopes, eroded (CrB2) and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Wetland 1009 (w1009) (0.39 acres)

This wetland was an emergent wetland located in a swale. A surface water connection with an unnamed tributary to Skinframe Creek, which flows into the Cumberland River, a Traditional Navigable Water, was observed. Due to this connection, this wetland should be considered a “waters of the United States”. See Figures 5.70 and 5.75.

Wetland Data Point

Data Point 1016 (DP1016)

Dominant vegetation in the vicinity of DP1016 included Common Fox Sedge (OBL), Flat-Top Goldentop (*Euthamia graminifolia*, FAC), Spotted Touch-Me-Not (FACW), Sensitive Fern (*Onoclea sensibilis*, FACW), and Dark-Green Bulrush (OBL). In addition, non-dominant vegetation at the data point included Curly Dock (FAC). The dominance test is greater than 50%, which qualifies as a hydrophytic vegetation indicator. The soil from 0-18” had a matrix soil color of 10YR 5/2 with concentrations in the matrix at 10%, and a texture of Silt Loam. The soil at the data point was mapped as Crider silt loam, 2 to 6 percent slopes, eroded (Ld), and met the Depleted Matrix (F3) hydric soil criterion. The secondary indicators of hydrology observed included Drainage Patterns (B10) and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Upland Data Point

Data Point 1017 (DP1017)

Dominant vegetation in the vicinity of DP1017 included Tall False Rye Grass (FACU) and Alsike Clover (FACU). In addition, non-dominant vegetation at the data point included Black Medick (FACU), Kentucky Blue Grass (FACU), Black-Seed Plantain (FACU), and butterfly milkweed (*Asclepias tuberosa*, UPL). This did not meet any indicators for hydrophytic vegetation. The soil from 0-18” had a matrix soil color of 10YR 5/4 with a texture of Silty Clay. The soil at the data point was mapped as Nicholson silt loam, 6 to 12 percent slopes, severely eroded (NhC3) and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Wetland 1010 (w1010) (0.54 acres)

This wetland was an emergent wetland located in a swale. A surface water connection with an unnamed tributary to Skinframe Creek, which flows into the Cumberland River, a Traditional Navigable Water, was observed. Due to this connection, this wetland should be considered a “waters of the United States”. See Figure 5.62.

Wetland Data Point

Data Point 1018 (DP1018)

Dominant vegetation in the vicinity of DP1018 included Great Ragweed (FAC), Common Fox Sedge (OBL), Dark-Green Bulrush (OBL), and Rough Cockleburr (FAC). In addition, non-dominant vegetation at the data point included Rice Cut Grass (OBL), Virginia Water-Horehound (*Lycopus virginicus*, OBL), and Curly Dock (FAC). The dominance test is greater than 50%, which qualifies as a hydrophytic vegetation indicator. The soil at the data point was mapped as Newark silt loam, occasionally flooded (Ne), and met the Depleted Matrix (F3) hydric soil criterion. The indicators of hydrology observed included Drift Deposits (B3), Drainage Patterns (B10), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Upland Data Point

Data Point 1019 (DP1019)

Dominant vegetation in the vicinity of DP1019 included St. Anthony's-Turnip (FAC). In addition, non-dominant vegetation at the data point included Carolina Horse-Nettle (*Solanum carolinense*, FACU), Giant Ironweed (FAC), and Soft Brome (*Bromus hordeaceus*, UPL). The dominance test is greater than 50%, which qualifies as a hydrophytic vegetation indicator. The soil from 0-6” had a matrix soil color of 10YR 5/3 with a texture of Silty Clay. The soil from 6-18” had a matrix soil color of 10YR 5/4 with a texture of Silty Clay. The soil at the data point was mapped as Newark silt loam, occasionally flooded (Ne) and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Wetland 1011 (w1011) (0.07 acres)

This wetland was an emergent wetland located in a depression. No surface water connection with any “waters of the United States” was observed. It is likely that this wetland is not regulated. See Figure 5.62.

Wetland Data Point

Data Point 1020 (DP1020)

Dominant vegetation in the vicinity of DP1020 included blunt spikerush (OBL) and Common Fox Sedge (OBL). In addition, non-dominant vegetation at the data point included Rice Cut Grass (OBL), St. Anthony's-Turnip (FAC), and Little Barley (FAC). This met the rapid test for hydrophytic vegetation. The soil from 0-18” had a matrix soil color of 10YR 5/1 with concentrations in the matrix at 5%, and a texture of Silt Loam. The soil at the data point was mapped as Newark silt loam, occasionally flooded (Ne), and met the Depleted Matrix (F3) and Redox Depressions (F8) hydric soil criteria. The secondary indicators of hydrology observed included Geomorphic Position (D2) and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Upland Data Point

Data Point 1021 (DP1021)

Dominant vegetation in the vicinity of DP1021 included Tall False Rye Grass (FACU). In addition, non-dominant vegetation at the data point included Nimblewill (*Muhlenbergia schreberi*, FAC), Carolina Horse-Nettle (FACU), and Spotted Lady's-Thumb (*Persicaria maculosa*, FACW). This did not meet any indicators for hydrophytic vegetation. The soil from 0-18" had a matrix soil color of 10YR 6/3 with concentrations in the matrix at 5%, and a texture of Silty Clay. The soil at the data point was mapped as Nicholson silt loam, 6 to 12 percent slopes, severely eroded(NhC3) and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Wetland 1012 (w1012) (1.05 acres)

This wetland was an emergent wetland located in a swale. A surface water connection with an unnamed tributary to Skinframe Creek, which flows into the Cumberland River, a Traditional Navigable Water, was observed. Due to this connection, this wetland should be considered a "waters of the United States". See Figures 5.62, 5.63, and 5.71.

Wetland Data Point

Data Point 1022 (DP1022)

Dominant vegetation in the vicinity of DP1022 included Rice Cut Grass (OBL) and Common Fox Sedge (OBL). In addition, non-dominant vegetation at the data point included Spotted Lady's-Thumb (FACW), blunt spikerush (OBL), St. Anthony's-Turnip (FAC), and Lesser Poverty Rush (FAC). This met the rapid test for hydrophytic vegetation. The soil from 0-18" had a matrix soil color of 10YR 5/1 with concentrations in the matrix at 5%, and a texture of Loamy Sand. The soil at the data point was mapped as Crider-Baxter complex, 12 to 30 percent slopes, severely eroded (CtE3), and met the Sandy Redox (S5) hydric soil criterion. The indicators of hydrology observed included High Water Table (A2), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Upland Data Point

Data Point 1023 (DP1023)

Dominant vegetation in the vicinity of DP1023 included Tall False Rye Grass (FACU). In addition, non-dominant vegetation at the data point included Lesser Poverty Rush (FAC), Broom-Sedge (*Andropogon virginicus*, FACU), Bouncing-Bett (*Saponaria officinalis*, FACU), and Field Brome (FACU). This did not meet any indicators for hydrophytic vegetation. The soil from 0-18" had a matrix soil color of 10YR 5/4 with a texture of Silty Clay. The soil at the data point was mapped as Nicholson silt loam, 6 to 12 percent slopes, severely eroded (NhC3) and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Wetland 1013 (w1013) (0.43 acres)

This wetland was an emergent wetland located in a depression. No surface water connection with any “waters of the United States” was observed. It is likely that this wetland is not regulated. See Figure 5.71.

Wetland Data Point

Data Point 1024 (DP1024)

Dominant vegetation in the vicinity of DP1024 included Lamp Rush (FACW). In addition, non-dominant vegetation at the data point included Rice Cut Grass (OBL) and Lesser Poverty Rush (FAC). This met the rapid test for hydrophytic vegetation. The soil from 0-18” had a matrix soil color of 10YR 6/2 with concentrations in the matrix at 10%, and a texture of Sandy Loam. The soil at the data point was mapped as Nicholson silt loam, 6 to 12 percent slopes, severely eroded (NhC3), and met the Depleted Matrix (F3) and Redox Depressions (F8) hydric soil criteria. The indicators of hydrology observed included Saturation (A3), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Upland Data Point

Data Point 1025 (DP1025)

Dominant vegetation in the vicinity of DP1025 included Tall False Rye Grass (FACU) and Nimblewill (FAC). In addition, non-dominant vegetation at the data point included Lesser Poverty Rush (FAC), Spotted Lady's-Thumb (FACW), Rough Cockleburr (FAC), Kentucky Blue Grass (FACU), White Clover (FACU), St. Anthony's-Turnip (FAC), and Little Barley (FAC). This did not meet any indicators for hydrophytic vegetation. The soil from 0-4” had a matrix soil color of 10YR 5/3 with a texture of silty clay. The soil from 4-18” had a matrix soil color of 10YR 5/6 with a texture of silt clay. The soil at the data point was mapped as Nicholson silt loam, 2 to 6 percent slopes, eroded (NhB2) and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Wetland Data Point

Data Point 1026 (DP1026)

Dominant vegetation in the vicinity of DP1026 included Common Fox Sedge (OBL), Frank's Sedge (OBL), and blunt spikerush (OBL). In addition, non-dominant vegetation at the data point included Dark-Green Bulrush (OBL), Rice Cut Grass (OBL), St. Anthony's-Turnip (FAC), Spotted Lady's-Thumb (FACW), and Rough Cockleburr (FAC). This met the rapid test for hydrophytic vegetation. The soil from 0-18” had a matrix soil color of 10YR 6/2 with concentrations in the matrix at 10%, and a texture of Silty Clay. The soil at the data point was mapped as Nicholson silt loam, 6 to 12 percent slopes, severely eroded (NhC3), and met the Depleted Matrix (F3) hydric soil criterion. The indicators of hydrology observed included Drift Deposits (B3), Drainage Patterns (B10), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Wetland 1014 (w1014) (0.06 acres)

This wetland was an emergent wetland located in a depression. A surface water connection with an unnamed tributary to Skinframe Creek, which flows into the Cumberland River, a Traditional Navigable Water, was observed. Due to this connection, this wetland should be considered a "waters of the United States". See Figure 5.69.

Wetland Data Point

Data Point 1027 (DP1027)

Dominant vegetation in the vicinity of DP1027 included Black Willow (OBL), Common Fox Sedge (OBL), and American Germander (*Teucrium canadense*, FACW). In addition, non-dominant vegetation at the data point included Spotted Lady's-Thumb (FACW), Japanese Stilt Grass (*Microstegium vimineum*, FAC), Field Brome (FACU), and Curly Dock (FAC). This met the rapid test for hydrophytic vegetation. The soil from 0-18" had a matrix soil color of 10YR 5/2 with concentrations in the matrix at 10%, and a texture of Silty Clay. The soil at the data point was mapped as Crider-Baxter complex, 12 to 30 percent slopes, severely eroded (CtE3), and met the Depleted Matrix (F3), and Redox Depressions (F8) hydric soil criteria. The secondary indicators of hydrology observed included Surface Soil Cracks (B6), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Upland Data Point

Data Point 1028 (DP1028)

Dominant vegetation in the vicinity of DP1028 included American Sycamore (FACW), Honey-Locust (FAC), Spreading Chervil (FACW), and Beefsteakplant (*Perilla frutescens*, FACU). In addition, non-dominant vegetation at the data point included Sugar-Berry (FACW), Robin's-Plantain (*Erigeron pulchellus*, FACU), American Pokeweed (*Phytolacca americana*, FACU), and Poison-Hemlock (FACW). The dominance test is greater than 50%, which qualifies as a hydrophytic vegetation indicator. The soil from 0-18" had a matrix soil color of 10YR 5/3 with a texture of Silty Clay. The soil at the data point was mapped as Crider-Baxter complex, 12 to 30 percent slopes, severely eroded (CtE3) and did not meet any hydric soil criteria. The only indicator of hydrology observed included the secondary indicator of the FAC-Neutral Test (D5). This data point did not qualify as a wetland.

Upland Data Point

Data Point 1029 (DP1029)

Dominant vegetation in the vicinity of DP1029 included Frank's Sedge (OBL), Common Fox Sedge (OBL), and Spotted Lady's-Thumb (FACW). In addition, non-dominant vegetation at the data point included Rough Cockleburr (FAC), St. Anthony's-Turnip (FAC), and Annual Ragweed (FACU). This met the rapid test for hydrophytic vegetation. The soil from 0-18" had a matrix soil color of 10YR 5/2 with a texture of Silty Clay. The soil at the data point was mapped as Crider-Baxter complex, 12 to 30 percent slopes, severely eroded (CtE3) and did not meet any hydric soil

criteria. The indicators of hydrology observed included Drift Deposits (B3), Drainage Patterns (B10), and the FAC-Neutral Test (D5). This data point did not qualify as a wetland.

Upland Data Point

Data Point 1030 (DP1030)

Dominant vegetation in the vicinity of DP1030 included Black Walnut (FACU), American Sycamore (FACW), Sugar-Berry (FACW), American Elm (FACW), Japanese Stilt Grass (FAC), Woodland Blue Grass (*Poa sylvestris*, FACW), and Virginia Wild Rye (FACW). In addition, non-dominant vegetation at the data point included Spotted Touch-Me-Not (FACW). The dominance test is greater than 50%, which qualifies as a hydrophytic vegetation indicator. The soil from 0-18” had a matrix soil color of 10YR 5/3 with a texture of Silt Loam. The soil at the data point was mapped as Nolin silt loam, occasionally flooded (No) and did not meet any hydric soil criteria. The only indicator of hydrology observed included the secondary indicator of the FAC-Neutral Test (D5). This data point did not qualify as a wetland.

Upland Data Point

Data Point 1031 (DP1031)

Dominant vegetation in the vicinity of DP1031 included Red Maple (FAC) and American Sycamore (FACW). In addition, non-dominant vegetation at the data point included American Elm (FACW), winter creeper (*Euonymus fortunei*, UPL), and St. Anthony's-Turnip (FAC). The dominance test is greater than 50%, which qualifies as a hydrophytic vegetation indicator. The soil from 0-18” had a matrix soil color of 10YR 5/3 with concentrations in the matrix at 5%, and a texture of Silt Loam. The soil at the data point was mapped as Nolin silt loam, occasionally flooded (No) and did not meet any hydric soil criteria. The secondary indicators of hydrology observed included Drainage Patterns (B10) and the FAC-Neutral Test (D5). This data point did not qualify as a wetland.

Wetland 1015 (w1015) (0.44 acres)

This wetland was a forested wetland located in a depression. A surface water connection with an unnamed tributary to Skinframe Creek, which flows into the Cumberland River, a Traditional Navigable Water, was observed. Due to this connection, this wetland should be considered a “waters of the United States”. See Figure 5.61.

Wetland Data Point

Data Point 1032 (DP1032)

Dominant vegetation in the vicinity of DP1032 included Black Willow (OBL), Red Maple (FAC), and Common Buttonbush (OBL). In addition, non-dominant vegetation at the data point included Common Persimmon (*Diospyros virginiana*, FAC), Black Elder (FAC), winter creeper (UPL), and St. Anthony's-Turnip (FAC). The dominance test is greater than 50%, which qualifies as a hydrophytic vegetation indicator. The soil from 0-18” had a matrix soil color of 10YR 5/1 with

concentrations in the matrix at 10%, and a texture of Silt Loam. The soil at the data point was mapped as Nolin silt loam, occasionally flooded (No), and met the Depleted Matrix (F3) and Redox Depressions (F8) hydric soil criteria. The indicators of hydrology observed included Drift Deposits (B3), Water-Stained Leaves (B9), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Wetland 1016 (w1016) (0.50 acres)

This wetland was a shrub scrub wetland located in a swale. A surface water connection with an unnamed tributary to Skinframe Creek, which flows into the Cumberland River, a Traditional Navigable Water, was observed. Due to this connection, this wetland should be considered a "waters of the United States". See Figures 5.54, 5.55, 5.61, and 5.62.

Wetland Data Point

Data Point 1033 (DP1033)

Dominant vegetation in the vicinity of DP1033 included Black Willow (OBL), Red Maple (FAC), and Red Maple (FAC). In addition, non-dominant vegetation at the data point included Fowl Manna Grass (OBL). The dominance test is greater than 50%, which qualifies as a hydrophytic vegetation indicator. The soil from 0-18" had a matrix soil color of 10YR 6/1 with concentrations in the matrix at 10%, and a texture of Silt Loam. The soil at the data point was mapped as Nicholson silt loam, 6 to 12 percent slopes, severely eroded (NhC3), and met the Depleted Matrix (F3) hydric soil criterion. The indicators of hydrology observed included Drift Deposits (B3), Drainage Patterns (B10), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Upland Data Point

Data Point 1034 (DP1034)

Dominant vegetation in the vicinity of DP1034 included Coral-Berry (FACU). In addition, non-dominant vegetation at the data point included Japanese Honeysuckle (FAC), Eastern Poison Ivy (FAC), Rosy Sedge (*Carex rosea*, FACU), Sticky-Willy (FACU), and Allegheny Blackberry (*Rubus allegheniensis*, FACU). This did not meet any indicators for hydrophytic vegetation. The soil from 0-18" had a matrix soil color of 10YR 5/3 with a texture of Silt Loam. The soil at the data point was mapped as Newark silt loam, occasionally flooded (Ne) and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Wetland 1101 (w1101) (0.04 acres)

This wetland was an emergent wetland located along a stream. A surface water connection with an unnamed tributary to Skinframe Creek, which flows into the Cumberland River, a Traditional Navigable Water, was observed. Due to this connection, this wetland should be considered a "waters of the United States". See Figure 5.65.

Wetland Data Point

Data Point 1101 (DP1101)

Dominant vegetation in the vicinity of DP1101 included Devil's-Pitchfork (*Bidens frondosa*, FACW) and Dark-Green Bulrush (OBL). In addition, non-dominant vegetation at the data point included Rice Cut Grass (OBL), Japanese Stilt Grass (FAC), and Seedbox (FACW). This met the rapid test for hydrophytic vegetation. The soil from 0-18" had a matrix soil color of 10YR 5/2 with concentrations in the matrix at 5%, and a texture of Silt Loam. The soil at the data point was mapped as Crider-Baxter complex, 12 to 30 percent slopes, severely eroded (CtE3), and met the Depleted Matrix (F3), and Redox Depressions (F8) hydric soil criteria. The indicators of hydrology observed included Saturation (A3), Drainage Patterns (B10), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Upland Data Point

Data Point 1102 (DP1102)

Dominant vegetation in the vicinity of DP1102 included Canadian Goldenrod (FACU). In addition, non-dominant vegetation at the data point included Kentucky Blue Grass (FACU), American Wild Mint (*Mentha arvensis*, FACW), Common Fox Sedge (OBL), and Virginia-Creeper (FACU). This did not meet any indicators for hydrophytic vegetation. The soil from 0-2" had a matrix soil color of 10YR 4/2 with a texture of Clay Loam. The soil from 2-16" had a matrix soil color of 10yr 4/4 with a texture of Clay Loam. The soil at the data point was mapped as Crider-Baxter complex, 12 to 30 percent slopes, severely eroded (CtE3) and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Wetland 1102 (w1102) (0.01 acres)

This wetland was an emergent wetland located along a stream. A surface water connection with an unnamed tributary to Skinframe Creek, which flows into the Cumberland River, a Traditional Navigable Water, was observed. Due to this connection, this wetland should be considered a "waters of the United States". See Figure 5.65.

Wetland Data Point

Data Point 1103 (DP1103)

Dominant vegetation in the vicinity of DP1103 included Common Fox Sedge (OBL). In addition, non-dominant vegetation at the data point included Dark-Green Bulrush (OBL), Kentucky Blue Grass (FACU), and Seedbox (FACW). This met the rapid test for hydrophytic vegetation. The soil from 0-18" had a matrix soil color of 10YR 5/2 with concentrations in the matrix at 5%, and a texture of Silt Loam. The soil at the data point was mapped as Crider-Baxter complex, 12 to 30 percent slopes, severely eroded (CtE3), and met the Depleted Matrix (F3) and Redox Depressions (F8) hydric soil criteria. The secondary indicators of hydrology observed included Drainage Patterns (B10), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Wetland 1103 (w1103) (0.02 acres)

This wetland was a forested wetland located in the inlet to a pond. A surface water connection with an unnamed tributary to Skinframe Creek, which flows into the Cumberland River, a Traditional Navigable Water, was observed. Due to this connection, this wetland should be considered a “waters of the United States”. See Figure 5.65.

Wetland Data Point

Data Point 1104 (DP1104)

Dominant vegetation in the vicinity of DP1104 included Black Willow (OBL), Slippery Elm (FAC), Mild Water-Pepper (*Persicaria hydropiper*, OBL), and Japanese Stilt Grass (FAC). In addition, non-dominant vegetation at the data point included Green Ash (FACW). The dominance test is greater than 50%, which qualifies as a hydrophytic vegetation indicator. The soil from 0-18” had a matrix soil color of 10YR 5/2 with concentrations in the matrix at 5%, and a texture of Silt Loam. The soil at the data point was mapped as Crider-Baxter complex, 12 to 30 percent slopes, severely eroded (CtE3), and met the Depleted Matrix (F3), and Redox Depressions (F8) hydric soil criteria. The secondary indicators of hydrology observed included Drainage Patterns (B10), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Upland Data Point

Data Point 1105 (DP1105)

Dominant vegetation in the vicinity of DP1105 included Black Walnut (FACU), and Japanese Stilt Grass (FAC). In addition, non-dominant vegetation at the data point included Amur honeysuckle (*Lonicera maackii*, UPL) and Mild Water-Pepper (OBL). This did not meet any indicators for hydrophytic vegetation. The soil from 0-2” had a matrix soil color of 10YR 4/2 with a texture of Clay Loam. The soil from 2-16” had a matrix soil color of 10YR 4/4 with a texture of Clay Loam. The soil at the data point was mapped as Crider-Baxter complex, 12 to 30 percent slopes, severely eroded (CtE3) and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Wetland 1104 (w1104) (0.47 acres)

This wetland was an emergent wetland located in a swale. A surface water connection with an unnamed tributary to Skinframe Creek, which flows into the Cumberland River, a Traditional Navigable Water, was observed. Due to this connection, this wetland should be considered a “waters of the United States”. See Figures 5.56 and 5.64.

Wetland Data Point

Data Point 1106 (DP1106)

Dominant vegetation in the vicinity of DP1106 included Black Elder (FAC), Common Fox Sedge (OBL), Rufous Bulrush (*Scirpus pendulus*, OBL), and Kentucky Blue Grass (FACU). In addition, non-dominant vegetation at the data point included Porcupine Sedge (*Carex hystericina*, OBL),

American Germander (FACW), Seedbox (FACW), Japanese Stilt Grass (FAC), American Sycamore (FACW), Black Willow (OBL), and Small-Spike False Nettle (*Boehmeria cylindrica*, FACW). The dominance test is greater than 50%, which qualifies as a hydrophytic vegetation indicator. The soil from 0-3" had a matrix soil color of 10YR 4/3 with concentrations in the matrix at 10%, and a texture of Clay Loam. The soil from 3-16" had a matrix soil color of 10YR 4/4 with concentrations in the matrix at 10%, and a texture of Clay Loam. The soil at the data point was mapped as Crider-Baxter complex, 12 to 30 percent slopes, severely eroded (CtE3), and met the Redox Depressions (F8) hydric soil criterion. The secondary indicators of hydrology observed included Drainage Patterns (B10), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Upland Data Point

Data Point 1107 (DP1107)

Dominant vegetation in the vicinity of DP1107 included Tall False Rye Grass (FACU), Red Fescue (FACU), and Black Elder (FAC). In addition, non-dominant vegetation at the data point included Meadow Garlic (Allium canadense, FACU), Curly Dock (FAC), and Hedge False Bindweed (*Calystegia sepium*, FAC). This did not meet any indicators for hydrophytic vegetation. The soil from 0-16" had a matrix soil color of 10YR 4/4 with concentrations in the matrix at 5%, and a texture of Silty Clay Loam. The soil at the data point was mapped as Crider-Baxter complex, 12 to 30 percent slopes, severely eroded (CtE3) and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Upland Data Point

Data Point 1108 (DP1108)

Dominant vegetation in the vicinity of DP1108 included green bristlegrass (*Setaria viridis*, UPL), Kentucky Blue Grass (FACU), and Red Fescue (FACU). In addition, non-dominant vegetation at the data point included Broom-Sedge (FACU), Lesser Poverty Rush (FAC), Blunt Broom Sedge (FACW), and English Plantain (UPL). This did not meet any indicators for hydrophytic vegetation. The soil from 0-16" had a matrix soil color of 10YR 5/4 with concentrations in the matrix at 5%, and a texture of Silt Loam. The soil at the data point was mapped as Otwood silt loam, 2 to 6 percent slopes, eroded (OtB2) and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Wetland 1105 (w1105) (0.21 acres)

This wetland was an emergent wetland located in a depression. No surface water connection with any "waters of the United States" was observed. It is likely that this wetland is not regulated. See Figure 5.56 and 5.64.

Wetland Data Point

Data Point 1109 (DP1109)

Dominant vegetation in the vicinity of DP1109 included Rufous Bulrush (OBL). In addition, non-dominant vegetation at the data point included Blunt Broom Sedge (FACW), Lesser Poverty Rush (FAC), Common Fox Sedge (OBL), Dwarf St. John's-Wort (*Hypericum mutilum*, FACW), and blunt spikerush (OBL). This met the rapid test for hydrophytic vegetation. The soil from 0-18" had a matrix soil color of 10YR 5/1 with concentrations in the matrix at 10%, and a texture of Clay Loam. The soil at the data point was mapped as Otwood silt loam, 2 to 6 percent slopes, eroded (OtB2), and met the Depleted Matrix (F3) and Redox Depressions (F8) hydric soil criteria. The indicators of hydrology observed included Saturation (A3), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Wetland 1106 (w1106) (0.03 acres)

This wetland was an emergent wetland located in a swale. No surface water connection with any "waters of the United States" was observed. It is likely that this wetland is not regulated. See Figure 5.64.

Wetland Data Point

Data Point 1110 (DP1110)

Dominant vegetation in the vicinity of DP1110 included Dark-Green Bulrush (OBL) and Blunt Broom Sedge (FACW). In addition, non-dominant vegetation at the data point included Common Fox Sedge (OBL) and blunt spikerush (OBL). This met the rapid test for hydrophytic vegetation. The soil from 0-18" had a matrix soil color of 10YR 5/1 with concentrations in the matrix at 10%, and a texture of Clay Loam. The soil at the data point was mapped as Nicholson silt loam, 6 to 12 percent slopes, severely eroded (NhC3), and met the Depleted Matrix (F3) and Redox Depressions (F8) hydric soil criteria. The indicators of hydrology observed included Saturation (A3), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Upland Data Point

Data Point 1111 (DP1111)

Dominant vegetation in the vicinity of DP1111 included Field Brome (FACU) and Tall Goldenrod (FACU). In addition, non-dominant vegetation at the data point included Broom-Sedge (FACU), Navel Cornsalad (*Valerianella umbilicata*, FAC), black raspberry (*Rubus occidentalis*, UPL), and Common Dandelion (FACU). This did not meet any indicators for hydrophytic vegetation. The soil from 0-18" had a matrix soil color of 10YR 5/1 with concentrations in the matrix at 10%, and a texture of Clay Loam. The soil at the data point was mapped as Nicholson silt loam, 6 to 12 percent slopes, severely eroded (NhC3), and met the Depleted Matrix (F3) hydric soil criterion. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Wetland 1107 (w1107) (0.01 acres)

This wetland was an emergent wetland located along a stream. A surface water connection with an unnamed tributary to Skinframe Creek, which flows into the Cumberland River, a Traditional Navigable Water, was observed. Due to this connection, this wetland should be considered a "waters of the United States". See Figure 5.65.

Wetland Data Point

Data Point 1112 (DP1112)

Dominant vegetation in the vicinity of DP1112 included Blunt Broom Sedge (FACW) and Common Fox Sedge (OBL). In addition, non-dominant vegetation at the data point included Mild Water-Pepper (OBL), Japanese Stilt Grass (FAC), Red Fescue (FACU), and Rice Cut Grass (OBL). This met the rapid test for hydrophytic vegetation. The soil from 0-2" had a matrix soil color of 10YR 4/4 with a texture of Clay Loam. The soil from 2-16" had a matrix soil color of 10YR 4/3 with concentrations in the matrix at 20%, and a texture of Clay Loam. The soil at the data point was mapped as Crider-Baxter complex, 12 to 30 percent slopes, severely eroded (CtE3), and met the Redox Depressions (F8) hydric soil criterion. The secondary indicators of hydrology observed included Surface Soil Cracks (B6), Drainage Patterns (B10), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Upland Data Point

Data Point 1113 (DP1113)

Dominant vegetation in the vicinity of DP1113 included Shag-Bark Hickory (*Carya ovata*, FACU), Sugar-Berry (FACW), Redbud (FACU), Slippery Elm (FAC), Coral-Berry (FACU), Tall Goldenrod (FACU), and Nodding Wild Rye (*Elymus canadensis*, FACU). In addition, non-dominant vegetation at the data point included Pin Oak (*Quercus palustris*, FACW), Bitter-Nut Hickory (*Carya cordiformis*, FACU), Sweet-Gum (*Liquidambar styraciflua*, FAC), blue ash (*Fraxinus quadrangulata*, UPL), Japanese Stilt Grass (FAC), Kentucky Blue Grass (FACU), Spotted Touch-Me-Not (FACW), Hairy Wild Rye (*Elymus villosus*, FACU), Davis' Sedge (*Carex davisii*, FAC), Wingstem (*Verbesina alternifolia*, FAC), and Canadian Honewort (FAC). This did not meet any indicators for hydrophytic vegetation. The soil from 0-2" had a matrix soil color of 10YR 4/4 with a texture of Silty Clay Loam. The soil from 2-16" had a matrix soil color of 10yr 4/4 with concentrations in the matrix at 5%, and a texture of Silty Clay Loam. The soil at the data point was mapped as Lindside silt loam, occasionally flooded (Ld) and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Upland Data Point

Data Point 1114 (DP1114)

Dominant vegetation in the vicinity of DP1114 included common wheat (UPL). This did not meet any indicators for hydrophytic vegetation. The soil from 0-16" had a matrix soil color of 10YR 4/2 with concentrations in the matrix at 10%, and a texture of Clay Loam. The soil at the data point

was mapped as Nicholson silt loam, 6 to 12 percent slopes, severely eroded (NhC3), and met the Depleted Matrix (F3) hydric soil criterion. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Wetland 1108 (w1108) (0.06 acres)

This wetland was an emergent wetland located in a swale. A surface water connection with an unnamed tributary to Hewlett Creek, which flows into the Cumberland River, a Traditional Navigable Water, was observed. Due to this connection, this wetland should be considered a "waters of the United States". See Figure 5.58.

Wetland Data Point

Data Point 1115 (DP1115)

Dominant vegetation in the vicinity of DP1115 included Fowl Manna Grass (OBL) and hybrid cattail (*Typha X glauca*, OBL). In addition, non-dominant vegetation at the data point included Rice Cut Grass (OBL), Dark-Green Bulrush (OBL), Lamp Rush (FACW), and Small-Spike False Nettle (FACW). This met the rapid test for hydrophytic vegetation. The soil from 0-16" had a matrix soil color of 10YR 5/2 with concentrations in the matrix at 5%, and a texture of Silty Clay Loam. The soil at the data point was mapped as Nicholson silt loam, 2 to 6 percent slopes, eroded (NhB2), and met the Depleted Matrix (F3)and Redox Depressions (F8) hydric soil criteria. The indicators of hydrology observed included Saturation (A3), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Upland Data Point

Data Point 1116 (DP1116)

Dominant vegetation in the vicinity of DP1116 included common wheat (UPL), Tall Goldenrod (FACU), and Field Brome (FACU). In addition, non-dominant vegetation at the data point included Indian-Hemp (*Apocynum cannabinum*, FACU), Cress-Leaf Groundsel (OBL), and Canadian Horseweed (*Erigeron canadensis*, FACU). This did not meet any indicators for hydrophytic vegetation. The soil from 0-2" had a matrix soil color of 10YR 4/2 with a texture of Clay Loam. The soil from 2-16" had a matrix soil color of 10YR 4/4 with concentrations in the matrix at 5%, and a texture of Clay Loam. The soil at the data point was mapped as Nicholson silt loam, 2 to 6 percent slopes, eroded (NhB2) and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Wetland 1109 (w1109) (0.01 acres)

This wetland was a forested wetland located along a stream. A surface water connection with an unnamed tributary to Hewlett Creek, which flows into the Cumberland River, a Traditional Navigable Water, was observed. Due to this connection, this wetland should be considered a "waters of the United States". See Figure 5.58.

Wetland Data Point

Data Point 1117 (DP1117)

Dominant vegetation in the vicinity of DP1117 included Black Willow (OBL), Black Elder (FAC), Green Ash (FACW), and Spotted Touch-Me-Not (FACW). In addition, non-dominant vegetation at the data point included Field Brome (FACU), Rice Cut Grass (OBL), Lamp Rush (FACW), Frank's Sedge (OBL), Porcupine Sedge (OBL), and Stiff Marsh Bedstraw (OBL). The dominance test is greater than 50%, which qualifies as a hydrophytic vegetation indicator. The soil from 0-16” had a matrix soil color of 10YR 5/1 with concentrations in the matrix at 10%, and a texture of Clay Loam. The soil at the data point was mapped as Nicholson silt loam, 6 to 12 percent slopes, severely eroded (NhC3), and met the Depleted Matrix (F3) and Redox Depressions (F8) hydric soil criteria. The secondary indicators of hydrology observed included Drainage Patterns (B10), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Wetland 1110 (w1110) (0.01 acres)

This wetland was a forested wetland located along a stream. A surface water connection with an unnamed tributary to Hewlett Creek, which flows into the Cumberland River, a Traditional Navigable Water, was observed. Due to this connection, this wetland should be considered a “waters of the United States”. See Figure 5.66.

Wetland Data Point

Data Point 1118 (DP1118)

Dominant vegetation in the vicinity of DP1118 included Black Willow (OBL), Black Elder (FAC), and Spotted Touch-Me-Not (FACW). In addition, non-dominant vegetation at the data point included Fowl Manna Grass (OBL), Rice Cut Grass (OBL), Lamp Rush (FACW), and Common Fox Sedge (OBL). The dominance test is greater than 50%, which qualifies as a hydrophytic vegetation indicator. The soil from 0-16” had a matrix soil color of 10YR 5/1 with concentrations in the matrix at 10%, and a texture of Clay loam. The soil at the data point was mapped as Nicholson silt loam, 6 to 12 percent slopes, severely eroded (NhC3), and met the Depleted Matrix (F3) and Redox Depressions (F8) hydric soil criteria. The secondary indicators of hydrology observed included Drainage Patterns (B10), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Wetland 1111 (W1111) (0.01 acres)

This wetland was a forested wetland located in a depression. A surface water connection with an unnamed tributary to Hewlett Creek, which flows into the Cumberland River, a Traditional Navigable Water, was observed. Due to this connection, this wetland should be considered a “waters of the United States”. See Figure 5.66.

Wetland Data Point

Data Point 1119 (DP1119)

Dominant vegetation in the vicinity of DP1119 included Slippery Elm (FAC), Northern White Oak (FACU), Slippery Elm (FAC), Fowl Manna Grass (OBL), Spotted Touch-Me-Not (FACW), Dark-Green Bulrush (OBL), and Eastern Poison Ivy (FAC). The dominance test is greater than 50%, which qualifies as a hydrophytic vegetation indicator. The soil from 0-4" had a matrix soil color of 10YR 4/4 with a texture of Silt Loam. The soil from 4-16" had a matrix soil color of 10YR 5/2 with concentrations in the matrix at 5%, and a texture of Silt Loam. The soil at the data point was mapped as Nicholson silt loam, 6 to 12 percent slopes, severely eroded (NhC3), and met the Depleted Matrix (F3) hydric soil criterion. The secondary indicators of hydrology observed included Drainage Patterns (B10), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Upland Data Point

Data Point 1120 (DP1120)

Dominant vegetation in the vicinity of DP1120 included Sugar Maple (FACU), Northern Red Oak (FACU), Shell-Bark Hickory (*Carya laciniosa*, FAC), Coral-Berry (FACU), and May-Apple (*Podophyllum peltatum*, FACU). In addition, non-dominant vegetation at the data point included Clustered Black-Snakeroot (*Sanicula odorata*, FACU) and Stiff Marsh Bedstraw (OBL). This did not meet any indicators for hydrophytic vegetation. The soil from 0-2" had a matrix soil color of 10YR 4/2 with a texture of Silty Clay Loam. The soil from 2-16" had a matrix soil color of 10YR 4/4 with a texture of Silty Clay Loam. The soil at the data point was mapped as Nicholson silt loam, 6 to 12 percent slopes, severely eroded (NhC3) and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Wetland 1112 (w1112) (0.14 acres)

This wetland was an emergent wetland located in a depression. No surface water connection with any "waters of the United States" was observed. It is likely that this wetland is not regulated. See Figure 5.53.

Wetland Data Point

Data Point 1121 (DP1121)

Dominant vegetation in the vicinity of DP1121 included Black Willow (OBL), Common Fox Sedge (OBL), and Blunt Broom Sedge (FACW). In addition, non-dominant vegetation at the data point included Rice Cut Grass (OBL) and Dock-Leaf Smartweed (FACW). This met the rapid test for hydrophytic vegetation. The soil from 0-1" had a matrix soil color of 10YR 4/4 with a texture of Clay loam. The soil from 1-16" had a matrix soil color of 10YR 5/2 with concentrations in the matrix at 10%, and a texture of Clay loam. The soil at the data point was mapped as Crider-Baxter complex, 12 to 30 percent slopes, severely eroded (CtE3), and met the Depleted Matrix (F3) and Redox Depressions (F8) hydric soil criteria. The indicators of hydrology observed included

Saturation (A3), Algal Mat or Crust (B4), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Upland Data Point

Data Point 1122 (DP1122)

Dominant vegetation in the vicinity of DP1122 included common wheat (UPL) and Tall Goldenrod (FACU). This did not meet any indicators for hydrophytic vegetation. The soil from 0-3" had a matrix soil color of 10YR 4/4 with a texture of Clay loam. The soil from 3-16" had a matrix soil color of 10YR 4/3 with concentrations in the matrix at 30%, and a texture of Clay loam. The soil at the data point was mapped as Crider-Baxter complex, 12 to 30 percent slopes, severely eroded (CtE3) and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Upland Data Point

Data Point 1123 (DP1123)

Dominant vegetation in the vicinity of DP1123 included Sugar-Berry (FACW) in multiple strata, and Mild Water-Pepper (OBL). In addition, non-dominant vegetation at the data point included Ash-Leaf Maple (FAC) and Canadian Wood-Nettle (FAC). This met the rapid test for hydrophytic vegetation. The soil from 0-2" had a matrix soil color of 10YR 4/2 with a texture of Silt Loam. The soil from 2-16" had a matrix soil color of 10YR 4/4 with a texture of Silt Loam. The soil at the data point was mapped as Crider-Baxter complex, 12 to 30 percent slopes, severely eroded (CtE3) and did not meet any hydric soil criteria. The only indicator of hydrology observed included the secondary indicator of the FAC-Neutral Test (D5). This data point did not qualify as a wetland.

Upland Data Point

Data Point 1124 (DP1124)

Dominant vegetation in the vicinity of DP1124 included Slippery Elm (FAC), Black Walnut (FACU), and American Germander (FACW). In addition, non-dominant vegetation at the data point included Common Milkweed (FACU), Allegheny Blackberry (FACU), Wingstem (FAC), Curly Dock (FAC), Great Ragweed (FAC), Field Brome (FACU), Sticky-Willy (FACU), and Mild Water-Pepper (OBL). The dominance test is greater than 50%, which qualifies as a hydrophytic vegetation indicator. The soil from 0-2" had a matrix soil color of 10YR 4/2 with a texture of Silty Clay Loam. The soil from 2-16" had a matrix soil color of 10yr 4/4 with a texture of Silty Clay Loam. The soil at the data point was mapped as Elk silt loam, 1 to 4 percent slopes, rarely flooded (EkB) and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Upland Data Point

Data Point 1125 (DP1125)

Dominant vegetation in the vicinity of DP1125 included Black Walnut (FACU), Honey-Locust (FAC), Black Walnut (FACU), Sugar-Berry (FACW), Slippery Elm (FAC), Field Brome (FACU), Tall Goldenrod (FACU), and American Germander (FACW). In addition, non-dominant vegetation at the data point included Common Milkweed (FACU), Hairy-Fruit Chervil (*Chaerophyllum tainturieri*, FAC), and Wingstem (FAC). This did not meet any indicators for hydrophytic vegetation. The soil from 0-2" had a matrix soil color of 10YR 4/2 with a texture of Silty clay loam. The soil from 2-16" had a matrix soil color of 10YR 4/4 with a texture of Silty clay loam. The soil at the data point was mapped as Elk silt loam, 1 to 4 percent slopes, rarely flooded (Ekb) and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Upland Data Point

Data Point 1126 (DP1126)

Dominant vegetation in the vicinity of DP1126 included American Elm (FACW), Sweet-Gum (FAC), American Elm (FACW), Coral-Berry (FACU), Spotted Touch-Me-Not (FACW), Japanese Stilt Grass (FAC), and Virginia-Creeper (FACU). In addition, non-dominant vegetation at the data point included Sugar-Berry (FACW), White Ash (FACU), White Snakeroot (*Ageratina altissima*, FACU), Davis' Sedge (FAC), Swamp Rose (OBL), Clustered Black-Snakeroot (FACU), Robin's-Plantain (FACU), and Pinkweed (FACW). The dominance test is greater than 50%, which qualifies as a hydrophytic vegetation indicator. The soil from 0-2" had a matrix soil color of 10YR 4/2 with a texture of silty clay loam. The soil from 2-16" had a matrix soil color of 10YR 4/4 with a texture of silty clay loam. The soil at the data point was mapped as Nicholson silt loam, 6 to 12 percent slopes, severely eroded (NhC3) and did not meet any hydric soil criteria. The only indicator of hydrology observed included the secondary indicator of the FAC-Neutral Test (D5). This data point did not qualify as a wetland.

Wetland 1113 (w1113) (0.97 acres of PEM, and 0.08 acres PFO)

This wetland was an emergent wetland located in a depression, connected to a forested wetland located in a swale. A surface water connection with an unnamed tributary to Skinframe Creek, which flows into the Cumberland River, a Traditional Navigable Water, was observed. Due to this connection, this wetland should be considered a "waters of the United States". See Figures 5.53 and 5.54.

Wetland Data Point

Data Point 1127 (DP1127)

Dominant vegetation in the vicinity of DP1127 included Common Buttonbush (OBL), Rice Cut Grass (OBL), and Rufous Bulrush (OBL). In addition, non-dominant vegetation at the data point included Shallow Sedge (OBL), Lamp Rush (FACW), and Cat-Tail Sedge (*Carex typhina*, FACW). This met the rapid test for hydrophytic vegetation. The soil from 0-1" had a matrix soil color of

10YR 4/3 with a texture of Silty Clay Loam. The soil from 1-16” had a matrix soil color of 10yr 5/2 with concentrations in the matrix at 20%, and a texture of Silty Clay Loam. The soil at the data point was mapped as Melvin silt loam, occasionally flooded (Me), and met the Depleted Matrix (F3) and Redox Depressions (F8) hydric soil criteria. The indicators of hydrology observed included Algal Mat or Crust (B4), Surface Soil Cracks (B6), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Upland Data Point

Data Point 1128 (DP1128)

Dominant vegetation in the vicinity of DP1128 included common wheat (UPL). This did not meet any indicators for hydrophytic vegetation. The soil from 0-2” had a matrix soil color of 10YR 4/2 with a texture of silty clay loam. The soil from 2-16” had a matrix soil color of 10yr 4/4 with a texture of silty clay loam. The soil at the data point was mapped as Melvin silt loam, occasionally flooded (Me) and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Wetland Data Point

Data Point 1129 (DP1129)

Dominant vegetation in the vicinity of DP1129 included Black Willow (OBL) in multiple strata, and Rice Cut Grass (OBL). In addition, non-dominant vegetation at the data point included American Sycamore (FACW). This met the rapid test for hydrophytic vegetation. The soil from 0-1” had a matrix soil color of 10YR 4/3 with a texture of Silty Clay Loam. The soil from 1-16” had a matrix soil color of 10YR 5/2 with concentrations in the matrix at 20%, and a texture of Silty Clay Loam. The soil at the data point was mapped as Nicholson silt loam, 2 to 6 percent slopes, eroded (NhB2), and met the Depleted Matrix (F3) and Redox Depressions (F8) hydric soil criteria. The indicators of hydrology observed included Algal Mat or Crust (B4), Surface Soil Cracks (B6), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Wetland 1114 (w1114) (0.05 acres)

This wetland was an emergent wetland located in a swale. No surface water connection with any “waters of the United States” was observed. It is likely that this wetland is not regulated. See Figure 5.46.

Wetland Data Point

Data Point 1130 (DP1130)

Dominant vegetation in the vicinity of DP1130 included Large Barnyard Grass (FAC), Mild Water-Pepper (OBL), Blunt Broom Sedge (FACW), Common Fox Sedge (OBL), Annual Ragweed (FACU), and Lesser Poverty Rush (FAC). In addition, non-dominant vegetation at the data point included Rice Cut Grass (OBL), Round-Fruit Hedge-Hyssop (*Gratiola virginiana*, OBL), blunt spikerush (OBL), Rufous Bulrush (OBL), Swamp Milkweed (OBL), and Hemlock Water-Parsnip

(Sium suave, OBL). The dominance test is greater than 50%, which qualifies as a hydrophytic vegetation indicator. The soil from 0-16" had a matrix soil color of 10YR 5/1 with concentrations in the matrix at 5%, and a texture of Clay Loam. The soil at the data point was mapped as Newark silt loam, occasionally flooded (Ne), and met the Depleted Matrix (F3) and Redox Depressions (F8) hydric soil criteria. The indicators of hydrology observed included Saturation (A3), Surface Soil Cracks (B6), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Upland Data Point

Data Point 1131 (DP1131)

Dominant vegetation in the vicinity of DP1131 included common wheat (UPL). In addition, non-dominant vegetation at the data point included Large Barnyard Grass (FAC), Annual Ragweed (FACU), and Common Three-Seed-Mercury (*Acalypha rhomboidea*, FACU). This did not meet any indicators for hydrophytic vegetation. The soil from 0-16" had a matrix soil color of 10YR 5/2 with concentrations in the matrix at 3%, and a texture of Clay Loam. The soil at the data point was mapped as Newark silt loam, occasionally flooded (Ne), and met the Depleted Matrix (F3) hydric soil criterion. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Wetland 1116 (w1116) (0.03 acres)

This wetland was a forested wetland located along a stream. No surface water connection with any "waters of the United States" was observed. It is likely that this wetland is not regulated. See Figure 5.46.

Wetland Data Point

Data Point 1132 (DP1132)

Dominant vegetation in the vicinity of DP1132 included Common Buttonbush (OBL), Devil's-Pitchfork (FACW), and Common Fox Sedge (OBL). In addition, non-dominant vegetation at the data point included Large Barnyard Grass (FAC), Short's Sedge (*Carex shortiana*, FAC), Hemlock Water-Parsnip (OBL), Lamp Rush (FACW), and Tall Goldenrod (FACU). This met the rapid test for hydrophytic vegetation. The soil from 0-16" had a matrix soil color of 10YR 5/1 with concentrations in the matrix at 5%, and a texture of Clay Loam. The soil at the data point was mapped as Newark silt loam, occasionally flooded (Ne), and met the Depleted Matrix (F3) and Redox Depressions (F8) hydric soil criteria. The indicators of hydrology observed included Saturation (A3), Surface Soil Cracks (B6), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Wetland 1115 (w1115) (0.02 acres)

This wetland was a forested wetland located along a stream. No surface water connection with any “waters of the United States” was observed. It is likely that this wetland is not regulated. See Figure 5.46.

Wetland Data Point

Data Point 1133 (DP1133)

Dominant vegetation in the vicinity of DP1133 included Common Buttonbush (OBL), Virginia Wild Rye (FACW), Hemlock Water-Parsnip (OBL), and Fowl Manna Grass (OBL). This met the rapid test for hydrophytic vegetation. The soil from 0-16” had a matrix soil color of 10YR 5/1 with concentrations in the matrix at 5%, and a texture of Clay Loam. The soil at the data point was mapped as Newark silt loam, occasionally flooded (Ne), and met the Depleted Matrix (F3) and Redox Depressions (F8) hydric soil criteria. The indicators of hydrology observed included Saturation (A3), Surface Soil Cracks (B6), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Upland Data Point

Data Point 1201 (DP1201)

Dominant vegetation in the vicinity of DP1201 included Sticky-Willy (FACU), Spotted Lady's-Thumb (FACW), Great Ragweed (FAC), Eastern Woodland Sedge (FAC), and common blue violet (FAC). The dominance test is greater than 50%, which qualifies as a hydrophytic vegetation indicator. The soil from 0-3” had a matrix soil color of 7.5YR 3/1 with a texture of Silt Loam. The soil from 3-12” had a matrix soil color of 7.5YR 5/2 with a texture of Silt Loam. The soil from 12-18” had a matrix soil color of 7.5YR 5/2 with concentrations in the matrix at 5%, and a texture of Silt Loam. The soil at the data point was mapped as Crider silt loam, 2 to 6 percent slopes, eroded (CrB2) and did not meet any hydric soil criteria. The indicators of hydrology observed included Drift Deposits (B3), and Geomorphic Position (D2). This data point did not qualify as a wetland.

Wetland 1201 (w1201) (0.30 acres)

This wetland was an emergent wetland located in a depression. No surface water connection with any “waters of the United States” was observed. It is likely that this wetland is not regulated. See Figure 5.38.

Wetland Data Point

Data Point 1202 (DP1202)

Dominant vegetation in the vicinity of DP1202 included Large Barnyard Grass (FAC). In addition, non-dominant vegetation at the data point included Cress-Leaf Groundsel (OBL) and Spotted Lady's-Thumb (FACW). The dominance test is greater than 50%, which qualifies as a hydrophytic vegetation indicator. The soil from 0-3” had a matrix soil color of 7.5YR 4/2 with a texture of Silt Loam. The soil from 3-12” had a matrix soil color of 7.5YR 4/2 with concentrations in the matrix

at 10%, and a texture of Silt Loam. The soil at the data point was mapped as Lindside silt loam, ponded (Lp), and met the Depleted Matrix (F3) and Redox Depressions (F8) hydric soil criteria. The indicators of hydrology observed included Drift Deposits (B3), Surface Soil Cracks (B6), and Geomorphic Position (D2). This data point qualified as a wetland.

Wetland 1202 (w1202) (0.42 acres)

This wetland was a forested wetland located in a depression. No surface water connection with any "waters of the United States" was observed. It is likely that this wetland is not regulated. See Figures 5.30 and 5.37.

Wetland Data Point

Data Point 1203 (DP1203)

Dominant vegetation in the vicinity of DP1203 included Greater Straw Sedge (*Carex normalis*, FACW). In addition, non-dominant vegetation at the data point included Pinkweed (FACW) and Large Barnyard Grass (FAC). This met the rapid test for hydrophytic vegetation. The soil from 0-10" had a matrix soil color of 7.5YR 5/2 with concentrations in the matrix at 10%, and a texture of Silt Loam. The soil from 10-18" had a matrix soil color of 10YR 6/2 with concentrations in the matrix at 25%, and a texture of Silty Clay Loam. The soil at the data point was mapped as Crider silt loam, 12 to 20 percent slopes, eroded (CrD2), and met the Depleted Matrix (F3) and Redox Depressions (F8) hydric soil criteria. The indicators of hydrology observed included Drift Deposits (B3), Water-Stained Leaves (B9), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Upland Data Point

Data Point 1204 (DP1204)

Dominant vegetation in the vicinity of DP1204 included common wheat (UPL) and Eastern Poison Ivy (FAC). In addition, non-dominant vegetation at the data point included Annual Blue Grass (*Poa annua*, FACU). This did not meet any indicators for hydrophytic vegetation. The soil from 0-18" had a matrix soil color of 7.5YR 5/2 with a texture of Silt Loam. The soil at the data point was mapped as Crider silt loam, 6 to 12 percent slopes, severely eroded (CrC3) and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Wetland 1203 (w1203) (0.02 acres)

This wetland was an emergent wetland located in a depression. No surface water connection with any "waters of the United States" was observed. It is likely that this wetland is not regulated. See Figure 5.37.

Wetland Data Point

Data Point 1205 (DP1205)

Dominant vegetation in the vicinity of DP1205 included Large Barnyard Grass (FAC) and Cress-Leaf Groundsel (OBL). The dominance test is greater than 50%, which qualifies as a hydrophytic vegetation indicator. The soil from 0-10" had a matrix soil color of 7.5YR 5/2 with concentrations in the matrix at 15%, and a texture of Silty Clay Loam. The soil at the data point was mapped as Crider silt loam, 6 to 12 percent slopes, severely eroded (CrC3), and met the Depleted Matrix (F3) and Redox Depressions (F8) hydric soil criteria. The indicators of hydrology observed included Drift Deposits (B3), Surface Soil Cracks (B6), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Wetland 1204 (w1204) (0.38 acres)

This wetland was an emergent wetland located in a depression. No surface water connection with any "waters of the United States" was observed. It is likely that this wetland is not regulated. See Figure 5.37.

Wetland Data Point

Data Point 1206 (DP1206)

Dominant vegetation in the vicinity of DP1206 included Large Barnyard Grass (FAC). The dominance test is greater than 50%, which qualifies as a hydrophytic vegetation indicator. The soil from 0-10" had a matrix soil color of 7.5YR 5/2 with concentrations in the matrix at 15%, and a texture of Silty Clay Loam. The soil at the data point was mapped as Crider silt loam, 6 to 12 percent slopes, severely eroded (CrC3), and met the Depleted Matrix (F3) and Redox Depressions (F8) hydric soil criteria. The indicators of hydrology observed included Drift Deposits (B3), Algal Mat or Crust (B4), Surface Soil Cracks (B6), and Geomorphic Position (D2). This data point qualified as a wetland.

Wetland 1205 (w1205) (0.21 acres)

This wetland was an emergent wetland located in a depression. No surface water connection with any "waters of the United States" was observed. It is likely that this wetland is not regulated. See Figure 5.37.

Wetland Data Point

Data Point 1207 (DP1207)

Dominant vegetation in the vicinity of DP1207 included Large Barnyard Grass (FAC) and Cress-Leaf Groundsel (OBL). The dominance test is greater than 50%, which qualifies as a hydrophytic vegetation indicator. The soil from 0-10" had a matrix soil color of 7.5YR 5/2 with concentrations in the matrix at 15%, and a texture of Silty clay Loam. The soil from 10-16" had a matrix soil color of 7.5yr 6/2 with concentrations in the matrix at 20%, and a texture of Silt Loam. The soil at the data point was mapped as Crider silt loam, 6 to 12 percent slopes, severely eroded (CrC3), and

met the Depleted Matrix (F3) and Redox Depressions (F8) hydric soil criteria. The indicators of hydrology observed included Drift Deposits (B3), Algal Mat or Crust (B4), Surface Soil Cracks (B6), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Wetland 1206 (w1206) (0.03 acres)

This wetland was an emergent wetland located in a depression. No surface water connection with any “waters of the United States” was observed. It is likely that this wetland is not regulated. See Figure 5.44.

Wetland Data Point

Data Point 1208 (DP1208)

Dominant vegetation in the vicinity of DP1208 included Large Barnyard Grass (FAC). In addition, non-dominant vegetation at the data point included Rough-Fruit Amaranth (FACW) and Cress-Leaf Groundsel (OBL). The dominance test is greater than 50%, which qualifies as a hydrophytic vegetation indicator. The soil from 0-10” had a matrix soil color of 7.5YR 5/2 with concentrations in the matrix at 15%, and a texture of Silty Clay Loam. The soil from 10-16” had a matrix soil color of 7.5YR 6/2 with concentrations in the matrix at 20%, and a texture of Silt Loam. The soil at the data point was mapped as Nolin silt loam, occasionally flooded (No), and met the Depleted Matrix (F3) and Redox Depressions (F8) hydric soil criteria. The indicators of hydrology observed included Drift Deposits (B3), Algal Mat or Crust (B4), Surface Soil Cracks (B6), and Geomorphic Position (D2). This data point qualified as a wetland.

Upland Data Point

Data Point 1209 (DP1209)

Dominant vegetation in the vicinity of DP1209 included Sugar-Berry (FACW), Sugar Maple (FACU), Ohio Buckeye (FACU), Northern Spicebush (FAC), Common Hoptree (*Ptelea trifoliata*, FAC), Clustered Black-Snakeroot (FACU), and Woodland Blue Grass (FACW). In addition, non-dominant vegetation at the data point included Ohio Buckeye (FACU), Sticky-Willy (FACU), Hairy Wild Rye (FACU), Gray's Sedge (*Carex grayi*, FACW), Spotted Touch-Me-Not (FACW), and Jumpseed (*Persicaria virginiana*, FAC). The dominance test is greater than 50%, which qualifies as a hydrophytic vegetation indicator. The soil from 0-4” had a matrix soil color of 10YR 3/2 with a texture of Silt Loam. The soil from 4-16” had a matrix soil color of 7.5YR 5/6 with a texture of Silt Loam. The soil at the data point was mapped as Nolin silt loam, occasionally flooded (No) and did not meet any hydric soil criteria. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Upland Data Point

Data Point 1210 (DP1210)

Dominant vegetation in the vicinity of DP1210 included Sugar-Berry (FACW), Sugar Maple (FACU), Coral-Berry (FACU), Clustered Black-Snakeroot (FACU), Woodland Blue Grass (FACW), and Spotted Touch-Me-Not (FACW). In addition, non-dominant vegetation at the data point included Ohio Buckeye (FACU), Ash-Leaf Maple (FAC), Osage-Orange (*Maclura pomifera*, UPL), Ohio Buckeye (FACU), Hairy Sweet-Cicely (FACU), Eastern Poison Ivy (FAC), Chinaroot (*Smilax hispida*, FAC), Jumpseed (FAC), Stinging Nettle (*Urtica dioica*, FACU), Wingstem (FAC), Inflated Narrow-Leaf Sedge (FACU), and Canadian White Violet (*Viola canadensis*, FAC). This did not meet any indicators for hydrophytic vegetation. The soil from 0-4" had a matrix soil color of 10YR 3/2 with a texture of Silt Loam. The soil from 4-16" had a matrix soil color of 7.5YR 5/6 with a texture of Silt Loam. The soil at the data point was mapped as Nolin silt loam, occasionally flooded (No) and did not meet any hydric soil criteria. The only indicator of hydrology observed included the secondary indicator of the FAC-Neutral Test (D5). This data point did not qualify as a wetland.

Wetland 1207 (w1207) (0.26 acres)

This wetland was an emergent wetland located in a depression. No surface water connection with any "waters of the United States" was observed. It is likely that this wetland is not regulated. See Figures 5.31 and 5.32.

Wetland Data Point

Data Point 1211 (DP1211)

Dominant vegetation in the vicinity of DP1211 included Large Barnyard Grass (FAC). In addition, non-dominant vegetation at the data point included Rough-Fruit Amaranth (FACW) and common wheat (UPL). The dominance test is greater than 50%, which qualifies as a hydrophytic vegetation indicator. The soil from 0-10" had a matrix soil color of 10YR 6/1 with concentrations in the matrix at 20%, and a texture of Silt Loam. The soil at the data point was mapped as Crider silt loam, 2 to 6 percent slopes, eroded (CrB2), and met the Depleted Matrix (F3) and Redox Depressions (F8) hydric soil criteria. The indicators of hydrology observed included Drift Deposits (B3), Surface Soil Cracks (B6), and Geomorphic Position (D2). This data point qualified as a wetland.

Upland Data Point

Data Point 1212 (DP1212)

Dominant vegetation in the vicinity of DP1212 included Sugar-Berry (FACW), Osage-Orange (UPL), Ash-Leaf Maple (FAC), Rambler Rose (FACU), and winter creeper (UPL). In addition, non-dominant vegetation at the data point included American Elm (FACW), Spotted Touch-Me-Not (FACW), Greendragon (*Arisaema dracontium*, FACW), Wild Blue Lettuce (*Lactuca biennis*, FACU), Woodland Blue Grass (FACW), and Inflated Narrow-Leaf Sedge (FACU). This did not meet any indicators for hydrophytic vegetation. The soil from 0-3" had a matrix soil color of 10YR 5/3 with a texture of Silt Loam. The soil at the data point was mapped as Crider silt loam, 2 to 6

percent slopes, eroded (CrB2) and did not meet any hydric soil criteria. The primary indicator of hydrology observed was Sediment Deposits (B2). This data point did not qualify as a wetland.

Wetland 1208 (w1208) (1.28 acres)

This wetland was an emergent wetland located in a depression. No surface water connection with any "waters of the United States" was observed. It is likely that this wetland is not regulated. See Figures 5.39 and 5.40.

Wetland Data Point

Data Point 1213 (DP1213)

Dominant vegetation in the vicinity of DP1213 included Large Barnyard Grass (FAC). In addition, non-dominant vegetation at the data point included common wheat (UPL). The dominance test is greater than 50%, which qualifies as a hydrophytic vegetation indicator. The soil from 0-10" had a matrix soil color of 10YR 4/2 with concentrations in the matrix at 20%, and a texture of Silt Loam. The soil at the data point was mapped as Lindside silt loam, occasionally flooded (Ld), and met the Depleted Matrix (F3) and Redox Depressions (F8) hydric soil criteria. The indicators of hydrology observed included Drift Deposits (B3), Algal Mat or Crust (B4), Surface Soil Cracks (B6), and Geomorphic Position (D2). This data point qualified as a wetland.

Wetland 1209 (w1209) (1.05 acres PSS, 0.29 acres PFO, 0.12 acres PEM)

This wetland was a shrub scrub wetland, forested wetland, and emergent wetland located in a swale. A surface water connection with an unnamed tributary to Skinframe Creek, which flows into the Cumberland River, a Traditional Navigable Water, was observed. Due to this connection, this wetland should be considered a "waters of the United States". See Figures 5.39, 5.40, and 5.46.

Wetland Data Point

Data Point 1214 (DP1214)

Dominant vegetation in the vicinity of DP1214 included Black Willow (OBL), Green Ash (FACW), Common Buttonbush (OBL), Ash-Leaf Maple (FAC), hybrid cattail (OBL), and Rice Cut Grass (OBL). In addition, non-dominant vegetation at the data point included Late Goldenrod (FACW), Purple-Stem American-Aster (*Symphyotrichum puniceum*, OBL), and Pinkweed (FACW). The dominance test is greater than 50%, which qualifies as a hydrophytic vegetation indicator. The soil from 0-12" had a matrix soil color of 10YR 4/2 with concentrations in the matrix at 20%, and a texture of Silt Loam. The soil at the data point was mapped as Newark silt loam, occasionally flooded (Ne), and met the Depleted Matrix (F3) and Redox Depressions (F8) hydric soil criteria. The indicators of hydrology observed included Drift Deposits (B3), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Wetland 1210 (w1210) (0.04 acres)

This wetland was an emergent wetland located in a swale. A surface water connection with Skinframe Creek, which flows into the Cumberland River, a Traditional Navigable Water, was observed. Due to this connection, this wetland should be considered a "waters of the United States". See Figure 5.40.

Wetland Data Point

Data Point 1215 (DP1215)

Dominant vegetation in the vicinity of DP1215 included Large Barnyard Grass (FAC). In addition, non-dominant vegetation at the data point included Prickly Fanpetals (*Sida spinosa*, UPL). The dominance test is greater than 50%, which qualifies as a hydrophytic vegetation indicator. The soil from 0-3" had a matrix soil color of 7.5YR 4/2 with a texture of Silt Loam. The soil from 3-12" had a matrix soil color of 7.5YR 4/2 with concentrations in the matrix at 10%, and a texture of Silt Loam. The soil at the data point was mapped as Elk silt loam, 1 to 4 percent slopes, rarely flooded (EkB), and met the Depleted Matrix (F3) and Redox Depressions (F8) hydric soil criteria. The indicators of hydrology observed included Drift Deposits (B3), Surface Soil Cracks (B6), and Geomorphic Position (D2). This data point qualified as a wetland.

Upland Data Point

Data Point 1216 (DP1216)

Dominant vegetation in the vicinity of DP1216 included Common Hackberry (*Celtis occidentalis*, FACU), Eastern Red-Cedar (FACU), Black Cherry (FACU), Black Walnut (FACU), Coral-Berry (FACU), Wingstem (FAC), Japanese Honeysuckle (FAC), Eastern Poison Ivy (FAC), and Woodland Blue Grass (FACW). In addition, non-dominant vegetation at the data point included Black Walnut (FACU), Common Persimmon (FAC), Smooth Brome (*Bromus inermis*, UPL), Nodding Wild Rye (FACU), and Clustered Black-Snakeroot (FACU). This did not meet any indicators for hydrophytic vegetation. The soil from 0-6" had a matrix soil color of 10YR 4/2 with a texture of Silt Loam. The soil from 6-16" had a matrix soil color of 10yr 4/1 with concentrations in the matrix at 15%, and a texture of Silt Loam. The soil at the data point was mapped as Newark silt loam, occasionally flooded (Ne), and met the Depleted Matrix (F3) hydric soil criterion. No indicators of hydrology were observed at the data point. This data point did not qualify as a wetland.

Wetland 1211 (w1211) (0.11 acres)

This wetland was a shrub-scrub wetland located in a swale. A surface water connection with an unnamed tributary to Skinframe Creek, which flows into the Cumberland River, a Traditional Navigable Water, was observed. Due to this connection, this wetland should be considered a "waters of the United States". See Figure 5.46.

Wetland Data Point

Data Point 1217 (DP1217)

Dominant vegetation in the vicinity of DP1217 included Green Ash (FACW), Common Buttonbush (OBL), Gray Dogwood (*Cornus racemosa*, FAC), Devil's-Pitchfork (FACW), Crested Sedge (*Carex cristatella*, FACW), Late Goldenrod (FACW), and Eastern Poison Ivy (FAC). In addition, non-dominant vegetation at the data point included American Elm (FACW), Fowl Manna Grass (OBL), White Grass (*Leersia virginica*, FACW), Dark-Green Bulrush (OBL), Common Fox Sedge (OBL), Cat-Tail Sedge (FACW), and Bearded Sedge (*Carex comosa*, OBL). The dominance test is greater than 50%, which qualifies as a hydrophytic vegetation indicator. The soil from 0-12" had a matrix soil color of 10YR 6/1 with concentrations in the matrix at 20%, and a texture of Silty clay Loam. The soil at the data point was mapped as Newark silt loam, occasionally flooded (Ne), and met the Depleted Matrix (F3) and Redox Depressions (F8) hydric soil criteria. The indicators of hydrology observed included Drift Deposits (B3), Algal Mat or Crust (B4), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Wetland 1212 (w1212) (0.32 acres PEM and 0.08 acres PFO)

This wetland was an emergent and forested wetland located in a depression. A surface water connection with Skinframe Creek, which flows into the Cumberland River, a Traditional Navigable Water, was observed. Due to this connection, this wetland should be considered a "waters of the United States". See Figure 5.45.

Wetland Data Point

Data Point 1218 (DP1218)

Dominant vegetation in the vicinity of DP1218 included Pin Oak (FACW) and Dock-Leaf Smartweed (FACW). In addition, non-dominant vegetation at the data point included Large Barnyard Grass (FAC), Fowl Manna Grass (OBL), and Devil's-Pitchfork (FACW). This met the rapid test for hydrophytic vegetation. The soil from 0-18" had a matrix soil color of 10YR 5/1 with concentrations in the matrix at 25%, and a texture of Silt Loam. The soil at the data point was mapped as Nolin silt loam, occasionally flooded (No), and met the Depleted Matrix (F3) and Redox Depressions (F8) hydric soil criteria. The indicators of hydrology observed included Algal Mat or Crust (B4), Surface Soil Cracks (B6), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Wetland 1213 (w1213) (0.07 acres)

This wetland was a forested wetland located in a depression. A surface water connection with Skinframe Creek, which flows into the Cumberland River, a Traditional Navigable Water, was observed. Due to this connection, this wetland should be considered a "waters of the United States". See Figure 5.40.

Wetland Data Point

Data Point 1219 (DP1219)

Dominant vegetation in the vicinity of DP1219 included Sugar-Berry (FACW), American Elm (FACW), Green Ash (FACW) in multiple strata, Large Barnyard Grass (FAC), and White Grass (FACW). In addition, non-dominant vegetation at the data point included Black Locust (FACU), Dark-Green Bulrush (OBL), Cress-Leaf Groundsel (OBL), Ash-Leaf Maple (FAC), Devil's-Pitchfork (FACW), Eastern Poison Ivy (FAC), American Water-Plantain (OBL), and Annual Blue Grass (FACU). The dominance test is greater than 50%, which qualifies as a hydrophytic vegetation indicator. The soil from 0-6" had a matrix soil color of 7.5YR 5/1 with concentrations in the pore linings at 25%, and a texture of Silt Loam. The soil from 6-16" had a matrix soil color of 7.5yr 6/2 with concentrations in the matrix at 15%, and a texture of Silty Clay Loam. The soil at the data point was mapped as Nolin silt loam, occasionally flooded (No), and met the Depleted Matrix (F3) and Redox Depressions (F8) hydric soil criteria. The indicators of hydrology observed included Drift Deposits (B3), Algal Mat or Crust (B4), Surface Soil Cracks (B6), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Wetland 1214 (w1214) (0.04 acres)

This wetland was an emergent wetland located in a depression. A surface water connection with Skinframe Creek, which flows into the Cumberland River, a Traditional Navigable Water, was observed. Due to this connection, this wetland should be considered a "waters of the United States". See Figure 5.48.

Wetland Data Point

Data Point 1220 (DP1220)

Dominant vegetation in the vicinity of DP1220 included Large Barnyard Grass (FAC). In addition, non-dominant vegetation at the data point included common wheat (UPL). The dominance test is greater than 50%, which qualifies as a hydrophytic vegetation indicator. The soil from 0-8" had a matrix soil color of 10YR 5/1 with concentrations in the matrix at 15%, and a texture of Sandy Loam. The soil from 8-16" had a matrix soil color of 10YR 6/1 with concentrations in the matrix at 20%, and a texture of Sandy Loam. The soil at the data point was mapped as Nolin silt loam, occasionally flooded (No), and met the Depleted Matrix (F3) and Redox Depressions (F8) hydric soil criteria. The indicators of hydrology observed included Drift Deposits (B3), Surface Soil Cracks (B6), and Geomorphic Position (D2). This data point qualified as a wetland.

Wetland 1215 (w1215) (0.40 acres)

This wetland was an emergent wetland located in a swale. A surface water connection with an unnamed tributary to Skinframe Creek, which flows into the Cumberland River, a Traditional Navigable Water, was observed. Due to this connection, this wetland should be considered a "waters of the United States". See Figures 5.46 and 5.53.

Wetland Data Point

Data Point 1221 (DP1221)

Dominant vegetation in the vicinity of DP1221 included Red Maple (FAC), Sweet-Gum (FAC), Pin Oak (FACW), American Elm (FACW), Wingstem (FAC), False Hop Sedge (*Carex lupuliformis*, FACW), Common Fox Sedge (OBL), White Grass (FACW), Spotted Lady's-Thumb (FACW), common wheat (UPL), and Large Barnyard Grass (FAC). In addition, non-dominant vegetation at the data point included Lesser Poverty Rush (FAC) and Prickly Fanpetals (UPL). The dominance test is greater than 50%, which qualifies as a hydrophytic vegetation indicator. The soil from 0-8" had a matrix soil color of 10YR 6/1 with concentrations in the matrix at 15%, and a texture of Silt Loam. The soil from 8-16" had a matrix soil color of 10YR 6/1 with concentrations in the matrix at 40%, and a texture of Silty Clay Loam. The soil at the data point was mapped as Henshaw silt loam, 0 to 2 percent slopes, rarely flooded (He), and met the Depleted Matrix (F3) and Redox Depressions (F8) hydric soil criteria. The indicators of hydrology observed included Sediment Deposits (B2), Drift Deposits (B3), Crayfish Burrows (C8), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Wetland 1216 (w1216) (3.40 acres)

This wetland was a forested wetland located in a depression. A surface water connection with an unnamed tributary to Skinframe Creek, which flows into the Cumberland River, a Traditional Navigable Water, was observed. Due to this connection, this wetland should be considered a "waters of the United States". See Figures 5.46 and 5.47.

Wetland Data Point

Data Point 1222 (DP1222)

Dominant vegetation in the vicinity of DP1222 included American Hornbeam (*Carpinus caroliniana*, FAC), Sugar-Berry (FACW), Pin Oak (FACW), Green Ash (FACW), American Elm (FACW), Fowl Manna Grass (OBL), Japanese Stilt Grass (FAC), and Greater Straw Sedge (FACW). In addition, non-dominant vegetation at the data point included Sweet-Gum (FAC), Shag-Bark Hickory (FACU), Spotted Touch-Me-Not (FACW), Woodland Blue Grass (FACW), White Grass (FACW), Late Goldenrod (FACW), Virginia Wild Rye (FACW), and Clustered Black-Snakeroot (FACU). The dominance test is greater than 50%, which qualifies as a hydrophytic vegetation indicator. The soil from 0-8" had a matrix soil color of 10YR 6/1 with concentrations in the matrix at 20%, and a texture of Silt Loam. The soil at the data point was mapped as Newark silt loam, occasionally flooded (Ne), and met the Depleted Matrix (F3) and Redox Depressions (F8) hydric soil criteria. The indicators of hydrology observed included Saturation (A3), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Wetland 1217 (w1217) (1.24 acres)

This wetland was an emergent wetland located in a swale. A surface water connection with an unnamed tributary to Skinframe Creek, which flows into the Cumberland River, a Traditional

Navigable Water, was observed. Due to this connection, this wetland should be considered a "waters of the United States". See Figures 5.46, 5.47, and 5.54.

Wetland Data Point

Data Point 1223 (DP1223)

Dominant vegetation in the vicinity of DP1223 included Green Ash (FACW), Rice Cut Grass (OBL), and Spotted Water-Hemlock (*Cicuta maculata*, OBL). In addition, non-dominant vegetation at the data point included Troublesome Sedge (FAC), Frank's Sedge (OBL), Halberd-Leaf Rose-Mallow (*Hibiscus laevis*, OBL), and Crested Sedge (FACW). This met the rapid test for hydrophytic vegetation. The soil from 0-5" had a matrix soil color of 10YR 4/2 with concentrations in the matrix at 15%, and a texture of Silt Loam. The soil from 5-16" had a matrix soil color of 10YR 6/1 with concentrations in the matrix at 25%, and a texture of Silty Clay Loam. The soil at the data point was mapped as Newark silt loam, occasionally flooded (Ne), and met the Depleted Matrix (F3) and Redox Depressions (F8) hydric soil criteria. The indicators of hydrology observed included Drift Deposits (B3), Oxidized Rhizospheres on Living Roots (C3), Drainage Patterns (B10), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

Wetland 1218 (w1218) (0.36 acres)

This wetland was a forested wetland located in a depression. No surface water connection with any "waters of the United States" was observed. It is likely that this wetland is not regulated. See Figure 5.47.

Wetland Data Point

Data Point 1224 (DP1224)

Dominant vegetation in the vicinity of DP1224 included Pin Oak (FACW), Green Ash (FACW), Lesser Poverty Rush (FAC), Japanese Honeysuckle (FAC), Bearded Sedge (OBL), Blunt Broom Sedge (FACW), and Spotted Touch-Me-Not (FACW). In addition, non-dominant vegetation at the data point included Sugar-Berry (FACW), Sandbar Willow (FACW), Curly Dock (FAC), Sticky-Willy (FACU), Greater Straw Sedge (FACW), Stinging Nettle (FACU), Common Fox Sedge (OBL), Late Goldenrod (FACW), and Japanese Stilt Grass (FAC). The dominance test is greater than 50%, which qualifies as a hydrophytic vegetation indicator. The soil from 0-1" had a matrix soil color of 10YR 5/2 with a texture of Silt Loam. The soil from 1-16" had a matrix soil color of 10yr 7/1 with concentrations in the matrix at 30%, and a texture of Silt Loam. The soil at the data point was mapped as Henshaw silt loam, 0 to 2 percent slopes, rarely flooded (He), and met the Depleted Matrix (F3) and Redox Depressions (F8) hydric soil criteria. The indicators of hydrology observed included Drift Deposits (B3), Water-Stained Leaves (B9), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

4.2.2 Stream Descriptions

Stream 0001 (s0001) (158 Linear Feet)

Stream 0001 was an intermittent that flowed southwest through the Study Area. The dominant substrates were boulder and cobble. OHWM width was 12 feet and depth was 0.5 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.24.

Stream 0002 (s0002) (655 Linear Feet)

Stream 0002 was an intermittent that flowed southwest through the Study Area. The dominant substrates were boulder and boulder slabs. OHWM width was 12 feet and depth was 0.5 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.29 and 5.30.

Stream 0003 (s0003) (2780 Linear Feet)

Stream 0003 was a perennial that flowed west through the Study Area. The dominant substrates were cobble and gravel. OHWM width was 16 feet and depth was 1 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.43, 5.44, and 5.49.

Stream 0004 (s0004) (363 Linear Feet)

Stream 0004 was an ephemeral that flowed south through the Study Area. The dominant substrates were boulder slabs and boulder slabs. OHWM width was 2 feet and depth was 0.2 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.43.

Stream 0005 (s0005) (57 Linear Feet)

Stream 0005 was an ephemeral that flowed southwest through the Study Area. The dominant substrates were silt and gravel. OHWM width was 1 feet and depth was 0.1 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.42.

Stream 0006 (s0006) (326 Linear Feet)

Stream 0006 was an ephemeral that flowed west through the Study Area. The dominant substrates were silt and cobble. OHWM width was 1 feet and depth was 0.1 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.42.

Stream 0007 (s0007) (251 Linear Feet)

Stream 0007 was an ephemeral that flowed west through the Study Area. The dominant substrates were silt and clay. OHWM width was 2 feet and depth was 0.1 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.42.

Stream 0008 (s0008) (290 Linear Feet)

Stream 0008 was an ephemeral that flowed north through the Study Area. The dominant substrates were silt and bedrock. OHWM width was 2 feet and depth was 0.1 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.35.

Stream 0009 (s0009) (122 Linear Feet)

Stream 0009 was an ephemeral that flowed west through the Study Area. The dominant substrates were silt and cobble. OHWM width was 2 feet and depth was 0.1 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.36.

Stream 0010 (s0010) (727 Linear Feet)

Stream 0010 was an ephemeral that flowed north through the Study Area. The dominant substrates were gravel and gravel. OHWM width was 2 feet and depth was 0.1 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.36.

Stream 0011 (s0011) (179 Linear Feet)

Stream 0011 was an ephemeral that flowed east through the Study Area. The dominant substrates were gravel and silt. OHWM width was 1 feet and depth was 0.1 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.36.

Stream 0101 (s0101) (215 Linear Feet)

Stream 0101 was an ephemeral that flowed south through the Study Area. The dominant substrates were clay and cobble. OHWM width was 3 feet and depth was 0.4 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.12.

Stream 0102 (s0102) (848 Linear Feet)

Stream 0102 was an intermittent that flowed south through the Study Area. The dominant substrates were silt and cobble. OHWM width was 1 feet and depth was 0.3 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.7, and 5.12.

Stream 0103 (s0103) (129 Linear Feet)

Stream 0103 was an ephemeral that flowed southeast through the Study Area. The dominant substrates were clay and leaf pack. OHWM width was 1 feet and depth was 0.3 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.16.

Stream 0104 (s0104) (310 Linear Feet)

Stream 0104 was an ephemeral that flowed south through the Study Area. The dominant substrates were clay and leaf pack. OHWM width was 1 feet and depth was 0.4 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.13.

Stream 0105 (s0105) (167 Linear Feet)

Stream 0105 was an ephemeral that flowed south through the Study Area. The dominant substrates were clay and leaf pack. OHWM width was 2 feet and depth was 0.3 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.6.

Stream 0201 (s0201) (650 Linear Feet)

Stream 0201 was an intermittent that flowed north through the Study Area. The dominant substrates were silt and gravel. OHWM width was 7 feet and depth was 0.3 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.45.

Stream 0202 (s0202) (2741 Linear Feet)

Stream 0202 was an intermittent that flowed north through the Study Area. The dominant substrates were gravel and sand. OHWM width was 20 feet and depth was 4 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.43, 5.50, and 5.51.

Stream 0203 (s0203) (1620 Linear Feet)

Stream 0203 was an ephemeral that flowed north through the Study Area. The dominant substrates were silt and gravel. OHWM width was 12 feet and depth was 1 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.49.

Stream 1001 (s1001) (779 Linear Feet)

Stream 1001 was an intermittent that flowed east through the Study Area. The dominant substrates were gravel and sand. OHWM width was 3 feet and depth was 0.3 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.78.

Stream 1002 (s1002) (653 Linear Feet)

Stream 1002 was an intermittent that flowed north through the Study Area. The dominant substrates were gravel and sand. OHWM width was 3 feet and depth was 0.3 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.79.

Stream 1003 (s1003) (893 Linear Feet)

Stream 1003 was an ephemeral that flowed northwest through the Study Area. The dominant substrates were gravel and sand. OHWM width was 2 feet and depth was 0.2 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.79, 5.81, and 5.82.

Stream 1004 (s1004) (420 Linear Feet)

Stream 1004 was an intermittent that flowed north through the Study Area. The dominant substrates were gravel and silt. OHWM width was 2 feet and depth was 0.2 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.81.

Stream 1005 (s1005) (1636 Linear Feet)

Stream 1005 was an perennial that flowed northeast through the Study Area. The dominant substrates were gravel and bedrock. OHWM width was 10 feet and depth was 1 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See figure 5.62 and 5.70.

Stream 1006 (s1006) (561 Linear Feet)

Stream 1006 was an intermittent that flowed west through the Study Area. The dominant substrates were gravel and bedrock. OHWM width was 2 feet and depth was 0.2 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.70.

Stream 1007 (s1007) (225 Linear Feet)

Stream 1007 was an ephemeral that flowed northwest through the Study Area. The dominant substrates were gravel and sand. OHWM width was 1 feet and depth was 0.4 feet This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.70 and 5.71.

Stream 1008 (s1008) (504 Linear Feet)

Stream 1008 was an ephemeral that flowed east through the Study Area. The dominant substrates were silt and gravel. OHWM width was 1 feet and depth was 0.1 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.70.

Stream 1009 (s1009) (511 Linear Feet)

Stream 1009 was an intermittent that flowed north through the Study Area. The dominant substrates were gravel and sand. OHWM width was 4 feet and depth was 0.4 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figures 5.63 and 5.71.

Stream 1010 (s1010) (425 Linear Feet)

Stream 1010 was an ephemeral that flowed west through the Study Area. The dominant substrates were silt and clay. OHWM width was 1 feet and depth was 0.1 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.69.

Stream 1011 (s1011) (1142 Linear Feet)

Stream 1011 was an intermittent that flowed west through the Study Area. The dominant substrates were clay and gravel. OHWM width was 2 feet and depth was 0.2 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.68 and 5.69.

Stream 1012 (s1012) (187 Linear Feet)

Stream 1012 was a perennial that flowed north through the Study Area. The dominant substrates were boulder and cobble. OHWM width was 6 feet and depth was 0.5 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.74.

Stream 1013 (s1013) (2734 Linear Feet)

Stream 1013 was a perennial that flowed north through the Study Area. The dominant substrates were boulder and cobble. OHWM width was 8 feet and depth was 0.5 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.60 and 5.68.

Stream 1014 (s1014) (1501 Linear Feet)

Stream 1014 was an intermittent that flowed northwest through the Study Area. The dominant substrates were gravel and bedrock. OHWM width was 3 feet and depth was 0.3 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.60 and 5.61.

Stream 1015 (s1015) (769 Linear Feet)

Stream 1015 was an intermittent that flowed north through the Study Area. The dominant substrates were gravel and cobble. OHWM width was 3 feet and depth was 0.3 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.55, and 5.62.

Stream 1016 (s1016) (2100 Linear Feet)

Stream 1016 was an intermittent that flowed northeast through the Study Area. The dominant substrates were silt and silt. OHWM width was 2 feet and depth was 0.4 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.55, 5.61, and 5.62.

Stream 1017 (s1017) (440 Linear Feet)

Stream 1017 was an intermittent that flowed east through the Study Area. The dominant substrates were silt and clay. OHWM width was 2 feet and depth was 0.2 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.55.

Stream 1018 (s1018) (149 Linear Feet)

Stream 1018 was an ephemeral that flowed east through the Study Area. The dominant substrates were silt and clay. OHWM width was 1 feet and depth was 0.2 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.55.

Stream 1101 (s1101) (1347 Linear Feet)

Stream 1101 was an intermittent that flowed north through the Study Area. The dominant substrates were silt and cobble. OHWM width was 1 feet and depth was 0.4 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.65.

Stream 1102 (s1102) (1153 Linear Feet)

Stream 1102 was an intermittent that flowed north through the Study Area. The dominant substrates were clay and cobble. OHWM width was 1 feet and depth was 0.2 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.64.

Stream 1103 (s1103) (302 Linear Feet)

Stream 1103 was an ephemeral that flowed north through the Study Area. The dominant substrates were silt and leaf pack. OHWM width was 1 feet and depth was 0.4 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”.See Figure 5.65.

Stream 1104 (s1104) (79 Linear Feet)

Stream 1104 was an intermittent that flowed northeast through the Study Area. The dominant substrates were sand and sand. OHWM width was 2 feet and depth was 0.3 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.67.

Stream 1105 (s1105) (3069 Linear Feet)

Stream 1105 was a perennial that flowed north through the Study Area. The dominant substrates were cobble and silt. OHWM width was 10 feet and depth was 0.5 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.58, 5.59, and 5.67.

Stream 1106 (s1106) (108 Linear Feet)

Stream 1106 was an intermittent that flowed east through the Study Area. The dominant substrates were leaf pack and clay. OHWM width was 2 feet and depth was 0.3 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.67.

Stream 1107 (s1107) (487 Linear Feet)

Stream 1107 was an ephemeral that flowed west through the Study Area. The dominant substrates were clay and silt. OHWM width was 3 feet and depth was 0.3 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.67.

Stream 1108 (s1108) (395 Linear Feet)

Stream 1108 was an intermittent that flowed east through the Study Area. The dominant substrates were silt and artificial. OHWM width was 2 feet and depth was 0.3 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.58.

Stream 1109 (s1109) (53 Linear Feet)

Stream 1109 was an ephemeral that flowed northeast through the Study Area. The dominant substrates were boulder slabs and boulder slabs. OHWM width was 2 feet and depth was 0.2 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.51.

Stream 1110 (s1110) (3781 Linear Feet)

Stream 1110 was a perennial that flowed north through the Study Area. The dominant substrates were cobble and cobble. OHWM width was 12 feet and depth was 1 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.51, 5.58, 5.59, and 5.60.

Stream 1111 (s1111) (1817 Linear Feet)

Stream 1111 was an intermittent that flowed north through the Study Area. The dominant substrates were clay and sand. OHWM width was 2 feet and depth was 0.3 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.57, 5.58, and 5.66.

Stream 1112 (s1112) (614 Linear Feet)

Stream 1112 was an intermittent that flowed northeast through the Study Area. The dominant substrates were sand and sand. OHWM width was 2 feet and depth was 0.5 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.66.

Stream 1113 (s1113) (536 Linear Feet)

Stream 1113 was an intermittent that flowed northeast through the Study Area. The dominant substrates were cobble and cobble. OHWM width was 3 feet and depth was 0.4 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.66.

Stream 1114 (s1114) (79 Linear Feet)

Stream 1114 was an intermittent that flowed east through the Study Area. The dominant substrates were gravel and sand. OHWM width was 3 feet and depth was 0.4 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.66.

Stream 1115 (s1115) (198 Linear Feet)

Stream 1115 was an ephemeral that flowed northeast through the Study Area. The dominant substrates were clay and sand. OHWM width was 1 feet and depth was 0.2 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.66.

Stream 1116 (s1116) (93 Linear Feet)

Stream 1116 was an ephemeral that flowed east through the Study Area. The dominant substrates were clay and sand. OHWM width was 1 feet and depth was 0.2 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.66.

Stream 1117 (s1117) (127 Linear Feet)

Stream 1117 was an intermittent that flowed west through the Study Area. The dominant substrates were cobble and cobble. OHWM width was 3 feet and depth was 0.4 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.59.

Stream 1118 (s1118) (105 Linear Feet)

Stream 1118 was an intermittent that flowed east through the Study Area. The dominant substrates were gravel and sand. OHWM width was 2 feet and depth was 0.3 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.59.

Stream 1119 (s1119) (90 Linear Feet)

Stream 1119 was an intermittent that flowed east through the Study Area. The dominant substrates were gravel and gravel. OHWM width was 5 feet and depth was 0.4 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.60.

Stream 1120 (s1120) (1971 Linear Feet)

Stream 1120 was an intermittent that flowed west through the Study Area. The dominant substrates were sand and gravel. OHWM width was 3 feet and depth was 0.2 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.68.

Stream 1121 (s1121) (66 Linear Feet)

Stream 1121 was an intermittent that flowed north through the Study Area. The dominant substrates were clay and gravel. OHWM width was 2 feet and depth was 0.2 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.68.

Stream 1122 (s1122) (453 Linear Feet)

Stream 1122 was an intermittent that flowed north through the Study Area. The dominant substrates were silt and clay. OHWM width was 3 feet and depth was 0.2 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.68.

Stream 1123 (s1123) (440 Linear Feet)

Stream 1123 was an ephemeral that flowed west through the Study Area. The dominant substrates were clay and silt. OHWM width was 3 feet and depth was 0.2 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.54.

Stream 1124 (s1124) (161 Linear Feet)

Stream 1124 was an intermittent that flowed south through the Study Area. The dominant substrates were clay and leaf pack. OHWM width was 1 feet and depth was 0.4 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.46.

Stream 1125 (s1125) (79 Linear Feet)

Stream 1125 was an intermittent that flowed northeast through the Study Area. The dominant substrates were boulder slabs and boulder slabs. OHWM width was 1 feet and depth was 0.3 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.58.

Stream 1201 (s1201) (271 Linear Feet)

Stream 1201 was an ephemeral that flowed west through the Study Area. The dominant substrates were silt and leaf pack. OHWM width was 4 feet and depth was 1 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.39.

Stream 1202 (s1202) (1153 Linear Feet)

Stream 1202 was an ephemeral that flowed northwest through the Study Area. The dominant substrates were silt and clay. OHWM width was 2 feet and depth was 0.5 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.45 and 5.46.

Stream 1203 (s1203) (10194 Linear Feet)

Stream 1203 was a perennial that flowed west through the Study Area. The dominant substrates were cobble and gravel. OHWM width was 16 feet and depth was 1 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.38, 5.39, 5.40, 5.41, 5.44, 5.45, 5.47, and 5.48.

Stream 1204 (s1204) (353 Linear Feet)

Stream 1204 was an intermittent that flowed west through the Study Area. The dominant substrates were gravel and sand. OHWM width was 8 feet and depth was 0.5 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.47 and 5.48.

Stream 1205 (s1205) (1149 Linear Feet)

Stream 1205 was an ephemeral that flowed southwest through the Study Area. The dominant substrates were silt and clay. OHWM width was 20 feet and depth was 0.8 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.40, 5.41, and 5.47.

Stream 1206 (s1206) (874 Linear Feet)

Stream 1206 was an ephemeral that flowed northwest through the Study Area. The dominant substrates were silt and silt. OHWM width was 2 feet and depth was 0.5 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.46.

Stream 1207 (s1207) (136 Linear Feet)

Stream 1207 was a perennial that flowed north through the Study Area. The dominant substrates were sand and gravel. OHWM width was 5 feet and depth was 1.2 feet. This stream flows into the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.55.

4.2.1 Pond Descriptions

Pond 0001 (p0001) (0.50 Acres)

Pond 0001 was an open water feature within the project Study Area. No surface water connection with a “waters of the United States” was observed. This feature should not be considered a “waters of the United States”. See Figure 5.22 and 5.29.

Pond 0002 (p0002) (7.73 Acres)

Pond 0002 was an open water feature within the project Study Area. No surface water connection with a “waters of the United States” was observed. This feature should not be considered a “waters of the United States”. See Figure 5.29.

Pond 0003 (p0003) (0.17 Acres)

Pond 0003 was an open water feature within the project Study Area. No surface water connection with a “waters of the United States” was observed. This feature should not be considered a “waters of the United States”. See Figure 5.23.

Pond 0004 (p0004) (0.76 Acres)

Pond 0004 was an open water feature within the project Study Area. No surface water connection with a “waters of the United States” was observed. This feature should not be considered a “waters of the United States”. See Figure 5.35.

Pond 0005 (p0005) (0.11 Acres)

Pond 0005 was an open water feature within the project Study Area. No surface water connection with a “waters of the United States” was observed. This feature should not be considered a “waters of the United States”. See Figure 5.35.

Pond 0006 (p0006) (0.34 Acres)

Pond 0006 was an open water feature within the project Study Area. No surface water connection with a “waters of the United States” was observed. This feature should not be considered a “waters of the United States”. See Figure 5.53.

Pond 0101 (p0101) (0.24 Acres)

Pond 0101 was an open water feature within the project Study Area. No surface water connection with a “waters of the United States” was observed. This feature should not be considered a “waters of the United States”. See Figure 5.17.

Pond 0102 (p0102) (2.84 Acres)

Pond 0102 was an open water feature within the project Study Area. No surface water connection with a “waters of the United States” was observed. This feature should not be considered a “waters of the United States”. See Figure 5.5 and 5.10.

Pond 0103 (p0103) (0.99 Acres)

Pond 0103 was an open water feature within the project Study Area. No surface water connection with a “waters of the United States” was observed. This feature should not be considered a “waters of the United States”. See Figure 5.5 and 5.11.

Pond 0201 (p0201) (0.50 Acres)

Pond 0201 was an open water feature within the project Study Area. No surface water connection with a “waters of the United States” was observed. This feature should not be considered a “waters of the United States”. See Figure 5.52.

Pond 0202 (p0202) (0.26 Acres)

Pond 0202 was an open water feature within the project Study Area. No surface water connection with a “waters of the United States” was observed. This feature should not be considered a “waters of the United States”. See Figure 5.57.

Pond 0203 (p0203) (0.38 Acres)

Pond 0203 was an open water feature within the project Study Area. No surface water connection with a “waters of the United States” was observed. This feature should not be considered a “waters of the United States”. See Figure 5.50.

Pond 0204 (p0204) (0.10 Acres)

Pond 0204 was an open water feature within the project Study Area. No surface water connection with a “waters of the United States” was observed. This feature should not be considered a “waters of the United States”. See Figure 5.51.

Pond 1001 (p1001) (0.17 Acres)

Pond 1001 was an open water feature within the project Study Area. No surface water connection with a “waters of the United States” was observed. This feature should not be considered a “waters of the United States”. See Figure 5.78.

Pond 1002 (p1002) (0.82 Acres)

Pond 1002 was an open water feature within the project Study Area. This pond has a surface water connection with the Cumberland River, a Traditional Navigable Water. Due to this connection, this pond will likely be considered a “waters of the United States”. See Figure 5.78.

Pond 1003 (p1003) (0.62 Acres)

Pond 1003 was an open water feature within the project Study Area. No surface water connection with a “waters of the United States” was observed. This feature should not be considered a “waters of the United States”. See Figure 5.82.

Pond 1004 (p1004) (0.12 Acres)

Pond 1004 was an open water feature within the project Study Area. No surface water connection with a “waters of the United States” was observed. This feature should not be considered a “waters of the United States”. See Figure 5.82.

Pond 1005 (p1005) (1.01 Acres)

Pond 1005 was an open water feature within the project Study Area. This pond has a surface water connection with the Cumberland River, a Traditional Navigable Water. Due to this connection, this stream will likely be considered a “waters of the United States”. See Figure 5.81.

Pond 1006 (p1006) (0.17 Acres)

Pond 1006 was an open water feature within the project Study Area. No surface water connection with a “waters of the United States” was observed. This feature should not be considered a “waters of the United States”. See Figure 5.81.

Pond 1007 (p1007) (0.48 Acres)

Pond 1007 was an open water feature within the project Study Area. No surface water connection with a “waters of the United States” was observed. This feature should not be considered a “waters of the United States”. See Figure 5.80.

Pond 1008 (p1008) (0.36 Acres)

Pond 1008 was an open water feature within the project Study Area. No surface water connection with a “waters of the United States” was observed. This feature should not be considered a “waters of the United States”. See Figure 5.77 and 5.80.

Pond 1009 (p1009) (0.72 Acres)

Pond 1009 was an open water feature within the project Study Area. No surface water connection with a “waters of the United States” was observed. This feature should not be considered a “waters of the United States”. See Figure 5.76.

Pond 1010 (p1010) (0.32 Acres)

Pond 1010 was an open water feature within the project Study Area. No surface water connection with a “waters of the United States” was observed. This feature should not be considered a “waters of the United States”. See Figure 5.70.

Pond 1011 (p1011) (0.06 Acres)

Pond 1011 was an open water feature within the project Study Area. No surface water connection with a “waters of the United States” was observed. This feature should not be considered a “waters of the United States”. See Figure 5.63.

Pond 1012 (p1012) (0.55 Acres)

Pond 1012 was an open water feature within the project Study Area. This pond has a surface water connection with the Cumberland River, a Traditional Navigable Water. Due to this connection, this pond will likely be considered a “waters of the United States”. See Figure 5.69.

Pond 1013 (p1013) (0.28 Acres)

Pond 1013 was an open water feature within the project Study Area. No surface water connection with a “waters of the United States” was observed. This feature should not be considered a “waters of the United States”. See Figure 5.69.

Pond 1101 (p1101) (0.57 Acres)

Pond 1101 was an open water feature within the project Study Area. This pond has a surface water connection with the Cumberland River, a Traditional Navigable Water. Due to this connection, this pond will likely be considered a “waters of the United States”. See Figure 5.65.

Pond 1102 (p1102) (0.67 Acres)

Pond 1102 was an open water feature within the project Study Area. This pond has a surface water connection with the Cumberland River, a Traditional Navigable Water. Due to this connection, this pond will likely be considered a “waters of the United States”. See Figure 5.65.

Pond 1103 (p1103) (0.50 Acres)

Pond 1103 was an open water feature within the project Study Area. This pond has a surface water connection with the Cumberland River, a Traditional Navigable Water. Due to this connection, this pond will likely be considered a “waters of the United States”. See Figure 5.58.

Pond 1201 (p1201) (0.12 Acres)

Pond 1201 was an open water feature within the project Study Area. No surface water connection with a “waters of the United States” was observed. This feature should not be considered a “waters of the United States”. See Figure 5.31.

5 Jurisdictional Analysis

5.1 U.S. Army Corps of Engineers

The USACE has authority over the discharge of fill and/or dredged material into “waters of the U.S.” This includes authority over any filling, mechanical land clearing, or construction activities that occur within the boundaries of any “waters of the U.S.” A permit must be obtained from the USACE under Section 404 of the Clean Water Act (CWA) before any of these activities occur. Permits in the Commonwealth can be divided into two general categories: Individual Permits and Nationwide Permits. Compensatory mitigation may be required for projects that impact greater than 0.10 acre of wetlands or result in a loss of streams or open waters.

Individual Permits are required for projects that do not fall into one of the specific Nationwide Permits (NWP) categories or are deemed to have significant environmental impacts. These permits are much more difficult to obtain and receive a much higher level of regulatory agency and public scrutiny and may require several months to more than a year for processing.

Nationwide Permits have been developed for projects which meet specific criteria and are deemed to have minimal impact on the aquatic environment. There are currently 54 NWP for qualifying activities with 32 NWP General Conditions and 7 KDOW Conditions that must be satisfied in order to receive NWP authorization from the Corps of Engineers. Nine of the 54 NWP are denied general use by the KDOW and always require individual 401 Water Quality Certification.

Section 401 Water Quality Certification (WQC) must be obtained from Kentucky Division of Water before the USACE will complete their permit review. Some NWP have been categorically granted WQC with the USACE NWP issuance, as long as specific project conditions are met.

5.2 Kentucky Division of Water

5.2.1 Section 401 Permits

Kentucky Division of Water is responsible for issuing CWA Section 401 WQCs in conjunction with the USACE Section 404 permits. Individual WQC is required for most projects that occur within surface waters with a special use designation (cold-water habitat, etc.). In addition, most project with proposed impacts greater than 300 linear feet of stream or ½ acre of wetlands require individual WQC. Individual WQC may be required for any project which the DOW determines to have more than minimal impacts to the aquatic environment.

Water quality certification may be granted, without notification to the KDOW, if the project falls under NWP limitations. In order to qualify for this standing certification, all prior-authorized General and Regional Conditions as published by the KDOW must be satisfied. Certain NWPs have specific conditions concerning project impact thresholds and notification requirements.

The permitting process of the KDOW is conditional upon a permit requirement under the CWA sections 401 and 404. For this reason, permits are only processed where the USACE has assumed jurisdiction over a resource. There is currently no mechanism to permit isolated wetlands through the KDOW.

5.2.2 Floodplain Permitting

Kentucky Division of Water is responsible for issuing floodplain development permits in the Commonwealth. Activities covered include dams, bridges, culverts, residential and commercial buildings, placement of fill, stream alterations or relocations, small impoundments and water and wastewater treatment plants. Projects are only authorized which will have minimal or no impact on the base flood elevations. KDOW has a combined permit application process that covers the Stream Construction and Floodplain permits.

Authorization for floodplain development is only granted with the approval of the local floodplain coordinator, who is typically assigned for each county or community participating in the national flood insurance program. Local approval may also involve additional development permits or conditions.

6 Summary and Conclusion

6.1 Summary

Cardno inspected the Caldwell Solar Study Area on April 6-8, 2020 and May 24-27, 2021. Delineated features are shown on the Figure 5 set and in Tables 6-1, 6-2, and 6-3.

6.1.1 Special-Use Waters

No special-use waters were identified within the Study Area.

6.1.2 Wetlands and Waterways

Seventy wetlands, 69 streams, and 30 ponds were identified.

Table 6-1 Wetlands Identified within the Caldwell Solar Study Area

Feature Name	NWI Identified	Feature Class	Regulatory Status*	ORAM Score	Acreage (AC)
w0001	Yes	PEM	non-WOTUS	40.0	1.31
w0002	No	PFO	non-WOTUS	46.0	0.06
w0003	No	PFO	non-WOTUS	65.0	0.49
w0004	No	PFO	non-WOTUS	60.0	0.05
w0005	No	PEM	non-WOTUS	38.0	0.21
w0006	No	PEM	non-WOTUS	52.0	0.07
w0007	No	PSS	non-WOTUS	47.0	1.35
w0008	No	PFO	WOTUS	58.0	0.07
w0009	Yes	PEM	non-WOTUS	77.0	0.81
w0010	No	PFO	non-WOTUS	57.0	0.16
w0011	No	PFO	non-WOTUS	54.0	0.03
w0101	No	PEM	non-WOTUS	42.0	0.04
w0102	Yes	PEM	non-WOTUS	44.0	0.02
w0103	No	PSS	non-WOTUS	46.0	0.03
w0104	No	PEM	non-WOTUS	30.0	0.21
w0105	No	PEM	non-WOTUS	36.0	0.05
w0201	No	PFO	WOTUS	39.0	0.03
w0202	Yes	PEM	non-WOTUS	38.0	0.64
w0203	Yes	PEM	non-WOTUS	38.0	0.62
w0204	Yes	PEM	non-WOTUS	39.0	0.73
w1001	No	PEM	non-WOTUS	21.0	0.06
w1002	Yes	PEM	WOTUS	47.0	1.25
w1003	No	PEM	WOTUS	48.0	0.16
w1004	No	PEM	non-WOTUS	38.0	0.00
w1005	Yes	PEM/PFO	WOTUS	57.0	1.53
w1006	Yes	PFO	WOTUS	46.0	0.27

Table 6-1 Wetlands Identified within the Caldwell Solar Study Area

Feature Name	NWI Identified	Feature Class	Regulatory Status*	ORAM Score	Acreage (AC)
w1007	No	PEM	non-WOTUS	39.0	0.25
w1008	No	PEM	non-WOTUS	38.0	0.01
w1009	Yes	PEM	WOTUS	61.0	0.39
w1010	Yes	PEM	WOTUS	39.0	0.54
w1011	No	PEM	non-WOTUS	29.0	0.07
w1012	Yes	PEM	WOTUS	42.0	1.05
w1013	Yes	PEM	non-WOTUS	45.0	0.43
w1014	Yes	PEM	WOTUS	35.0	0.06
w1015	Yes	PFO	WOTUS	53.0	0.44
w1016	No	PSS	WOTUS	47.0	0.50
w1101	Yes	PEM	WOTUS	34.0	0.04
w1102	Yes	PEM	WOTUS	26.0	0.01
w1103	No	PFO	WOTUS	25.0	0.02
w1104	Yes	PEM	WOTUS	37.0	0.47
w1105	No	PEM	non-WOTUS	33.0	0.21
w1106	No	PEM	non-WOTUS	29.0	0.03
w1107	No	PEM	WOTUS	29.0	0.01
w1108	Yes	PEM	WOTUS	26.0	0.06
w1109	No	PFO	WOTUS	37.0	0.01
w1110	No	PFO	WOTUS	42.0	0.01
w1111	No	PFO	WOTUS	47.0	0.01
w1112	Yes	PEM	non-WOTUS	30.0	0.14
w1113	Yes	PEM/PFO	WOTUS	40.0	1.04
w1114	No	PEM	non-WOTUS	39.0	0.05
w1115	No	PFO	non-WOTUS	52.0	0.02
w1116	No	PFO	non-WOTUS	38.0	0.03
w1201	No	PEM	non-WOTUS	18.0	0.30
w1202	Yes	PFO	non-WOTUS	35.0	0.42
w1203	No	PEM	non-WOTUS	12.0	0.02
w1204	Yes	PEM	non-WOTUS	17.0	0.38
w1205	No	PEM	non-WOTUS	17.0	0.21
w1206	No	PEM	non-WOTUS	17.0	0.03
w1207	No	PEM	non-WOTUS	17.0	0.26
w1208	No	PEM	non-WOTUS	37.0	1.28
w1209	Yes	PEM/PSS/PFO	WOTUS	34.0	1.45
w1210	No	PEM	WOTUS	20.0	0.04

Table 6-1 Wetlands Identified within the Caldwell Solar Study Area

Feature Name	NWI Identified	Feature Class	Regulatory Status*	ORAM Score	Acreage (AC)
w1211	No	PSS	WOTUS	22.0	0.11
w1212	No	PEM/PFO	WOTUS	21.0	0.40
w1213	No	PFO	WOTUS	22.0	0.07
w1214	No	PEM	WOTUS	21.0	0.04
w1215	No	PEM	WOTUS	21.0	0.40
w1216	No	PFO	WOTUS	46.0	3.40
w1217	Yes	PEM	WOTUS	40.0	1.24
w1218	No	PFO	non-WOTUS	39.0	0.36
TOTALS		**PEM**	**non-WOTUS**	**8.47**	
			WOTUS	**7.78**	
			TOTAL	**16.25**	
		PSS	**non-WOTUS**	**1.37**	
			WOTUS	**1.66**	
			TOTAL	**3.03**	
		PFO	**non-WOTUS**	**1.62**	
			WOTUS	**5.70**	
			TOTAL	**7.32**	
		non-WOTUS		**11.46**	
		WOTUS		**15.14**	
		GRAND TOTAL		**26.60**	

*Regulatory Status is based on our professional judgment and experience; however, the USACE makes the final determination.

Table 6-2 Streams Identified Within the Caldwell Solar Study Area

Feature Name	USGS/NWI Identified	Feature Class	Regulatory Status*	Dimensions (FT)		QHEI/HHEI Score	Linear Feet (LF)	Acreage (AC)
				Width	Depth			
s0001	Yes	INT	WOTUS	12	0.5	96	158	0.04
s0002	Yes	INT	WOTUS	12	0.5	91	655	0.18
s0003	Yes	PER	WOTUS	16	1.0	106	2780	1.02
s0004	No	EPH	WOTUS	2	0.2	103	363	0.02
s0005	No	EPH	WOTUS	1	0.1	97	57	0.00
s0006	No	EPH	WOTUS	1	0.1	83	326	0.01
s0007	No	EPH	WOTUS	2	0.1	83	251	0.01
s0008	No	EPH	WOTUS	2	0.1	111	290	0.01
s0009	No	EPH	WOTUS	2	0.1	87	122	0.01
s0010	No	EPH	WOTUS	2	0.1	83	727	0.03
s0011	No	EPH	WOTUS	1	0.1	83	179	0.00
s0101	No	EPH	WOTUS	3	0.4	50	215	0.01
s0102	No	INT	WOTUS	1	0.3	112	848	0.02
s0103	No	EPH	WOTUS	1	0.3	91	129	0.00
s0104	No	EPH	WOTUS	1	0.4	86	310	0.01
s0105	No	EPH	WOTUS	2	0.3	94	167	0.01
s0201	No	INT	WOTUS	7	0.3	86	650	0.10
s0202	Yes	INT	WOTUS	20	4.0	63	2741	1.26
s0203	Yes	EPH	WOTUS	12	1.0	62	1620	0.45
s1001	Yes	INT	WOTUS	3	0.3	111	779	0.05
s1002	Yes	INT	WOTUS	3	0.3	108	653	0.04
s1003	No	EPH	WOTUS	2	0.2	84	893	0.04
s1004	Yes	INT	WOTUS	2	0.2	73	420	0.02
s1005	Yes	PER	WOTUS	10	1.0	132	1636	0.38
s1006	No	INT	WOTUS	2	0.2	113	561	0.03
s1007	No	EPH	WOTUS	1	0.4	83	225	0.01
s1008	No	EPH	WOTUS	1	0.1	95	504	0.01
s1009	Yes	INT	WOTUS	4	0.4	117	2498	0.23
s1010	No	EPH	WOTUS	1	0.1	108	425	0.01
s1011	No	INT	WOTUS	2	0.2	130	1142	0.05
s1012	Yes	PER	WOTUS	6	0.5	85	187	0.03
s1013	Yes	PER	WOTUS	8	0.5	85	2734	0.50
s1014	No	INT	WOTUS	3	0.3	127	1501	0.10
s1015	Yes	INT	WOTUS	3	0.3	88	769	0.05

Feature Name	USGS/NWI Identified	Feature Class	Regulatory Status*	Dimensions (FT)		QHEI/HHEI Score	Linear Feet (LF)	Acreage (AC)
				Width	Depth			
s1016	Yes	INT	WOTUS	2	0.4	76	2100	0.10
s1017	No	INT	WOTUS	2	0.2	76	440	0.02
s1018	No	EPH	WOTUS	1	0.2	65	149	0.00
s1101	Yes	INT	WOTUS	1	0.4	77	1347	0.03
s1102	Yes	INT	WOTUS	1	0.2	90	1153	0.03
s1103	No	EPH	WOTUS	1	0.4	70	302	0.01
s1104	Yes	INT	WOTUS	2	0.3	75	79	0.00
s1105	Yes	PER	WOTUS	10	0.5	120	3069	0.70
s1106	No	INT	WOTUS	2	0.3	114	108	0.00
s1107	No	EPH	WOTUS	3	0.3	86	487	0.03
s1108	No	INT	WOTUS	2	0.3	93	395	0.02
s1109	No	EPH	WOTUS	2	0.2	0	53	0.00
s1110	Yes	PER	WOTUS	12	1.0	120	3781	1.04
s1111	No	INT	WOTUS	2	0.3	82	1817	0.08
s1112	No	INT	WOTUS	2	0.5	82	614	0.03
s1113	No	INT	WOTUS	3	0.4	100	536	0.04
s1114	No	INT	WOTUS	3	0.4	114	79	0.01
s1115	No	EPH	WOTUS	1	0.2	95	198	0.00
s1116	No	EPH	WOTUS	1	0.2	90	93	0.00
s1117	No	INT	WOTUS	3	0.4	105	127	0.01
s1118	No	INT	WOTUS	2	0.3	107	105	0.00
s1119	No	INT	WOTUS	5	0.4	107	90	0.01
s1120	Yes	INT	WOTUS	3	0.2	96	1971	0.14
s1121	No	INT	WOTUS	2	0.2	95	66	0.00
s1122	No	INT	WOTUS	3	0.2	100	453	0.03
s1123	No	EPH	WOTUS	3	0.2	69	440	0.03
s1124	No	INT	WOTUS	1	0.4	91	161	0.00
s1125	No	INT	WOTUS	1	0.3	0	79	0.00
s1201	Yes	EPH	WOTUS	4	1.0	68	271	0.02
s1202	No	EPH	WOTUS	2	0.5	58	1153	0.05
s1203	Yes	PER	WOTUS	16	1.0	106	10194	3.74
s1204	Yes	INT	WOTUS	8	0.5	92	353	0.06
s1205	No	EPH	WOTUS	20	0.8	86	1149	0.53
s1206	No	EPH	WOTUS	2	0.5	36	874	0.04
s1207	Yes	PER	WOTUS	5	1.2	119	136	0.02

Feature Name	USGS/NWI Identified	Feature Class	Regulatory Status*	Dimensions (FT)		QHEI/HHEI Score	Linear Feet (LF)	Acreage (AC)
				Width	Depth			
TOTALS		EPH					11,972	1.37
		INT					23,461	2.61
		PER					24,517	7.43
		GRAND TOTAL					59,950	11.42

*Regulatory Status is based on our professional judgment and experience; however, the USACE makes the final determination.

Table 6-3 Ponds Identified Within the Caldwell Solar Study Area

Feature Name	NWI Identified	Feature Class	Regulatory Status*	Acreage (AC)
p0001	Yes	PUB	non-WOTUS	0.50
p0002	Yes	PUB	non-WOTUS	7.73
p0003	Yes	PUB	non-WOTUS	0.17
p0004	Yes	PUB	non-WOTUS	0.76
p0005	Yes	PUB	non-WOTUS	0.11
p0006	No	PUB	non-WOTUS	0.34
p0101	Yes	PUB	non-WOTUS	0.24
p0102	Yes	PUB	non-WOTUS	2.84
p0103	Yes	PUB	non-WOTUS	0.99
p0201	Yes	PUB	non-WOTUS	0.50
p0202	No	PUB	non-WOTUS	0.26
p0203	Yes	PUB	non-WOTUS	0.38
p0204	Yes	PUB	non-WOTUS	0.10
p1001	No	PUB	non-WOTUS	0.17
p1002	Yes	PUB	WOTUS	0.82
p1003	No	PUB	non-WOTUS	0.62
p1004	No	PUB	non-WOTUS	0.12
p1005	Yes	PUB	WOTUS	1.01
p1006	No	PUB	non-WOTUS	0.17
p1007	No	PUB	non-WOTUS	0.48
p1008	No	PUB	non-WOTUS	0.36
p1009	Yes	PUB	non-WOTUS	0.72
p1010	No	PUB	non-WOTUS	0.32
p1011	No	PUB	non-WOTUS	0.06
p1012	No	PUB	WOTUS	0.55
p1013	Yes	PUB	non-WOTUS	0.28
p1101	Yes	PUB	WOTUS	0.57
p1102	Yes	PUB	WOTUS	0.67
p1103	Yes	PUB	WOTUS	0.50
p1201	Yes	PUB	non-WOTUS	0.12
TOTALS			**non-WOTUS**	**18.33**
			WOTUS	**4.11**
			GRAND TOTAL	**22.45**

*Regulatory Status is based on our professional judgment and experience; however, the USACE makes the final determination.

6.1.3 Floodways and Floodplains

The FEMA FIRMette map of the area (Figure 3) identified a 100-year floodplain along Skin Frame Creek and also associated with several other tributaries to Skin Frame Creek.

6.2 Conclusion

Seventy wetlands, 69 streams, and 30 ponds were identified.

While this report represents our best professional judgment based on our knowledge and experience, it is important to note that the Louisville District of the U.S. Army Corps of Engineers has final discretionary authority over all jurisdictional determinations of 'waters of the U.S.' including wetlands under Section 404 of the CWA in this region. It is therefore, recommended that a copy of this report be furnished to the Louisville District of the U.S. Army Corps of Engineers to confirm the results of our findings.

7 References

Environmental Laboratory. 1987. *U.S. Army Corps of Engineers' Wetland Delineation Manua*l, Technical Report Y-87-1, U.S. Waterways Experiment Station, Vicksburg, MS.

Environmental Laboratory. 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region*, ERDC/EL TR-10-16, U.S. Army Engineer Research and Development Center, Vicksburg, MS.

Gleason, H.A. and A. Cronquist. 1991. *Manual of Vascular Plants of Northeastern United States and Adjacent Canada*. 2nd Edition. The New York Botanical Garden. Bronx, NY.

Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. The National Wetland Plant List: 2016 wetland ratings. Phytoneuron 2016-30: 1-17. Published April 28, 2016. ISSN 2153 733X

Lichvar, R.W., and John T. Kartesz. 2009. *North American Digital Flora: National Wetland Plant List, version 2.4.0* (https://wetland_plants.usace.army.mil). U.S. Army Corps of Engineers, Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory, Hanover, NH, and BONAP, Chapel Hill, NC.

Lichvar, R., Melvin, N.C., Butterwick, M.L. and Kirchner, W.N. 2012. *National Wetland Plant List Indicator Rating Definitions*. ERDC/CRREL TN-12-1. Hanover, NH: U.S. Army Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory. http://www.fws.gov/wetlands/documents/National-Wetland-Plant-List-Indicator-Rating-Definitions.pdf

Reed, P. B., Jr. 1988. National List of Plant Species that Occur in Wetlands: 1988. Washington, DC: U.S. Fish and Wildlife Service.

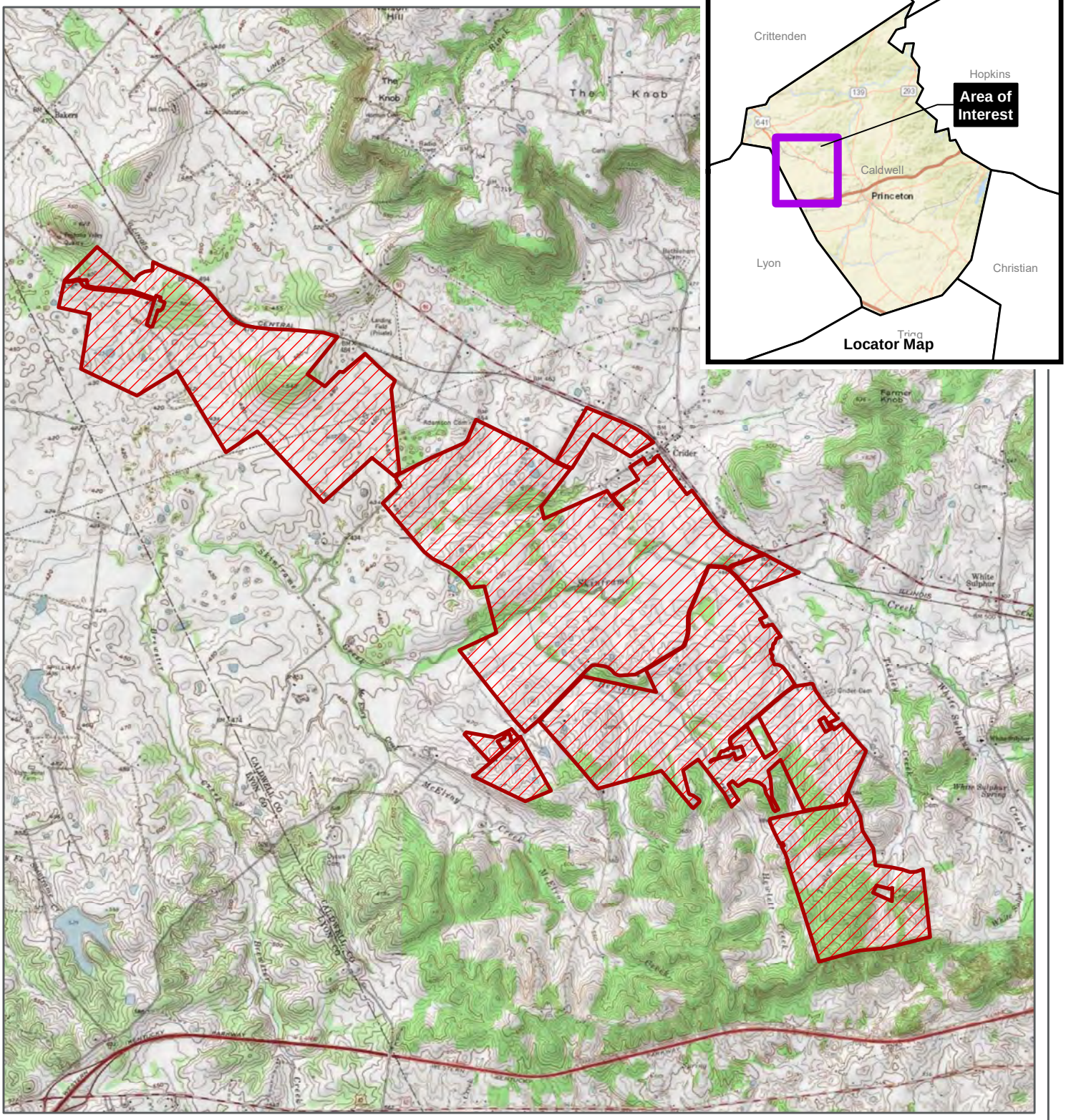
Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at http://websoilsurvey.nrcs.usda.gov/. Accessed [10/15/2021].

StreamStats, United States Geological Survey. Available online at https://streamstats.usgs.gov.

Caldwell Solar, Caldwell County, Kentucky

APPENDIX A

FIGURES



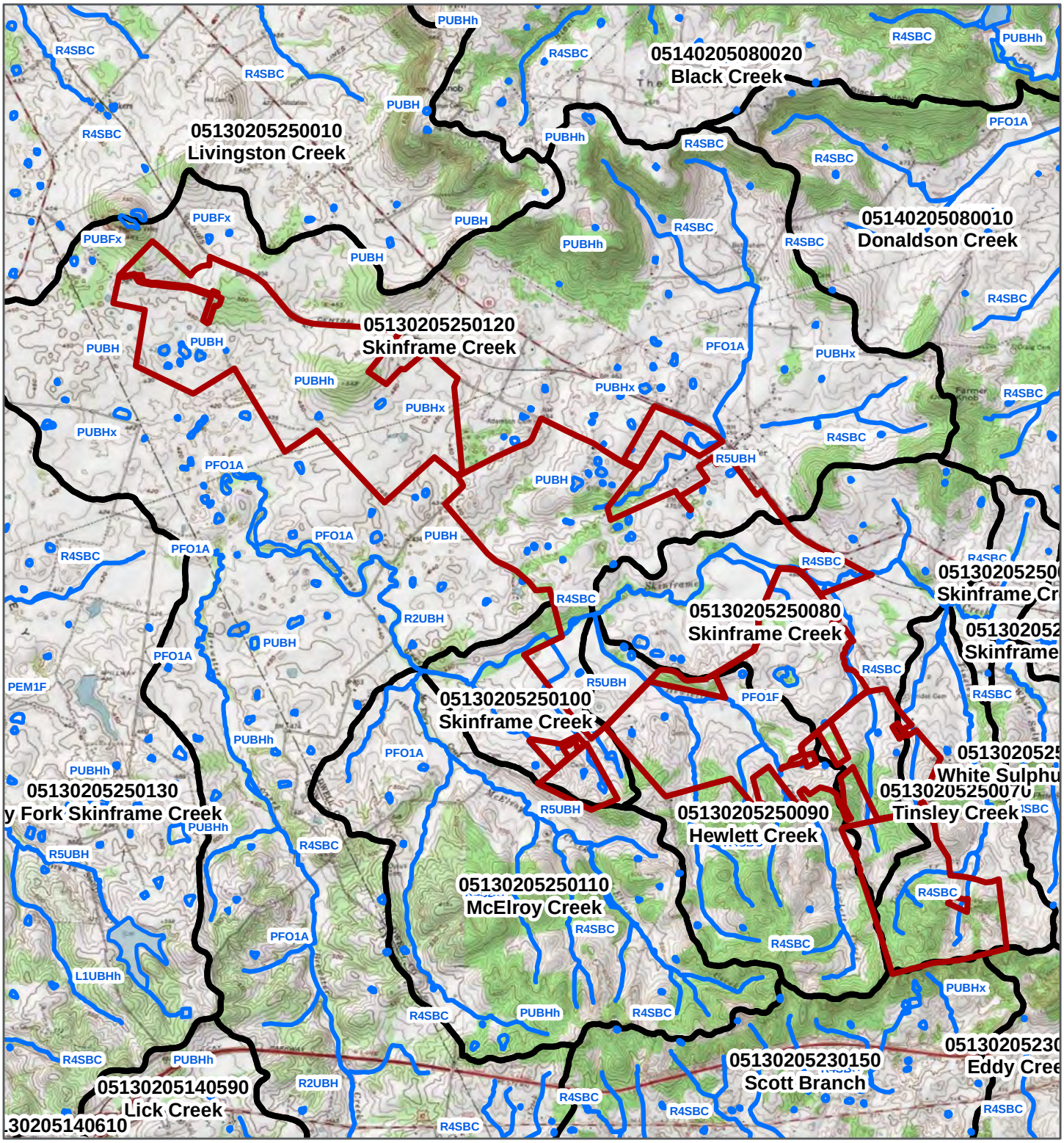
N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 1: Project Location
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1986
www.cardno.com

Date: 7/21/2021 File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F1_Location.mxd Saved By: Stephen.LaFon



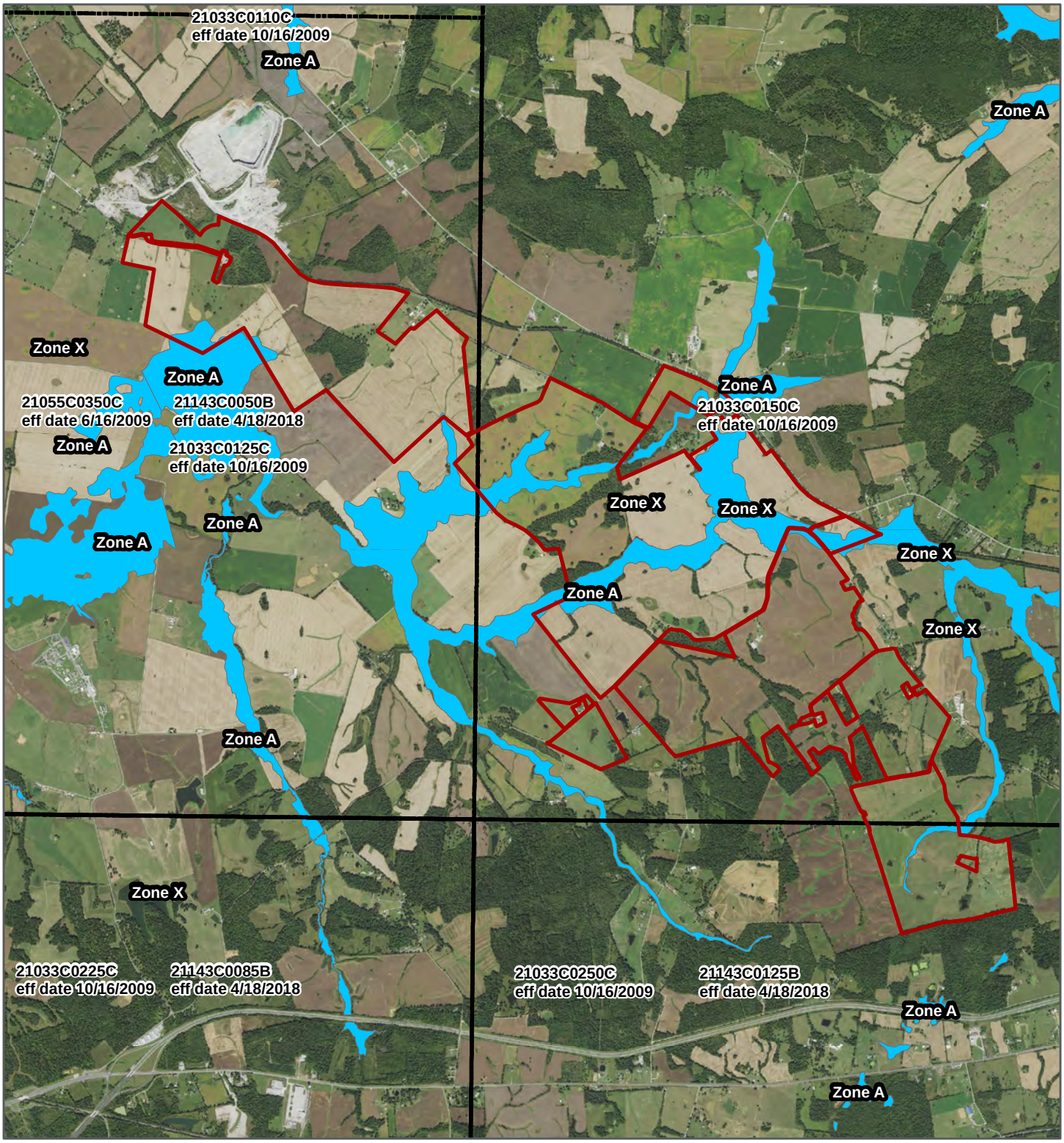
N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 2: NWI & Watershed
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1986
www.cardno.com

Date: 7/21/2021 File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F2_NWI_Wtrshed.mxd Saved By: Stephen.LaFon



0 2,000 4,000 Feet

0 400 800 1,200 Meters

National Flood Hazard - FIRM Panels

FEMA Mapped 100-year Floodplain

Regulated Floodway

Study Area

N

W E

S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

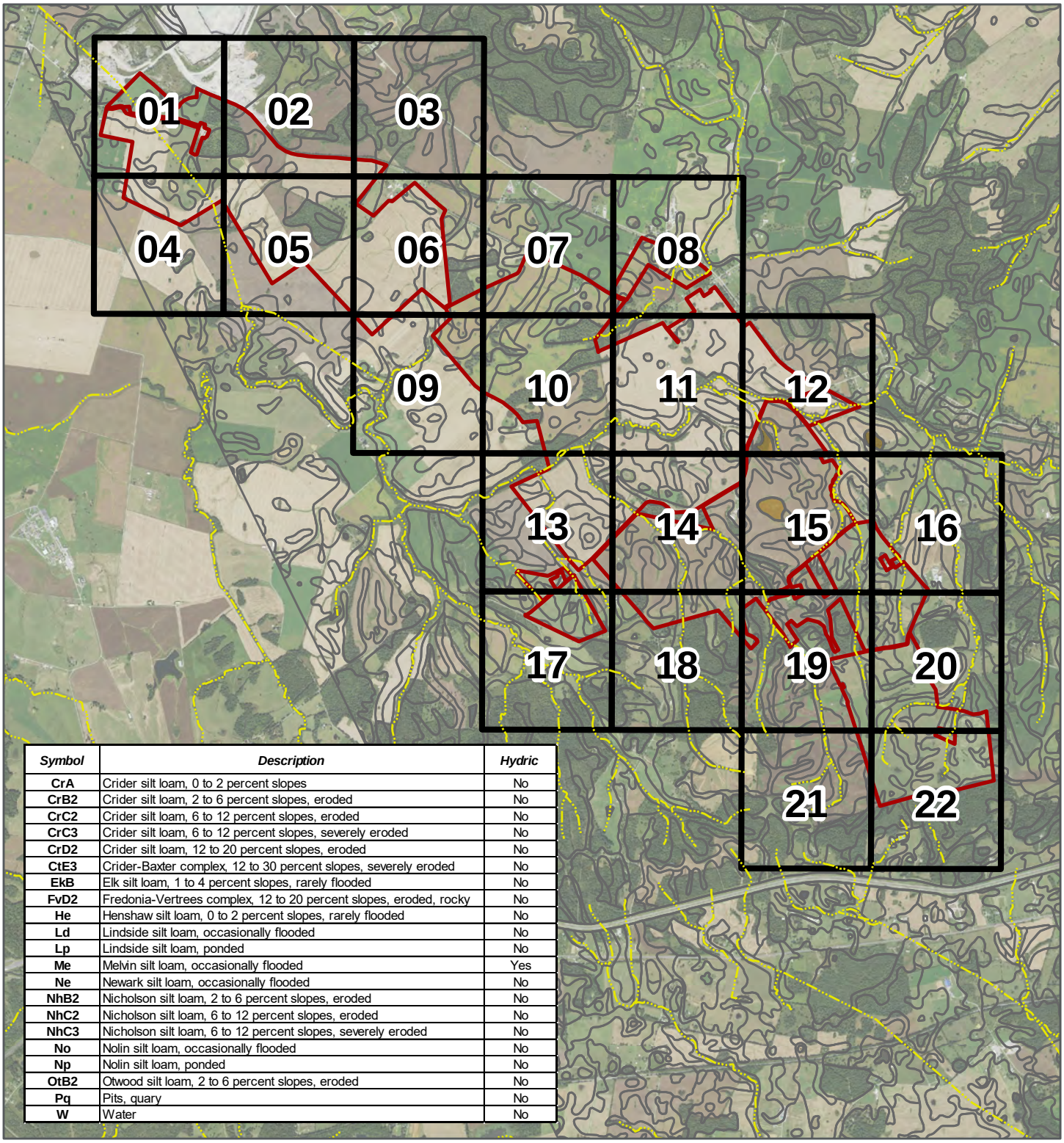
Figure 3: Construction in Floodway Constraints (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1986
www.cardno.com

Date: 7/21/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F3_CIF_Constraint.mxd

Saved By: Stephen.LaFon



Symbol	Description	Hydric
CrA	Crider silt loam, 0 to 2 percent slopes	No
CrB2	Crider silt loam, 2 to 6 percent slopes, eroded	No
CrC2	Crider silt loam, 6 to 12 percent slopes, eroded	No
CrC3	Crider silt loam, 6 to 12 percent slopes, severely eroded	No
CrD2	Crider silt loam, 12 to 20 percent slopes, eroded	No
CtE3	Crider-Baxter complex, 12 to 30 percent slopes, severely eroded	No
EkB	Elk silt loam, 1 to 4 percent slopes, rarely flooded	No
FvD2	Fredonia-Vertrees complex, 12 to 20 percent slopes, eroded, rocky	No
He	Henshaw silt loam, 0 to 2 percent slopes, rarely flooded	No
Ld	Lindside silt loam, occasionally flooded	No
Lp	Lindside silt loam, ponded	No
Me	Melvin silt loam, occasionally flooded	Yes
Ne	Newark silt loam, occasionally flooded	No
NhB2	Nicholson silt loam, 2 to 6 percent slopes, eroded	No
NhC2	Nicholson silt loam, 6 to 12 percent slopes, eroded	No
NhC3	Nicholson silt loam, 6 to 12 percent slopes, severely eroded	No
No	Nolin silt loam, occasionally flooded	No
Np	Nolin silt loam, ponded	No
OtB2	Otwood silt loam, 2 to 6 percent slopes, eroded	No
Pq	Pits, quary	No
W	Water	No

0 2,000 4,000 Feet
0 400 800 1,200 Meters

NHD Flowline
Soil Unit
Study Area
Map Index
Soil Unit - Hydric

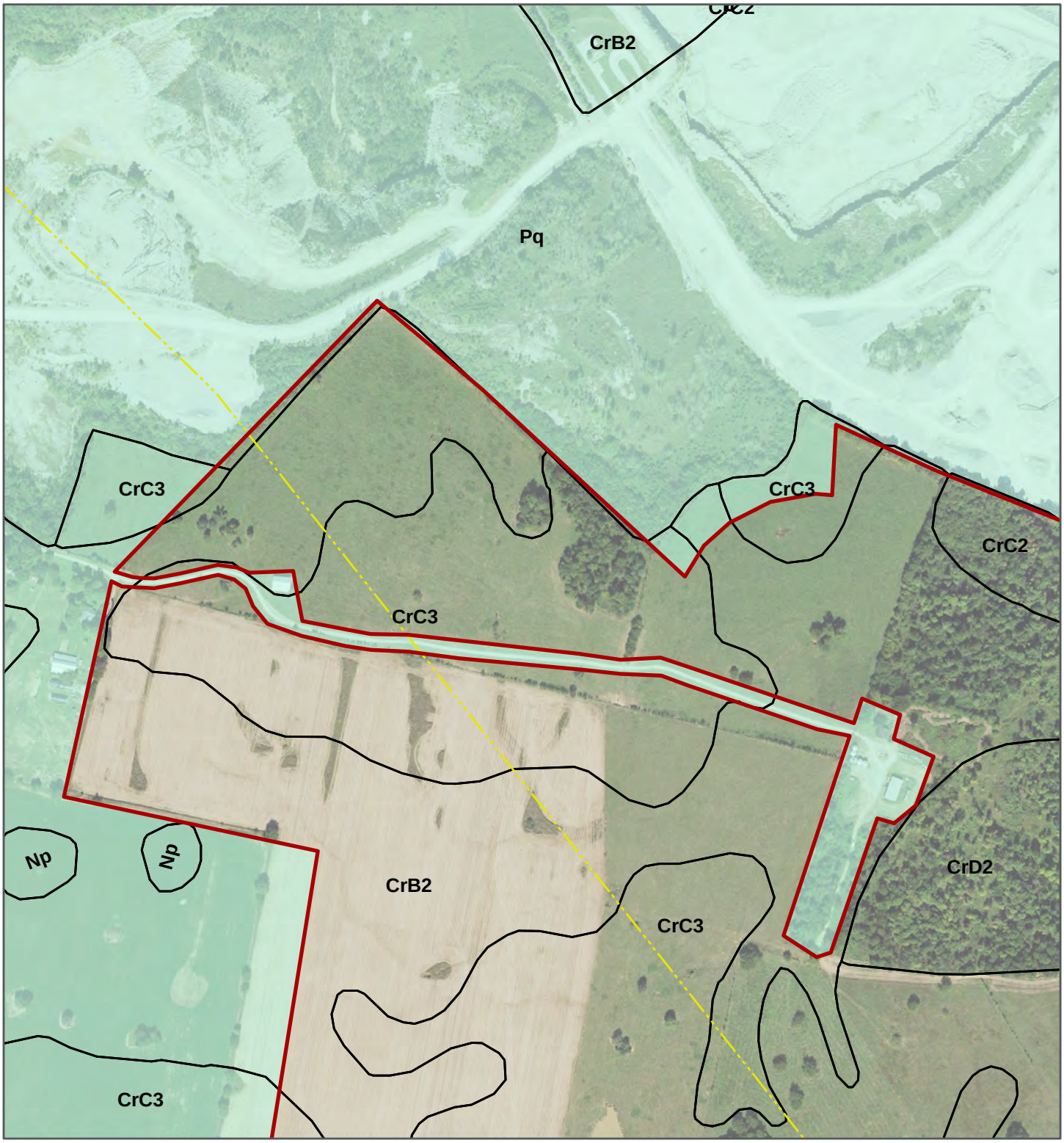
N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 4.00: Soil Survey & NHD (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1986
www.cardno.com

Date: 7/26/2021
Basemap:
File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F4a_SoilSurvey_index.mxd
Saved By: Stephen.LaFon



0 250 500 Feet
0 50 100 150 Meters

NHD Flowline
Soil Unit
Soil Unit - Hydric
Study Area

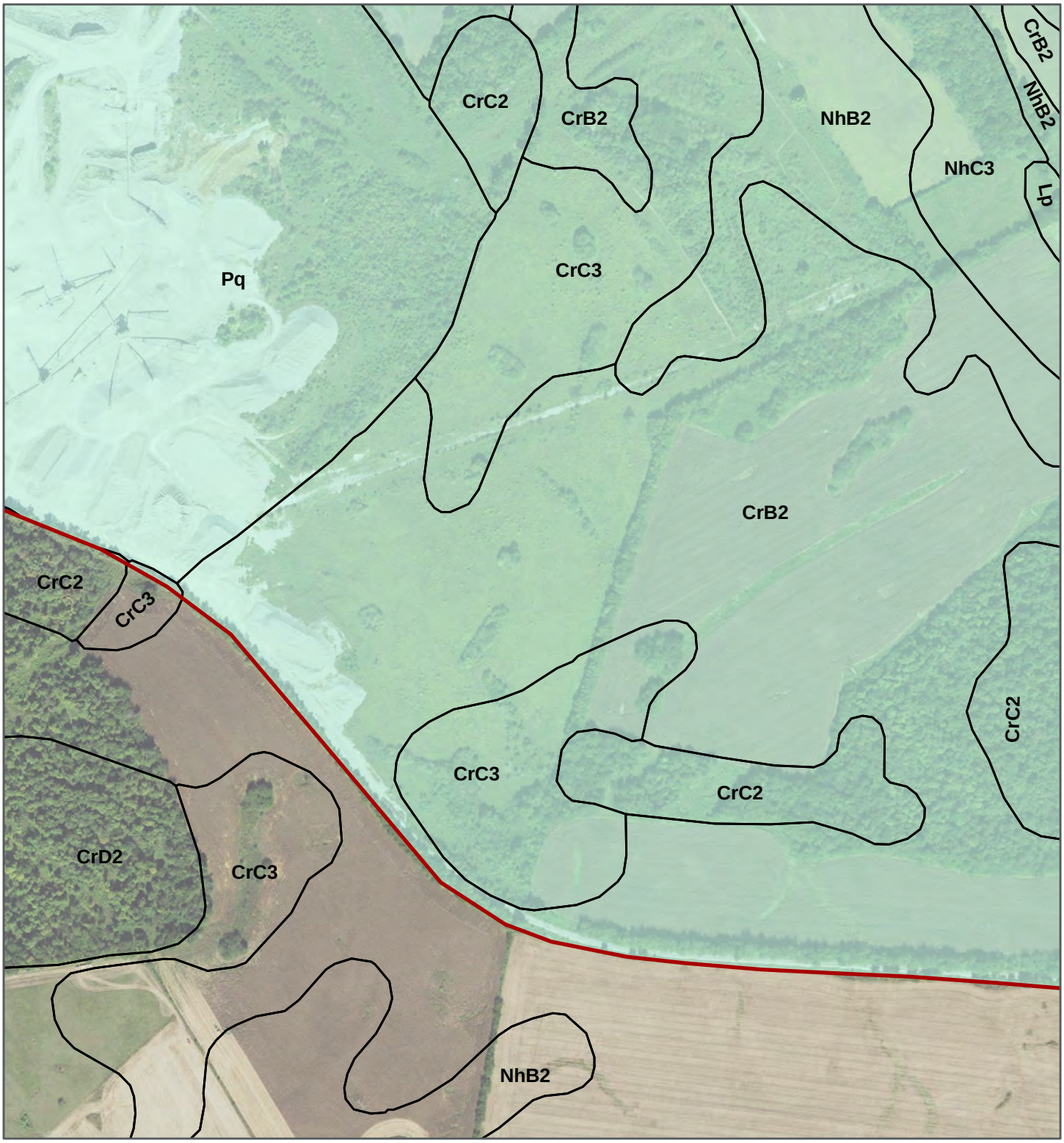
N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 4.01: Soil Survey & NHD (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1986
www.cardno.com

Date: 7/26/2021
Basemap:
File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F4b_SoilSurvey_set.mxd
Saved By: Stephen.LaFon



0 250 500 Feet
0 50 100 150 Meters

NHD Flowline
Soil Unit
Soil Unit - Hydric
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

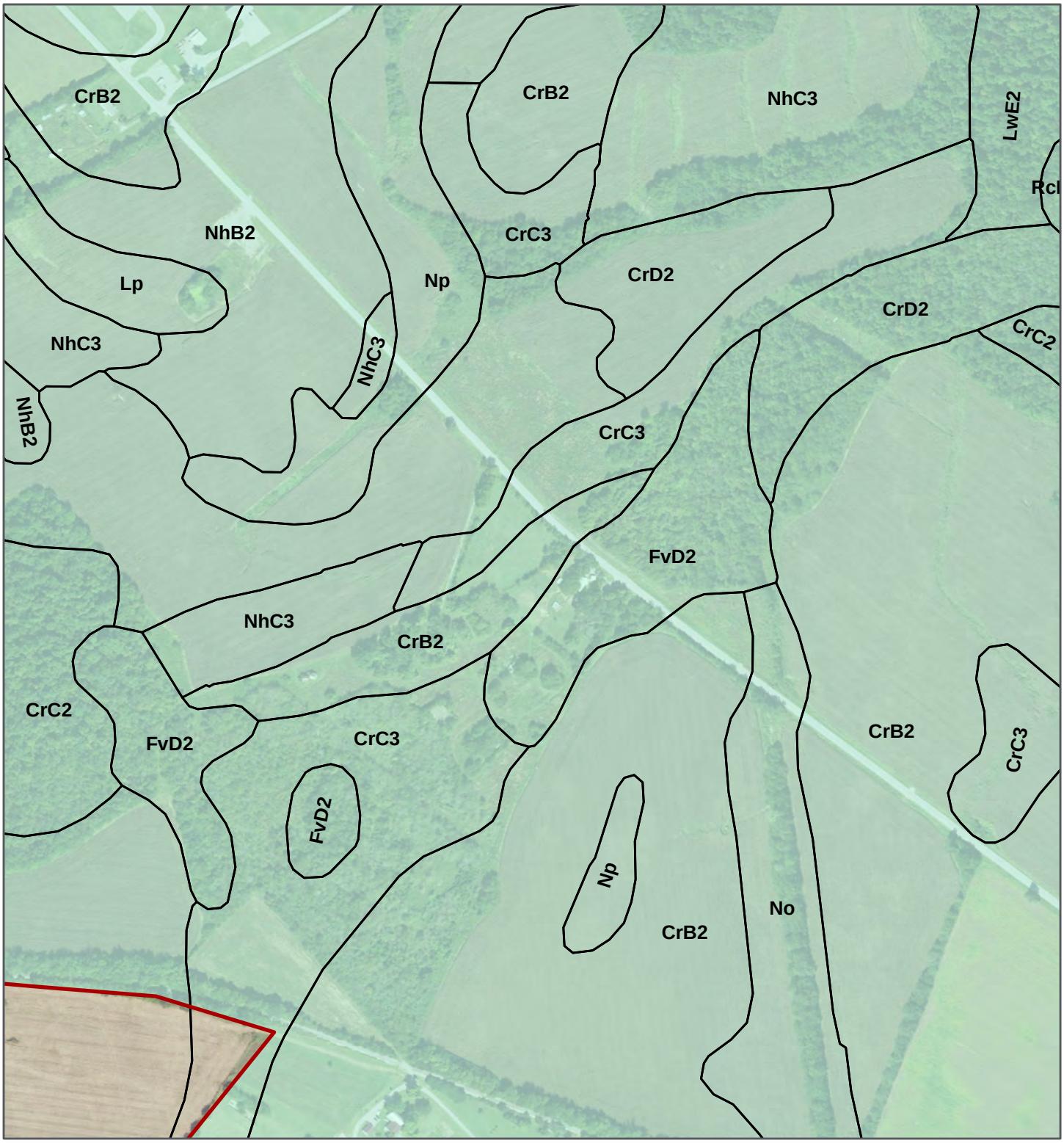
Figure 4.02: Soil Survey & NHD (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1986
www.cardno.com

Date: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F4b_SoilSurvey_set.mxd

Saved By: Stephen.LaFon



N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

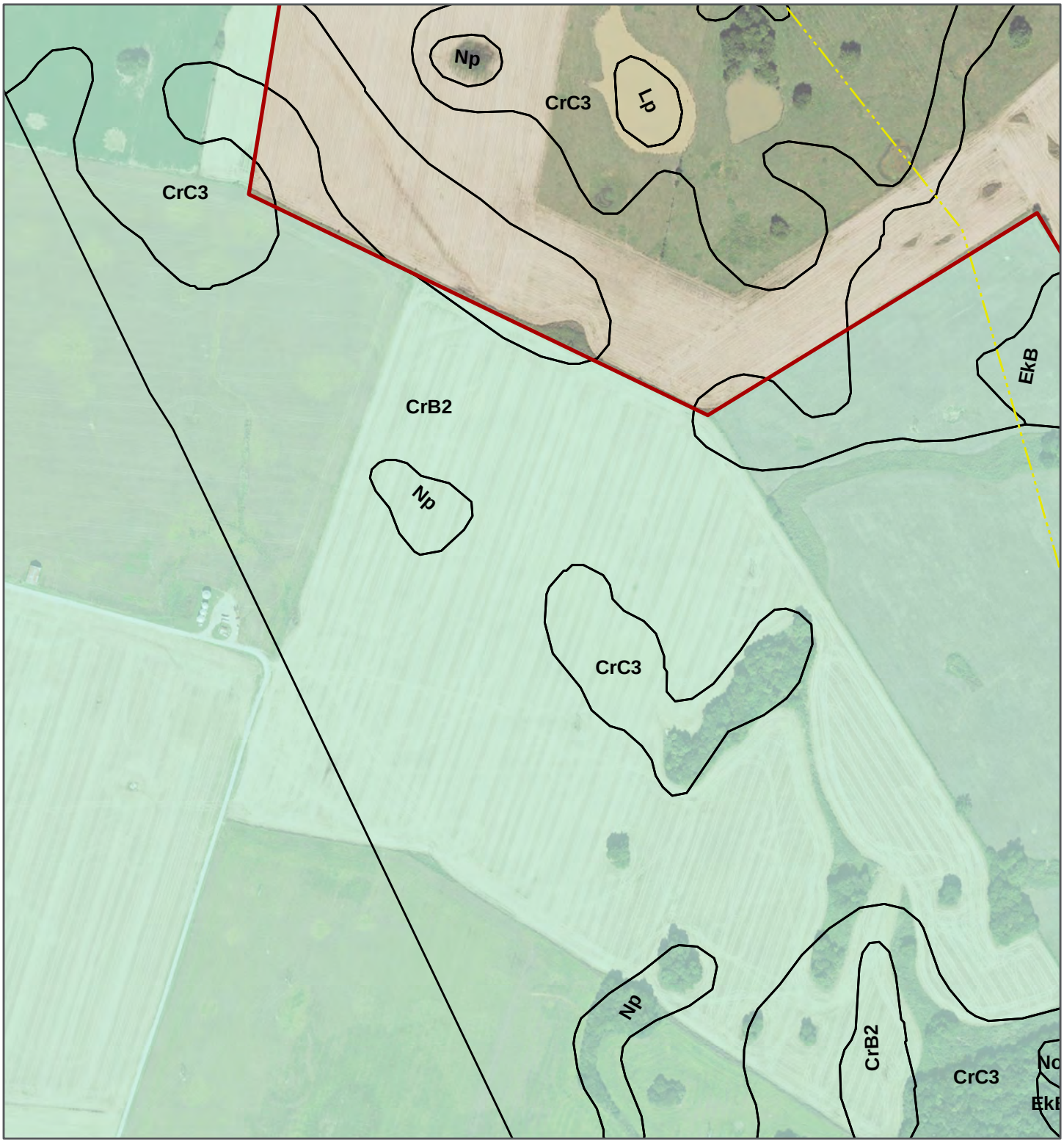
Figure 4.03: Soil Survey & NHD (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1986
www.cardno.com

Date: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F4b_SoilSurvey_set.mxd

Saved By: Stephen.LaFon



N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

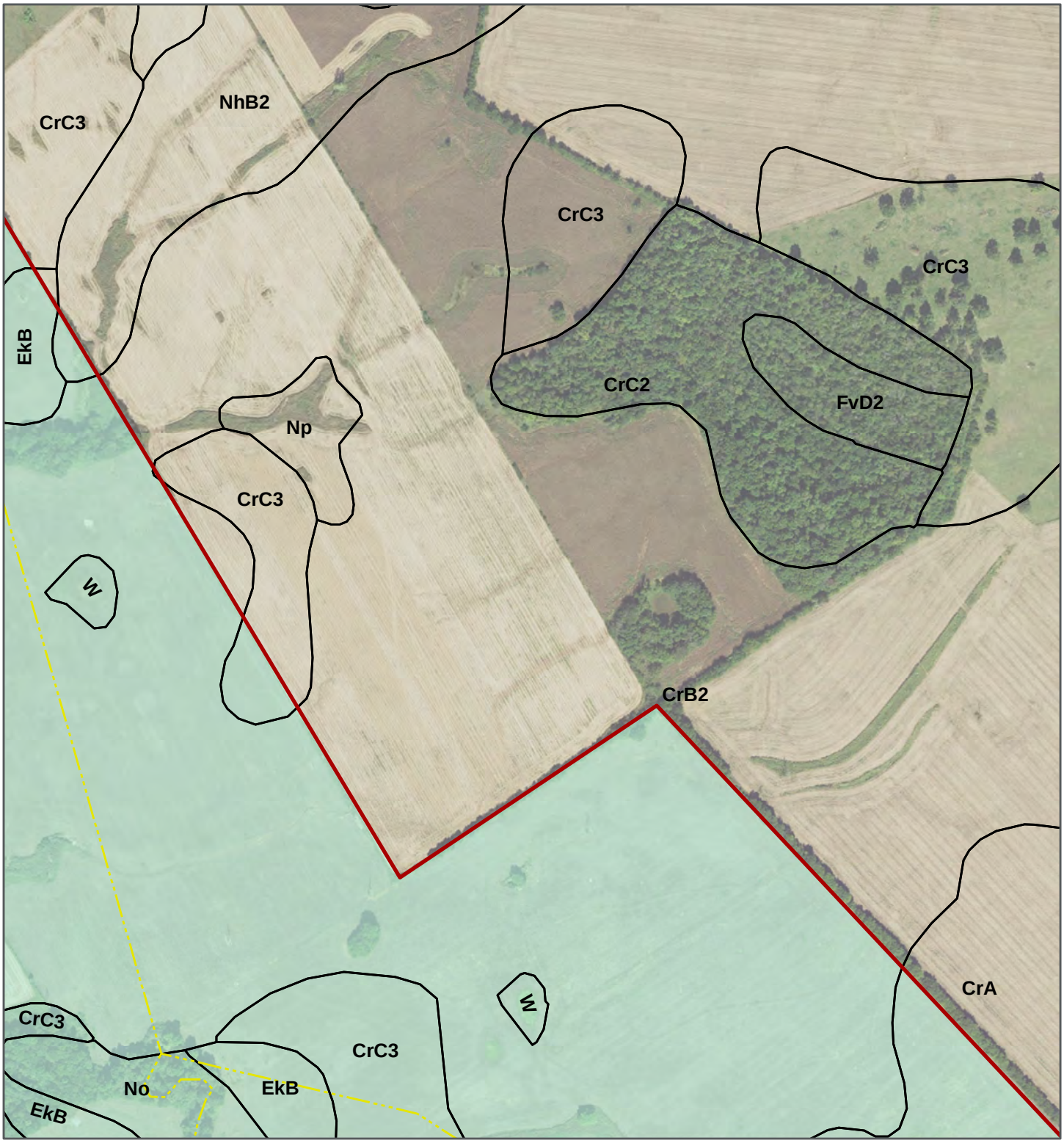
Figure 4.04: Soil Survey & NHD (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1986
www.cardno.com

Date: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F4b_SoilSurvey_set.mxd

Saved By: Stephen.LaFon



0 250 500 Feet
0 50 100 150 Meters

NHD Flowline
Soil Unit
Soil Unit - Hydric
Study Area

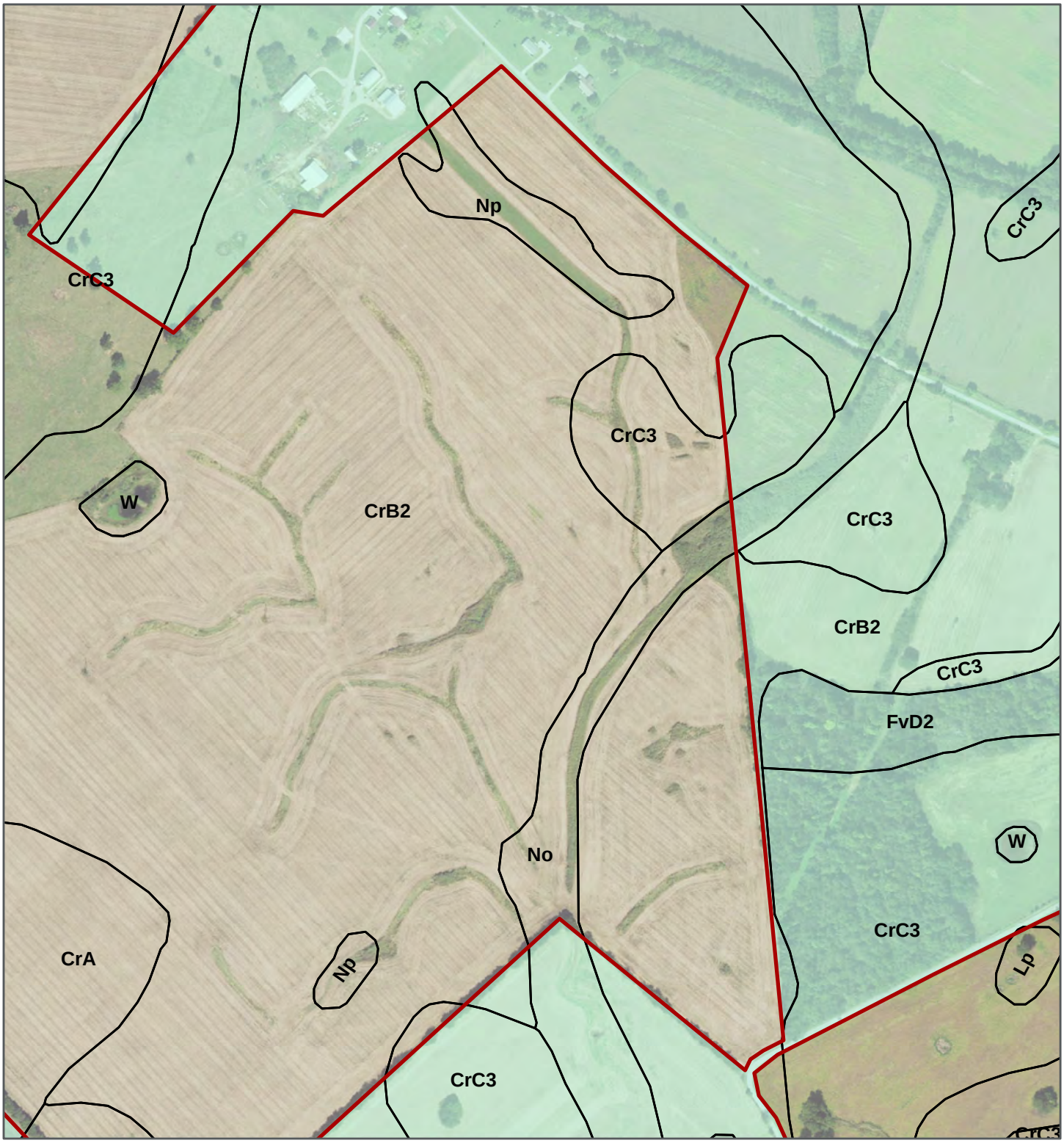
N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 4.05: Soil Survey & NHD (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1986
www.cardno.com

Date: 7/26/2021
Basemap:
File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F4b_SoilSurvey_set.mxd
Saved By: Stephen.LaFon



N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

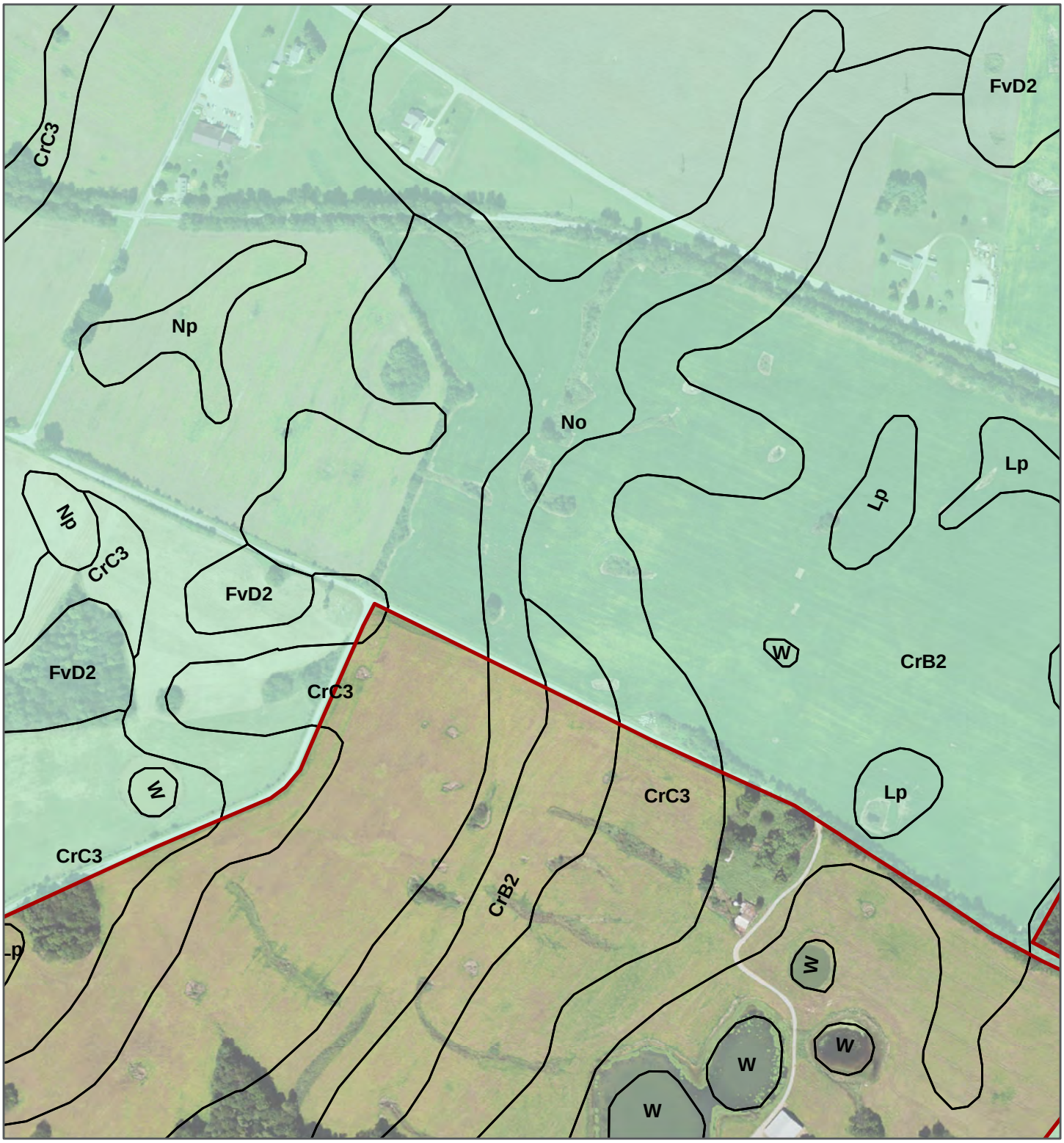
Figure 4.06: Soil Survey & NHD (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1986
www.cardno.com

Date: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F4b_SoilSurvey_set.mxd

Saved By: Stephen.LaFon



0 250 500 Feet

0 50 100 150 Meters

NHD Flowline

Soil Unit

Soil Unit - Hydric

Study Area

N

W E

S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

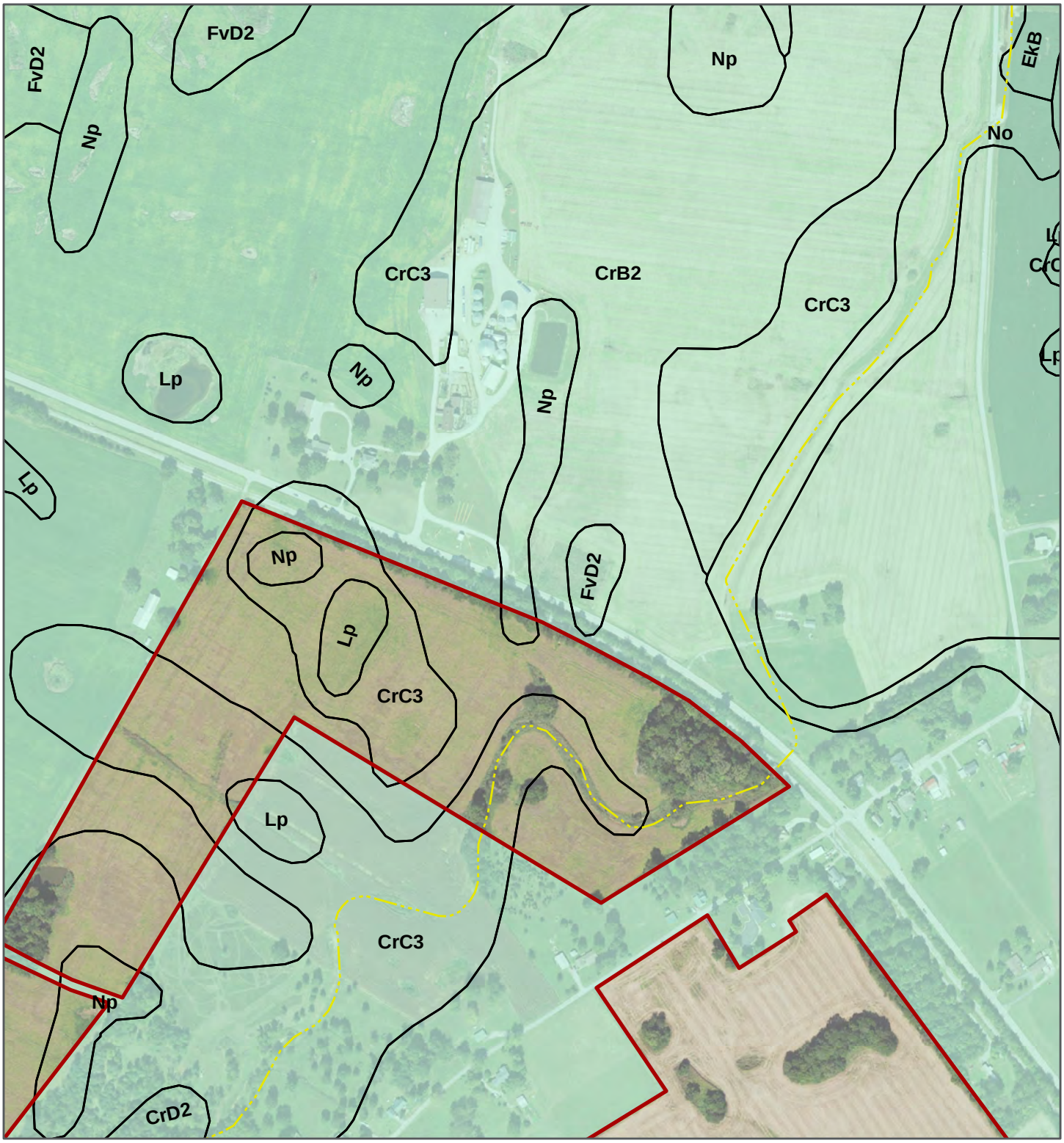
Figure 4.07: Soil Survey & NHD (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1986
www.cardno.com

Date: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F4b_SoilSurvey_set.mxd

Saved By: Stephen.LaFon



0 250 500 Feet
0 50 100 150 Meters

NHD Flowline
Soil Unit
Soil Unit - Hydric
Study Area

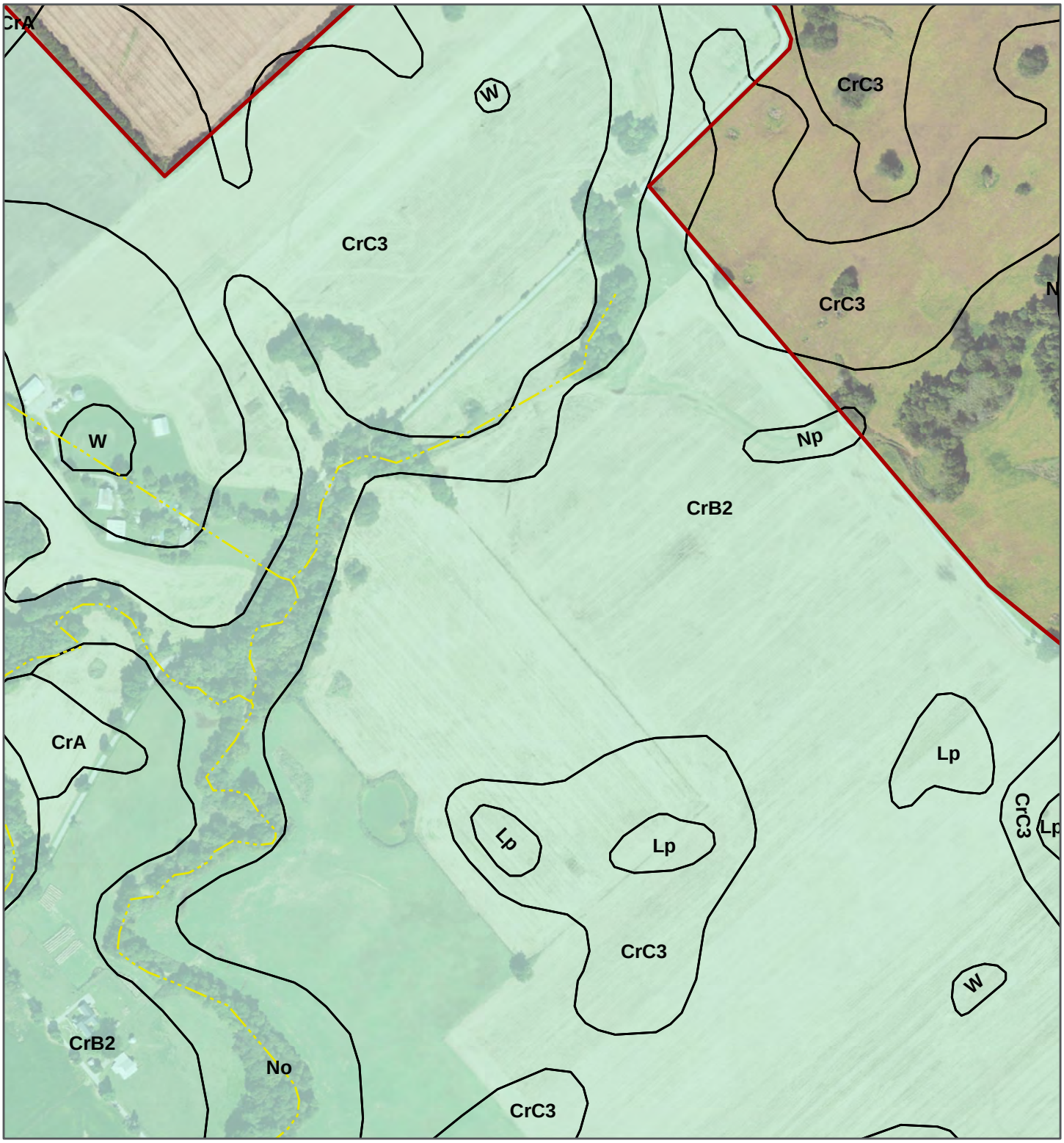
N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 4.08: Soil Survey & NHD (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1986
www.cardno.com

Date: 7/26/2021
Basemap:
File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F4b_SoilSurvey_set.mxd
Saved By: Stephen.LaFon



0 250 500 Feet

0 50 100 150 Meters

NHD Flowline

Soil Unit

Soil Unit - Hydric

Study Area

N

W E

S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

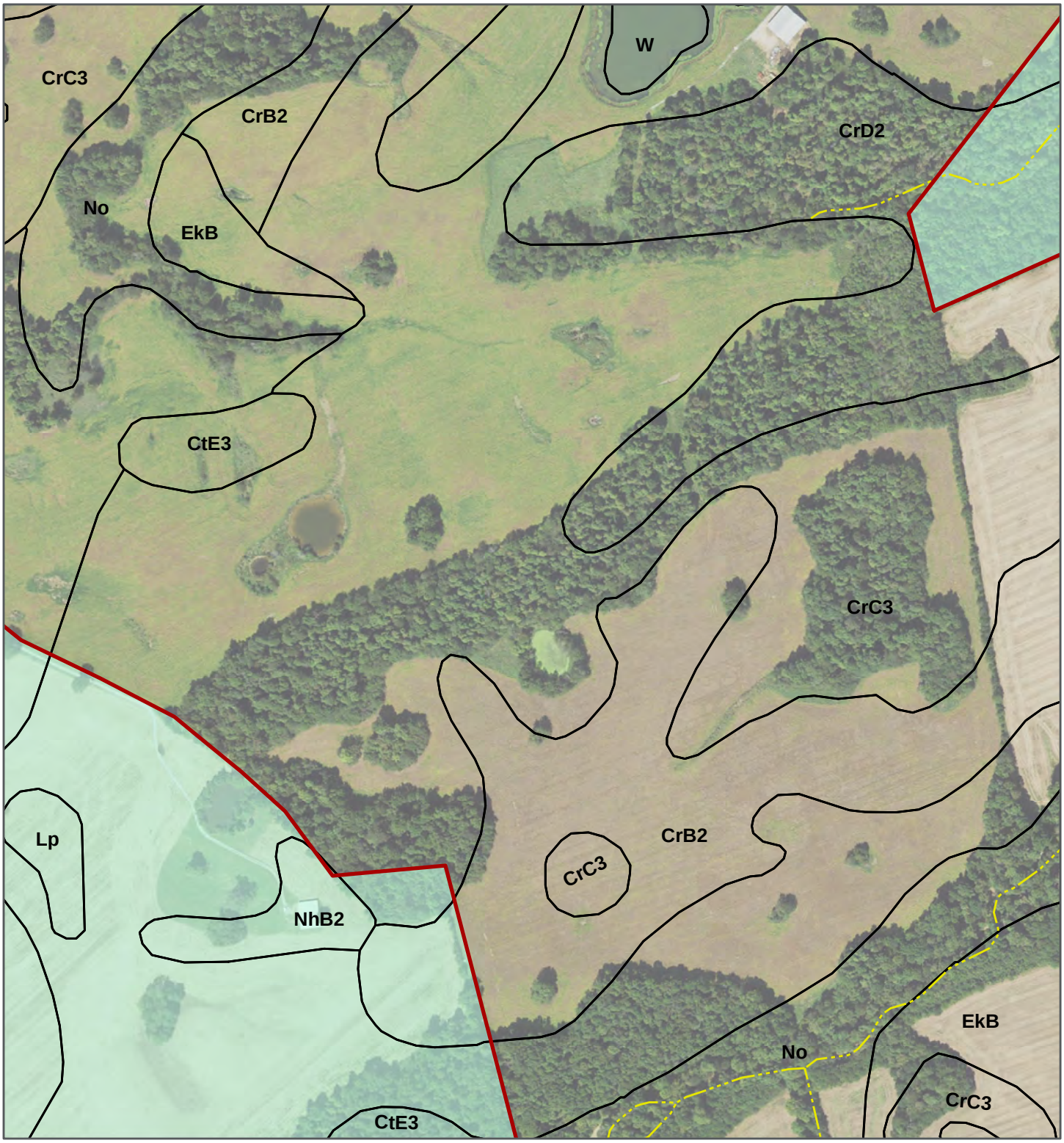
Figure 4.09: Soil Survey & NHD (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1986
www.cardno.com

Date: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F4b_SoilSurvey_set.mxd

Saved By: Stephen.LaFon



0 250 500 Feet
0 50 100 150 Meters

NHD Flowline
Soil Unit
Soil Unit - Hydric
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

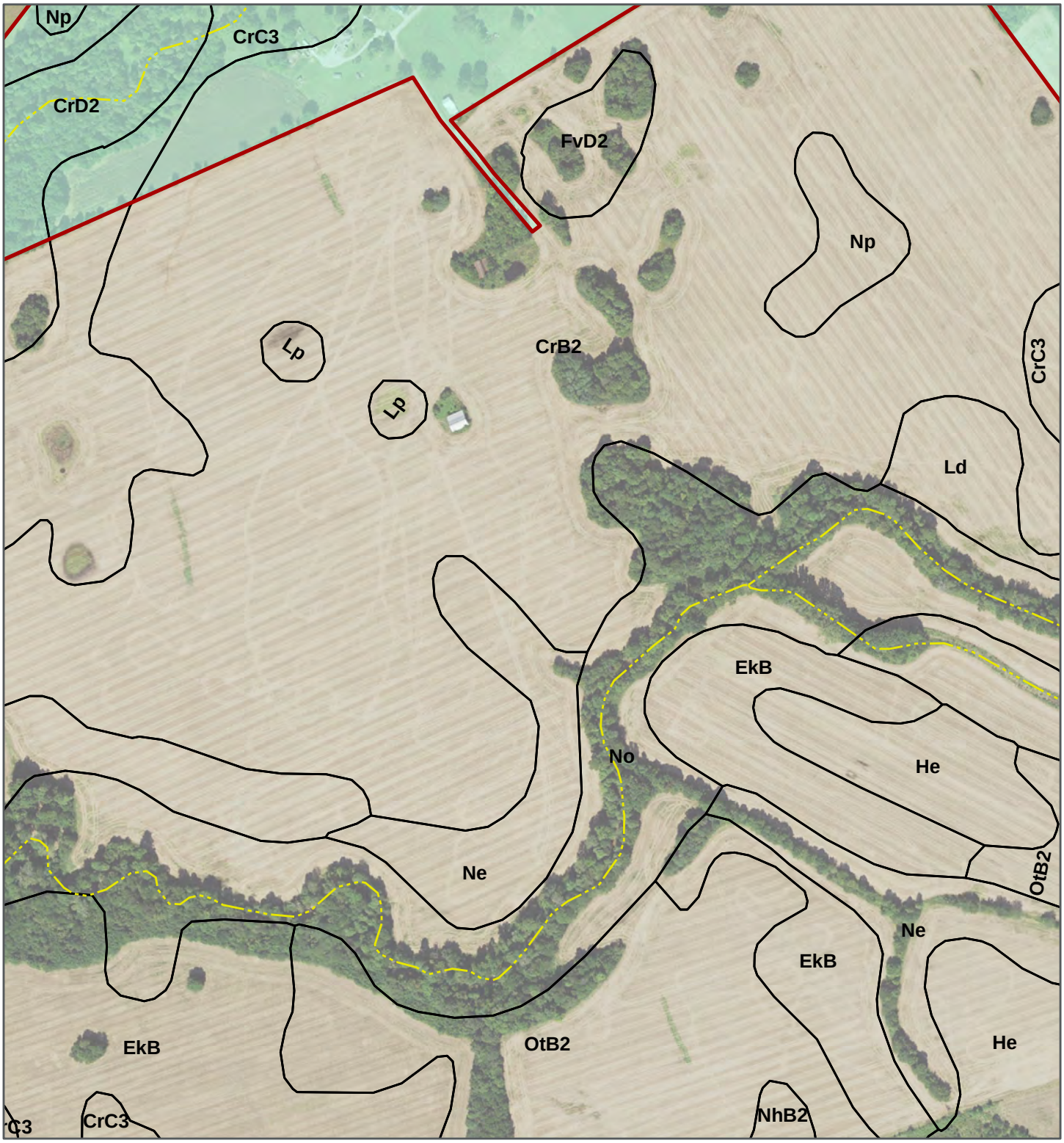
Figure 4.10: Soil Survey & NHD (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1986
www.cardno.com

Date: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F4b_SoilSurvey_set.mxd

Saved By: Stephen.LaFon



N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 4.11: Soil Survey & NHD (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1986
www.cardno.com

Date: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F4b_SoilSurvey_set.mxd

Saved By: Stephen.LaFon

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

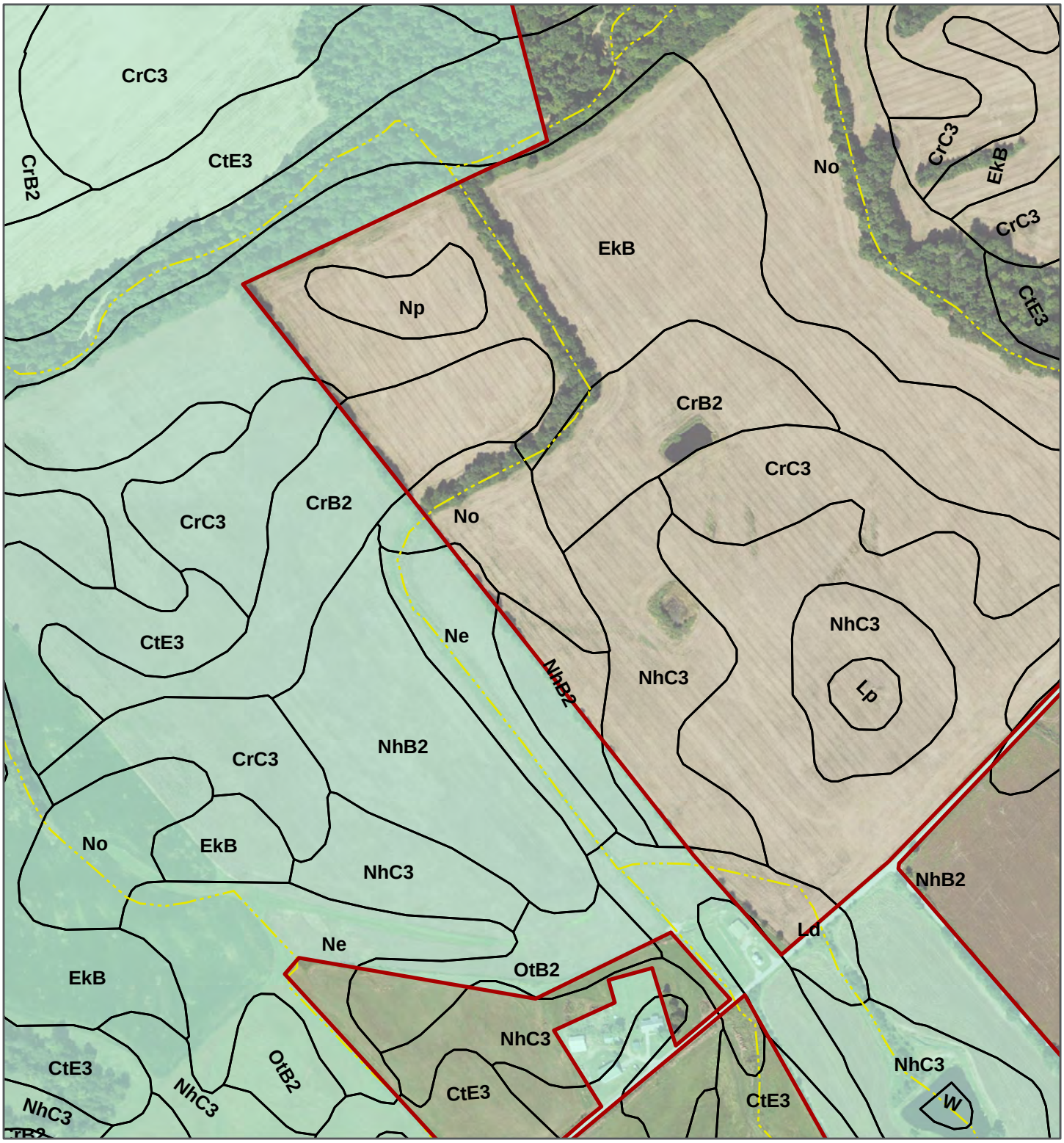
Figure 4.12: Soil Survey & NHD (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1986
www.cardno.com

Date: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F4b_SoilSurvey_set.mxd

Saved By: Stephen.LaFon



N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 4.13: Soil Survey & NHD (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1986
www.cardno.com

Date: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F4b_SoilSurvey_set.mxd

Saved By: Stephen.LaFon

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

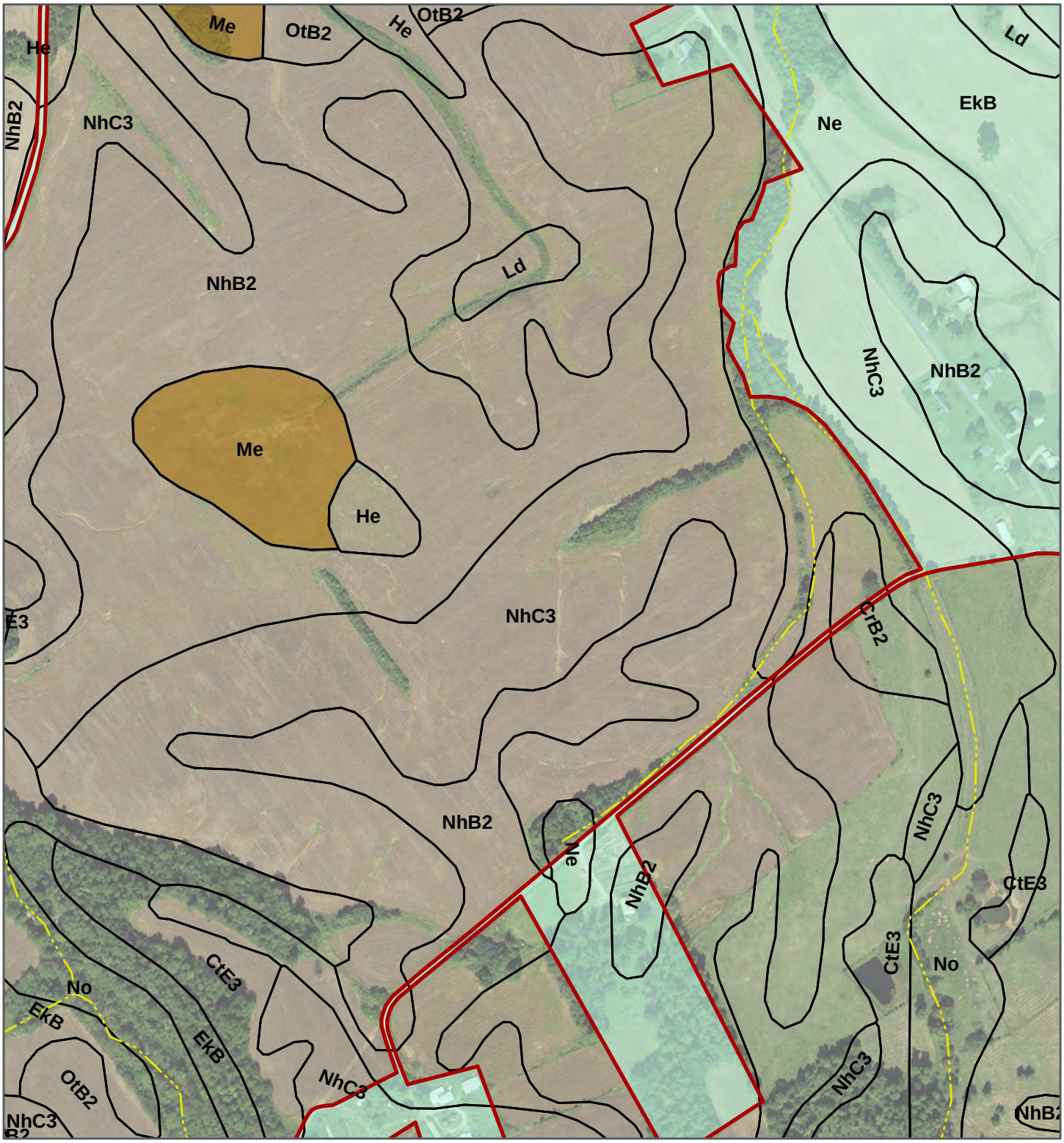
Figure 4.14: Soil Survey & NHD (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1986
www.cardno.com

Date: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F4b_SoilSurvey_set.mxd

Saved By: Stephen.LaFon



0 250 500 Feet

0 50 100 150 Meters

NHD Flowline
Soil Unit
Soil Unit - Hydric
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

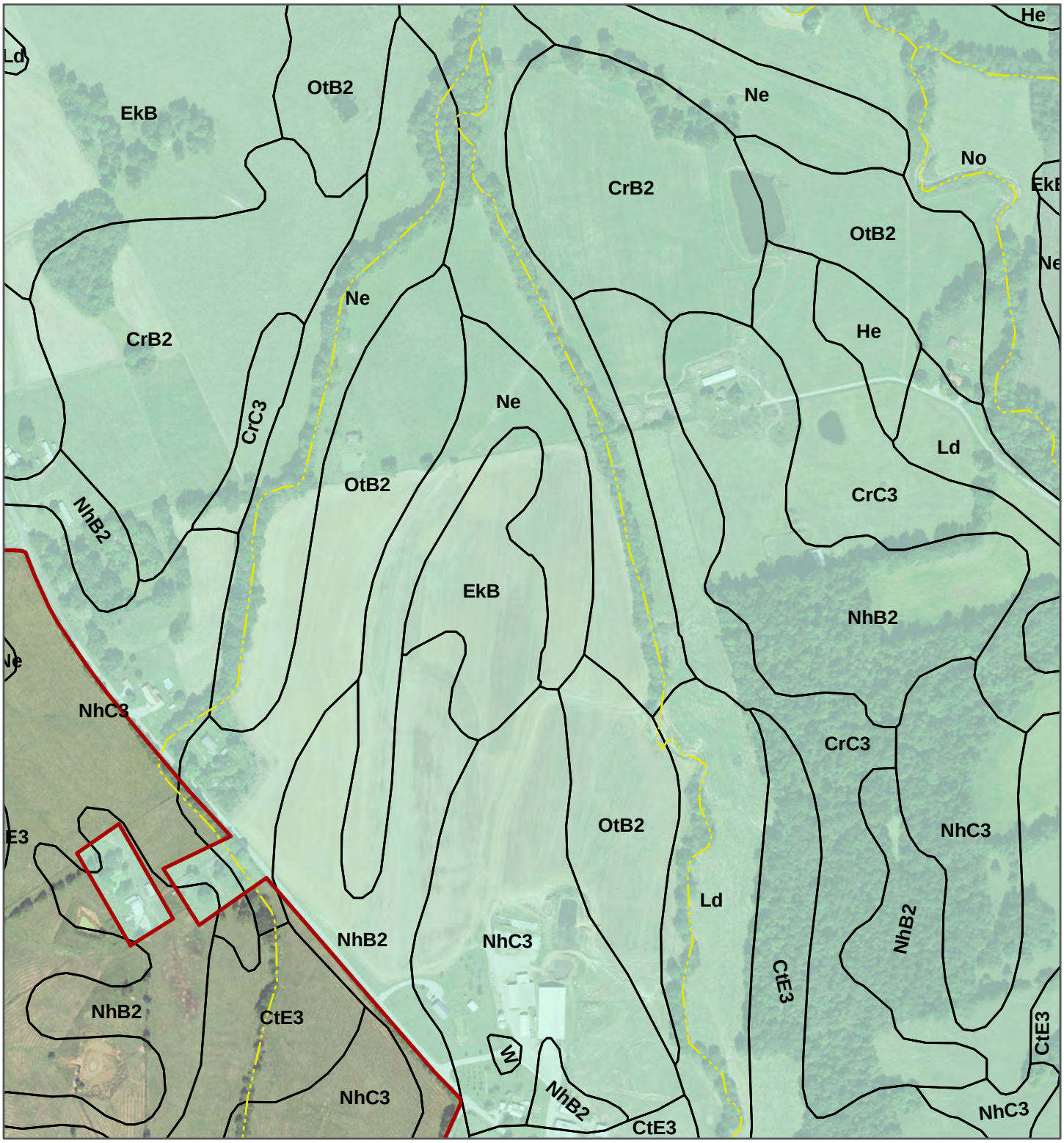
Figure 4.15: Soil Survey & NHD (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1986
www.cardno.com

Date: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F4b_SoilSurvey_set.mxd

Saved By: Stephen.LaFon



7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

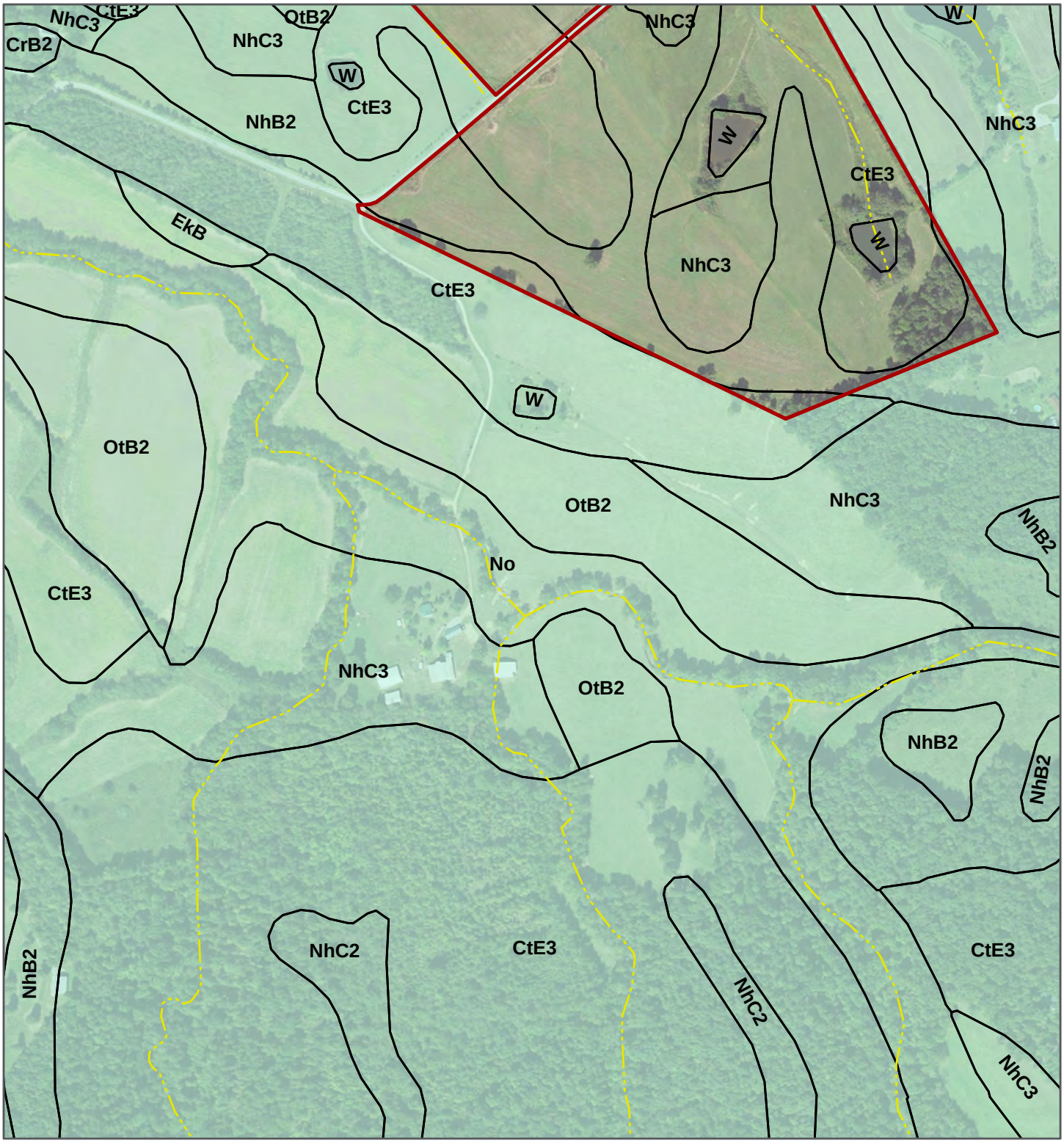
Figure 4.16: Soil Survey & NHD (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1986
www.cardno.com

Date: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F4b_SoilSurvey_set.mxd

Saved By: Stephen.LaFon



N
W
E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

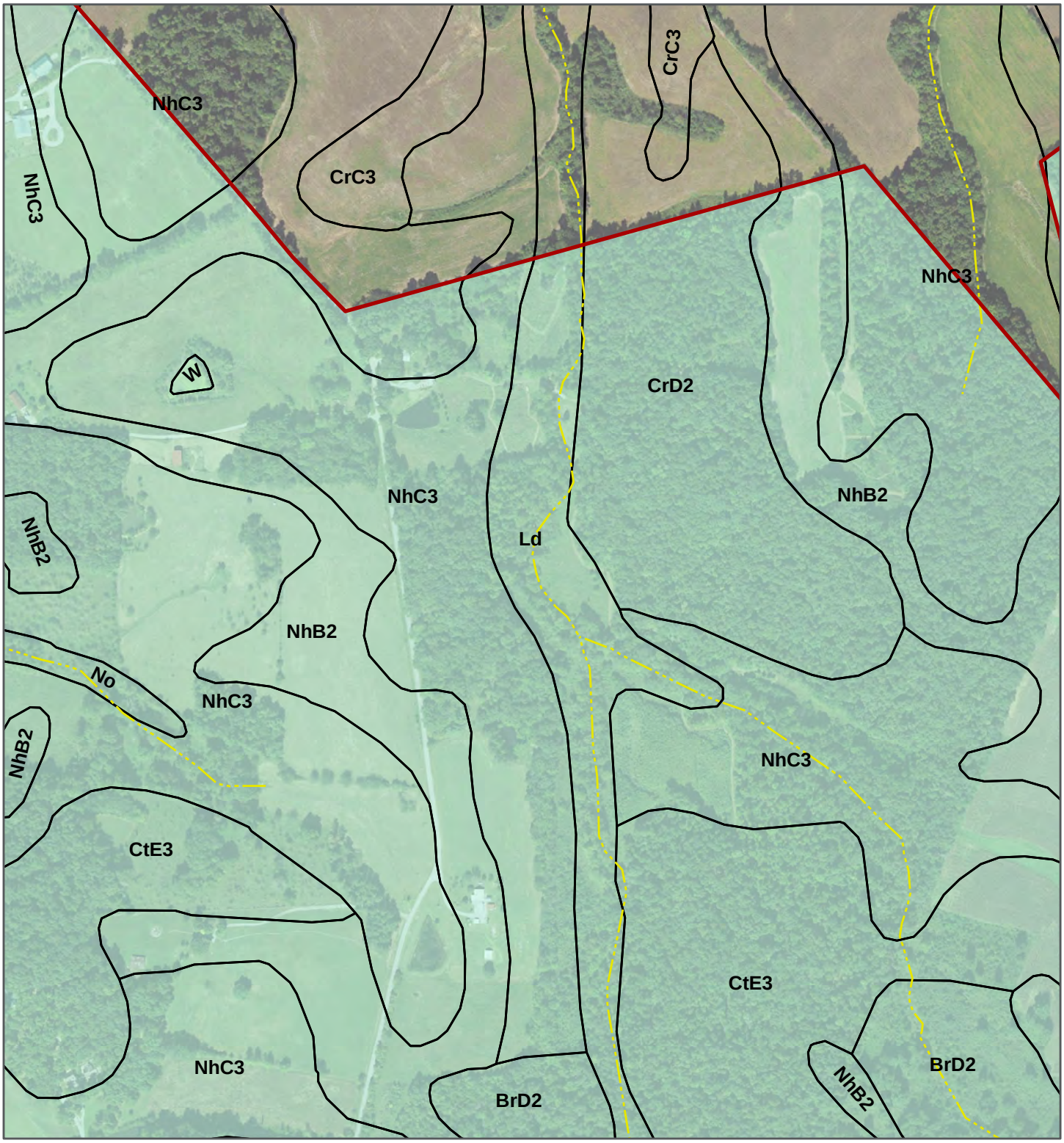
Figure 4.17: Soil Survey & NHD (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1986
www.cardno.com

Date: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F4b_SoilSurvey_set.mxd

Saved By: Stephen.LaFon



0 250 500 Feet
0 50 100 150 Meters

NHD Flowline
Soil Unit
Soil Unit - Hydric
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

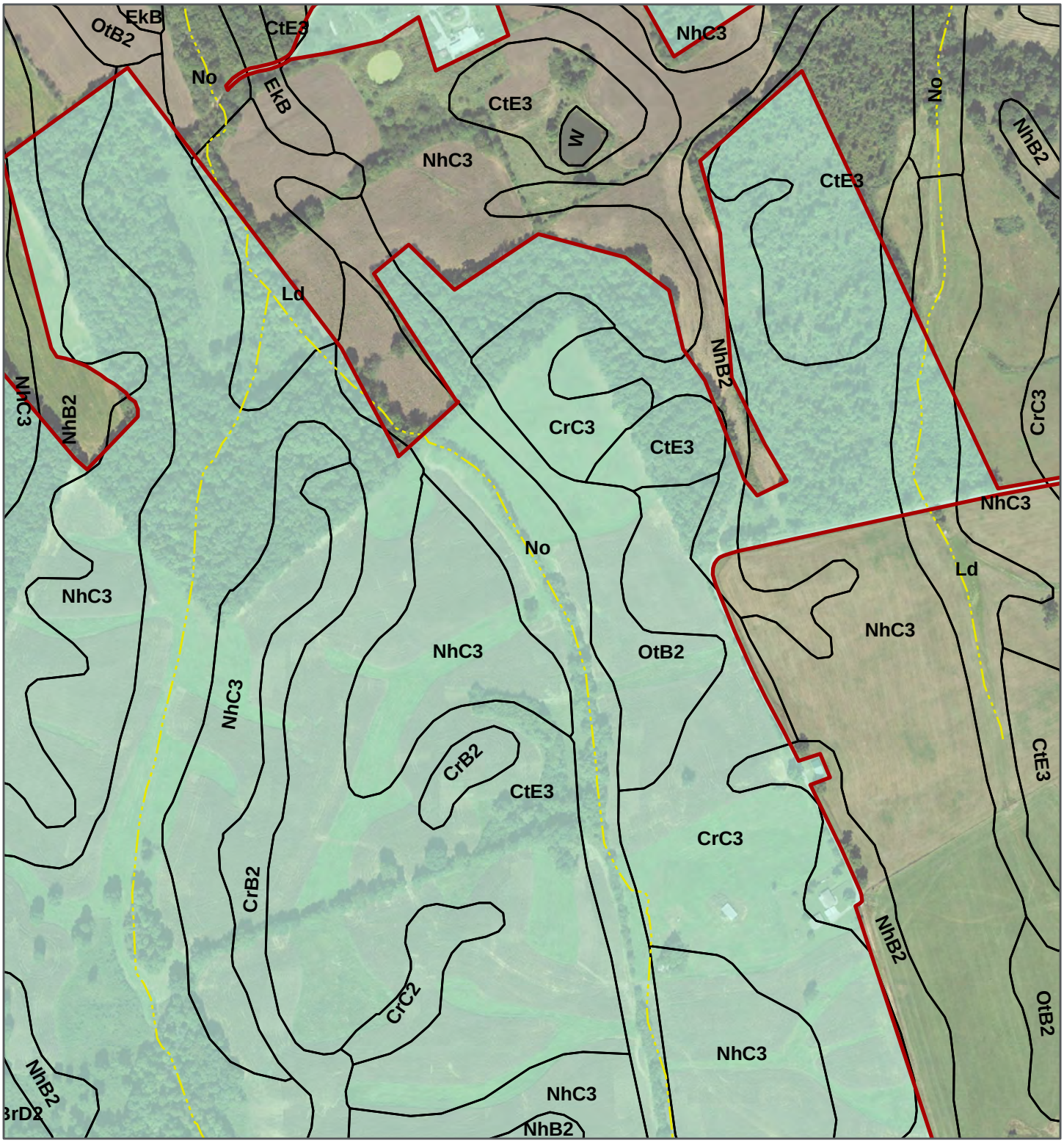
Figure 4.18: Soil Survey & NHD (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1986
www.cardno.com

Date: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F4b_SoilSurvey_set.mxd

Saved By: Stephen.LaFon



0 250 500 Feet

0 50 100 150 Meters

NHD Flowline
Soil Unit
Soil Unit - Hydric
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

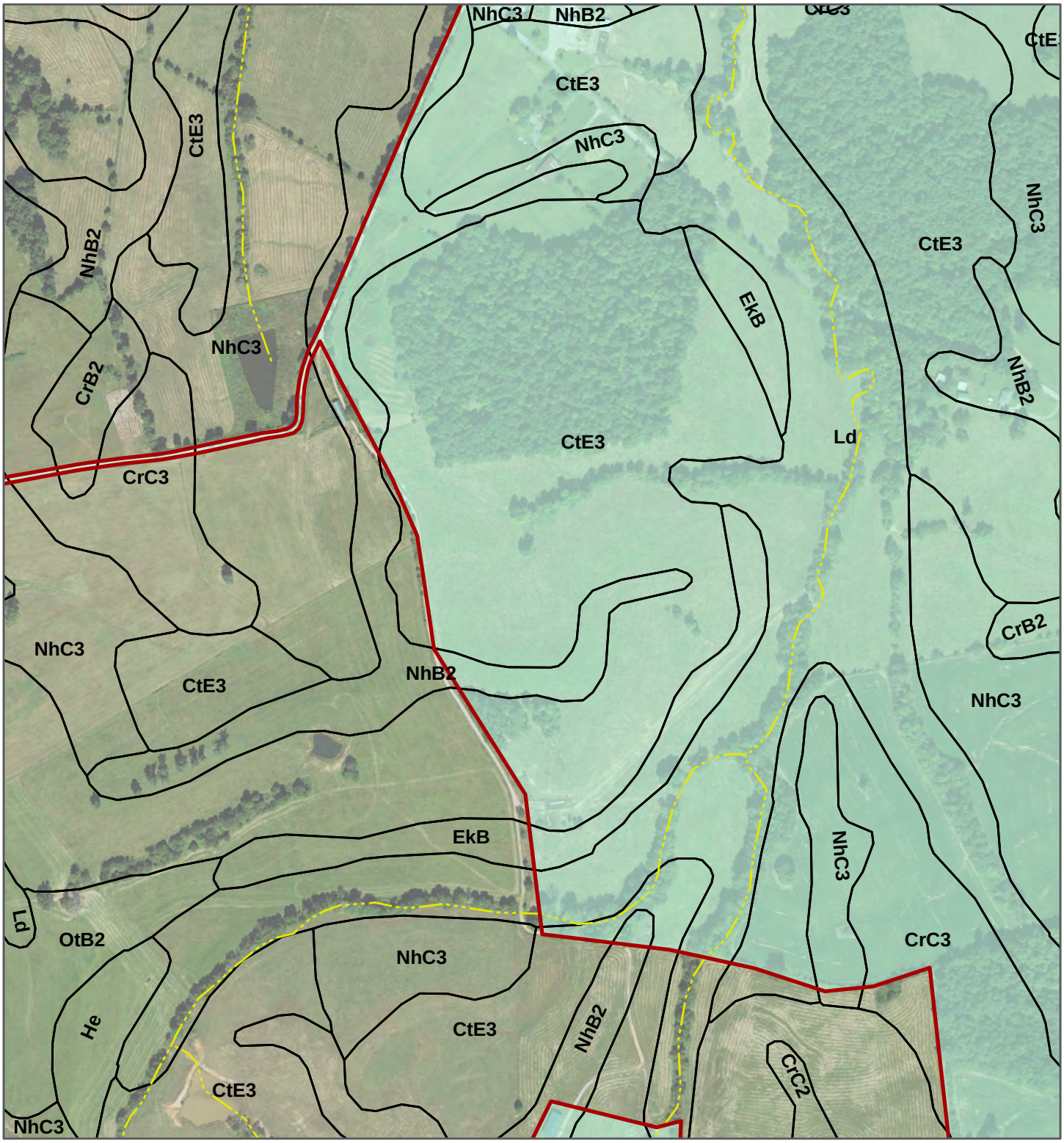
Figure 4.19: Soil Survey & NHD (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1986
www.cardno.com

Date: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F4b_SoilSurvey_set.mxd

Saved By: Stephen.LaFon



0 250 500 Feet

0 50 100 150 Meters

NHD Flowline
Soil Unit
Soil Unit - Hydric
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

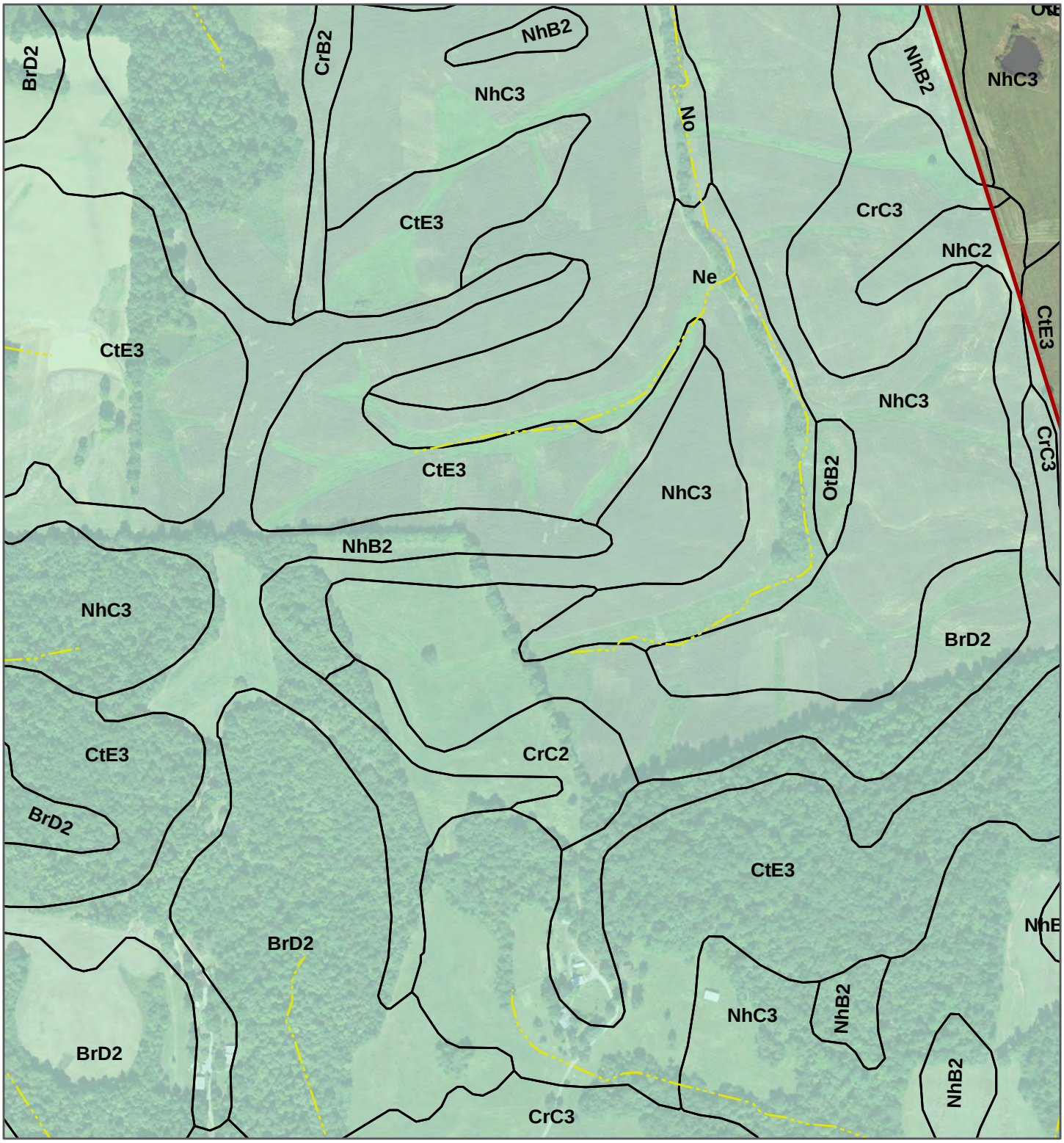
Figure 4.20: Soil Survey & NHD (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1986
www.cardno.com

Date: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F4b_SoilSurvey_set.mxd

Saved By: Stephen.LaFon



0 250 500 Feet

0 50 100 150 Meters

NHD Flowline

Soil Unit

Soil Unit - Hydric

Study Area

N

W E

S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

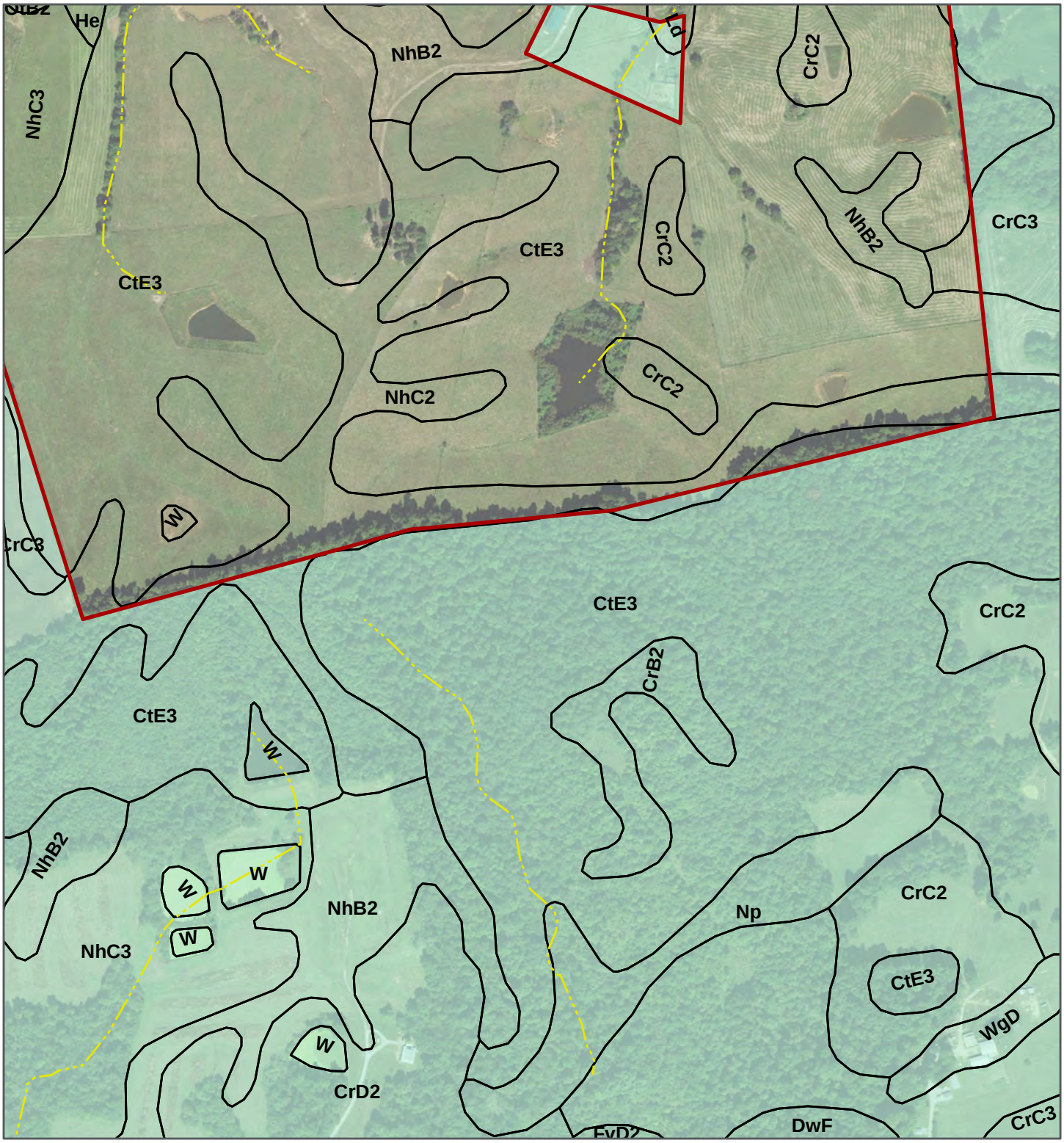
Figure 4.21: Soil Survey & NHD (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1986
www.cardno.com

Date: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F4b_SoilSurvey_set.mxd

Saved By: Stephen.LaFon



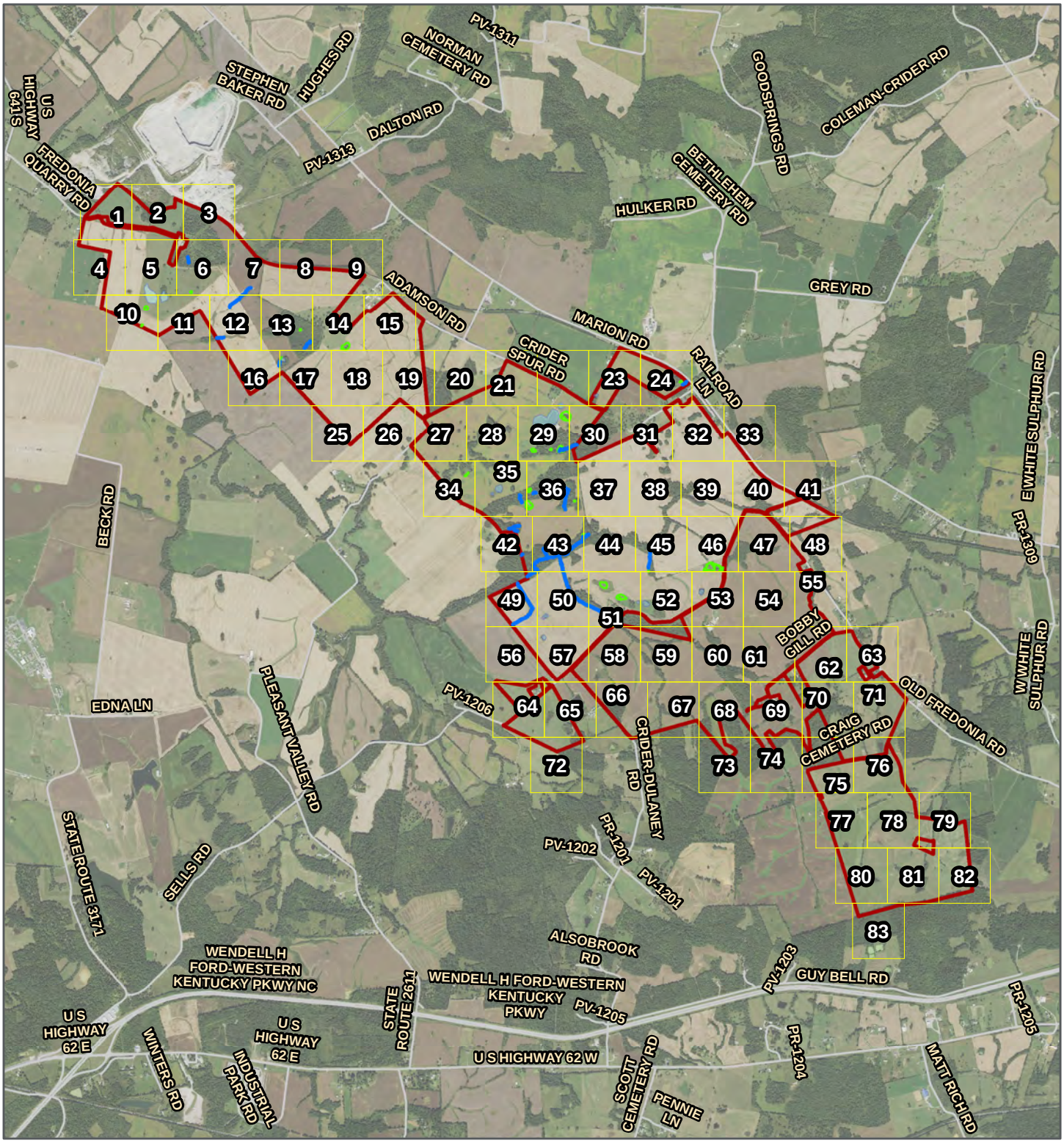
N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 4.22: Soil Survey & NHD (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1986
www.cardno.com

Date: 7/26/2021
Basemap:
File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F4b_SoilSurvey_set.mxd
Saved By: Stephen.LaFon



0 2,000 4,000 Feet
0 400 800 1,200 Meters

Delineated Stream
Delineated Wetland
Study Area
Pond
Map Page

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5: Delineation Overview
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/21/2021
Basemap:
File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5a_DelineationOverview.mxd
Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

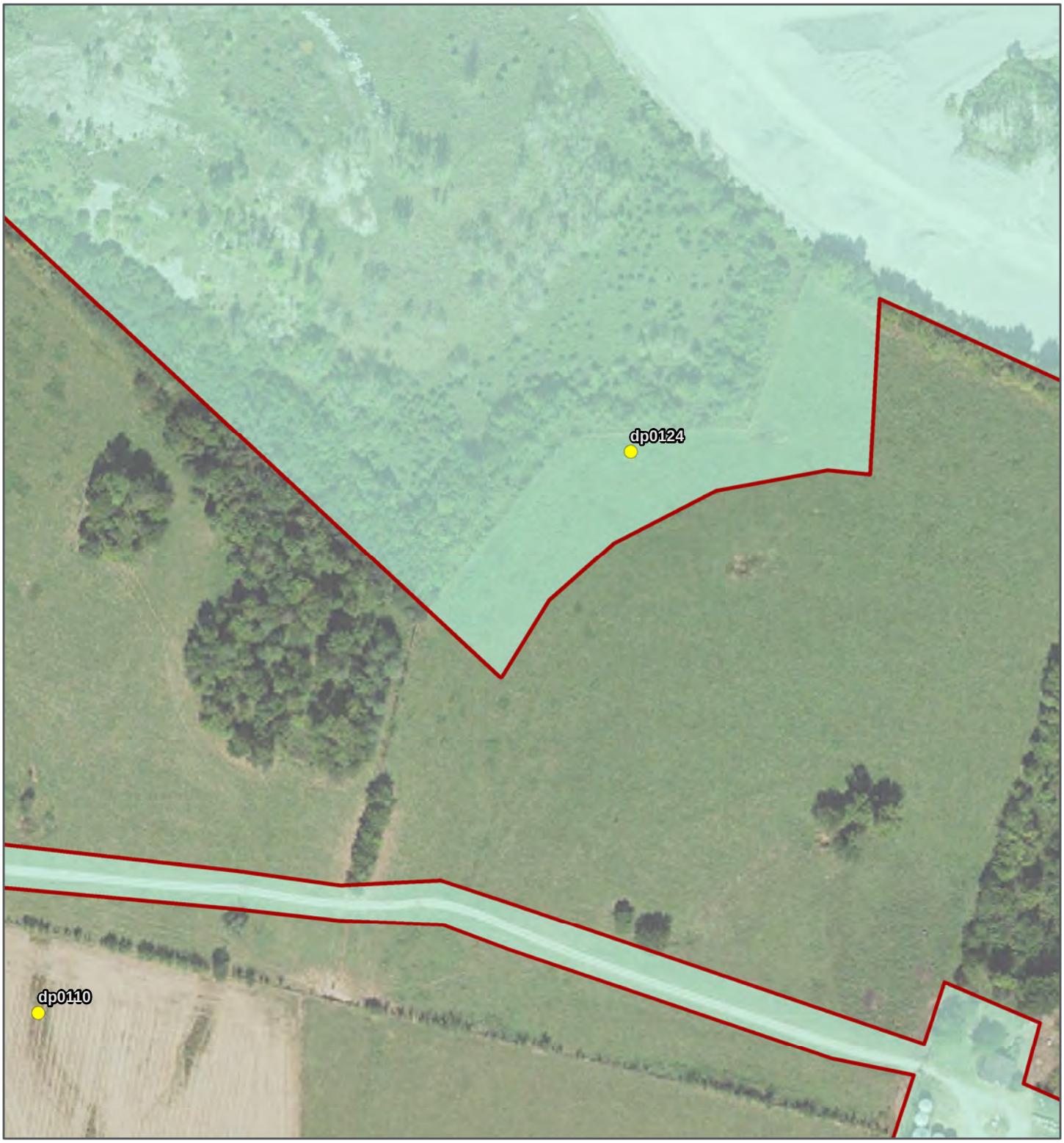
Figure 5.1: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon



0 100 200 Feet
0 20 40 60 Meters

Data Point
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.2: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet

0 20 40 60 Meters

Study Area

N W E S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.3: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.4: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Study Area
Pond

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

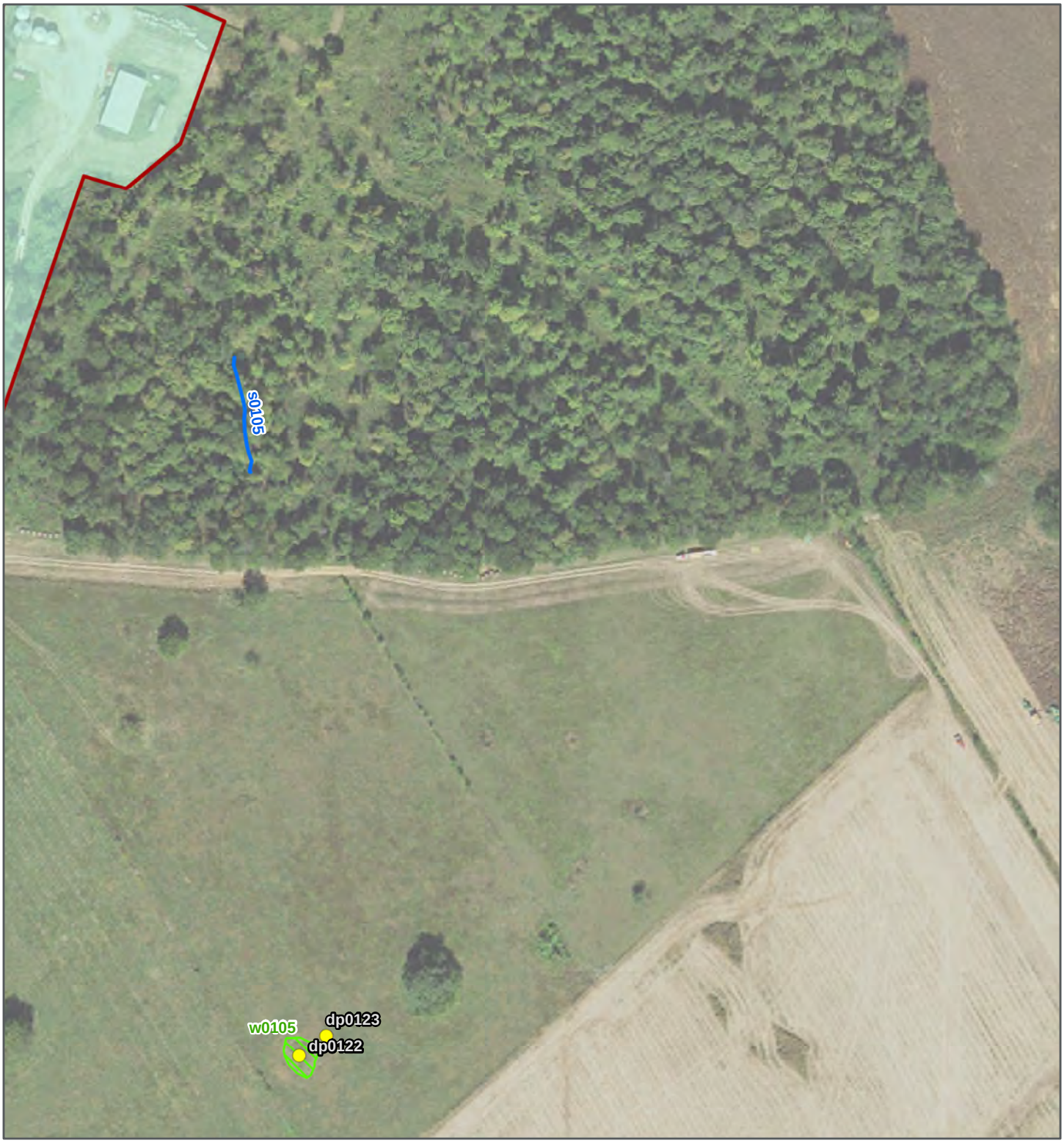
Figure 5.5: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon



0 100 200 Feet
0 20 40 60 Meters

Data Point
Delineated Stream
Delineated Wetland
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.6: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Delineated Stream
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.7: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet

0 20 40 60 Meters

Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.8: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.9: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Delineated Wetland
Pond
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.10: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Pond
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.11: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Delineated Stream
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.12: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Delineated Stream
Delineated Wetland
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.13: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Delineated Wetland
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.14: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.15: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Delineated Stream
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.16: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Delineated Stream
Pond
Delineated Wetland
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.17: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Delineated Wetland
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.18: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.19: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet

0 20 40 60 Meters

Study Area

N

W E

S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.20: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.21: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Pond
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.22: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Pond
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.23: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Delineated Stream
Delineated Wetland
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.24: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:
File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd
Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.25: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.26: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.27: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.28: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Delineated Stream
Pond
Delineated Wetland
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

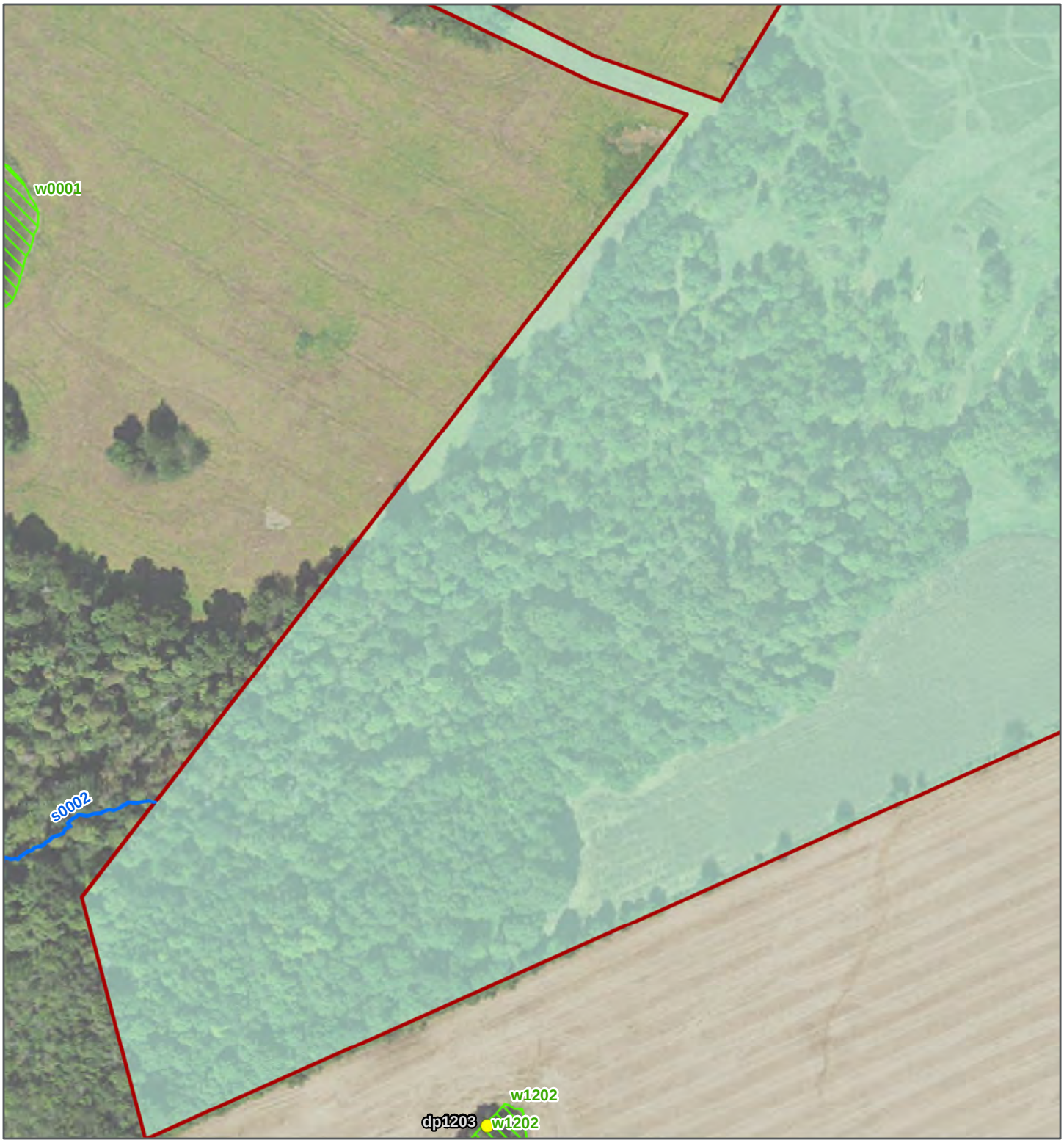
Figure 5.29: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon



0 100 200 Feet
0 20 40 60 Meters

Data Point
Delineated Stream
Delineated Wetland
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.30: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Pond
Delineated Wetland
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.31: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Delineated Wetland
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.32: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.33: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Delineated Wetland
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.34: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Delineated Stream
Pond
Delineated Wetland
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.35: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.36: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Delineated Wetland
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.37: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Delineated Stream
Delineated Wetland
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.38: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Delineated Stream
Delineated Wetland
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.39: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Delineated Stream
Delineated Wetland
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.40: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:
File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd
Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Delineated Stream
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.41: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Study Area
Delineated Stream

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

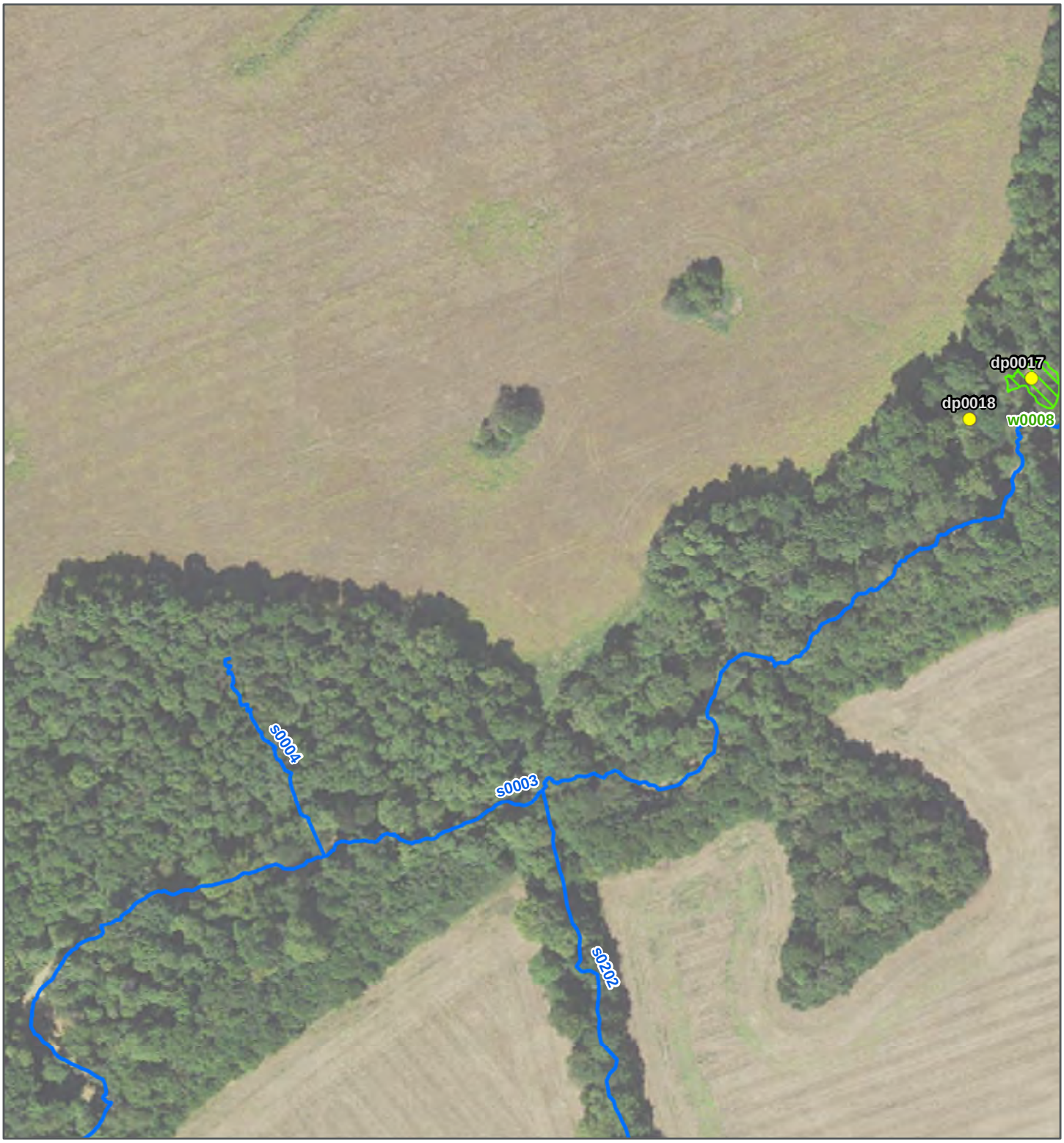
Figure 5.42: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon



0 100 200 Feet
0 20 40 60 Meters

Data Point
Delineated Stream
Delineated Wetland
Study Area

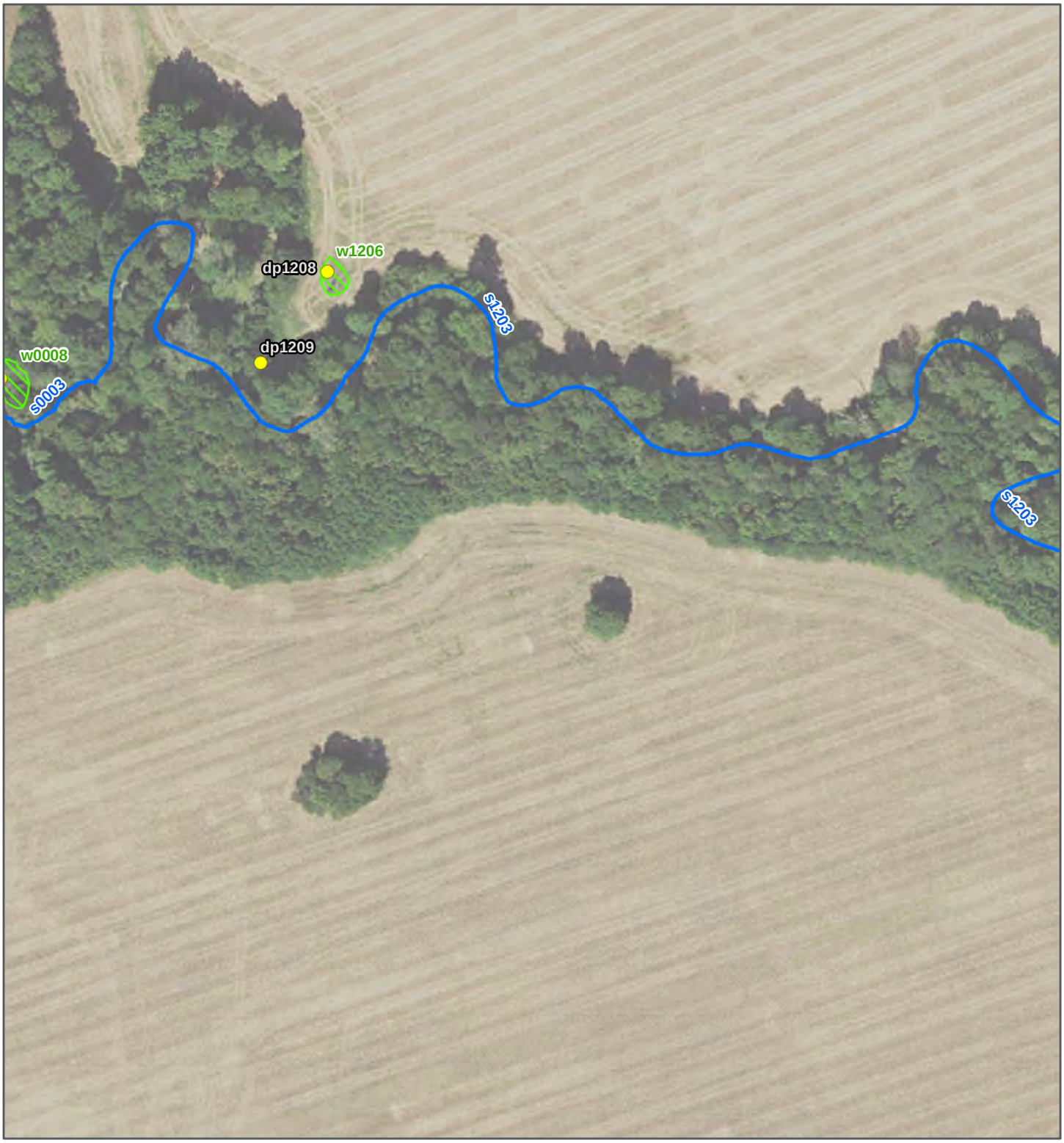
N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.43: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:
File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd
Saved By: Stephen.LaFon



0 100 200 Feet
0 20 40 60 Meters

Data Point
Delineated Stream
Delineated Wetland
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.44: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:
File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd
Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Delineated Stream
Delineated Wetland
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.45: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Delineated Stream
Delineated Wetland
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.46: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Delineated Stream
Delineated Wetland
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.47: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Delineated Stream
Delineated Wetland
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.48: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Delineated Stream
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.49: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Delineated Stream
Study Area
Pond

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.50: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Delineated Stream
Pond
Delineated Wetland
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.51: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:
File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd
Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Pond
Delineated Wetland
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.52: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Delineated Wetland
Pond
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.53: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:
File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd
Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Delineated Stream
Delineated Wetland
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.54: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Delineated Stream
Delineated Wetland
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.55: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Delineated Wetland
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.56: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Delineated Stream
Study Area
Pond

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.57: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Delineated Stream
Pond
Delineated Wetland
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

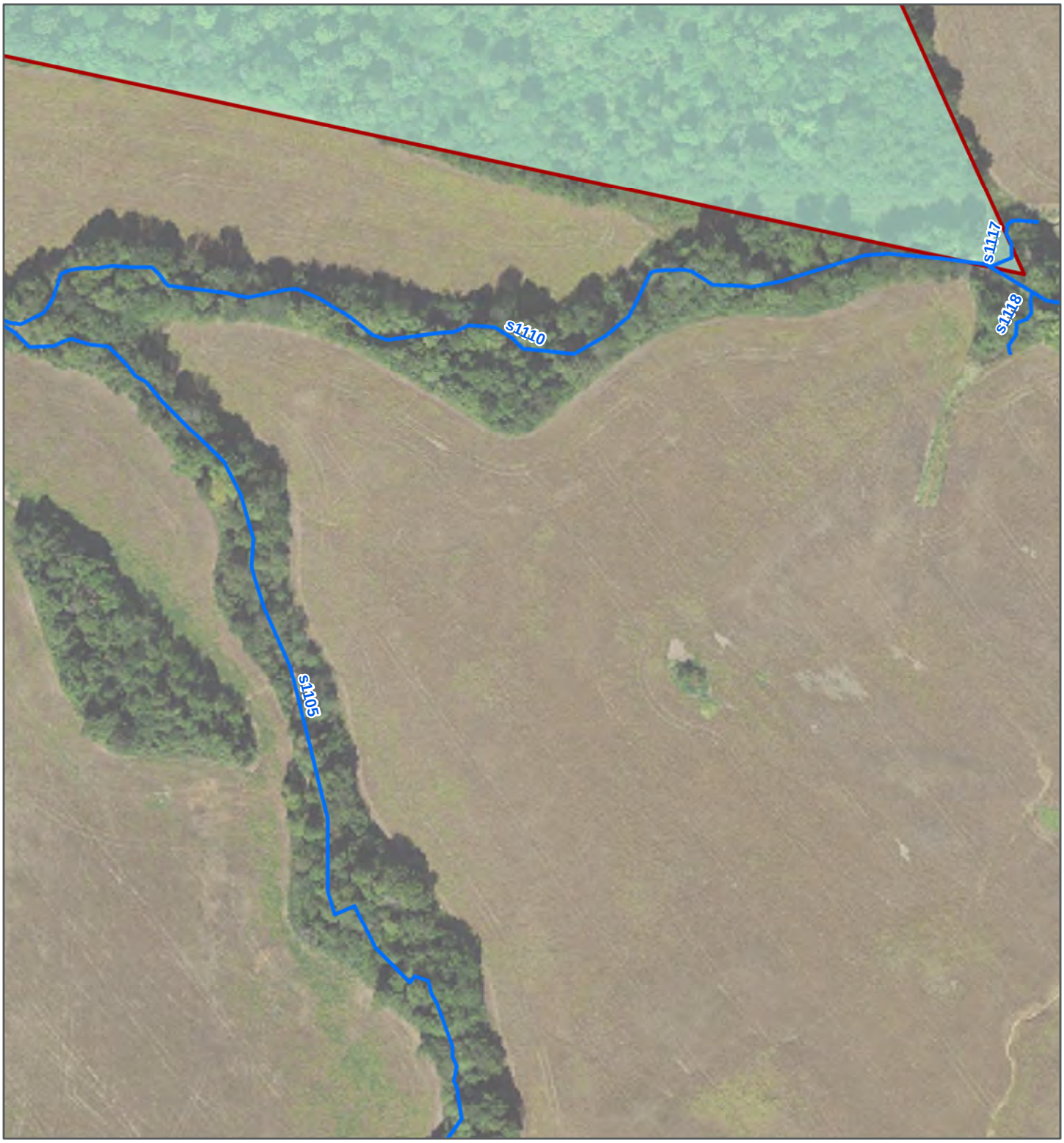
Figure 5.58: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon



0 100 200 Feet
0 20 40 60 Meters

Delineated Stream
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.59: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Delineated Stream
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.60: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Delineated Stream
Delineated Wetland
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

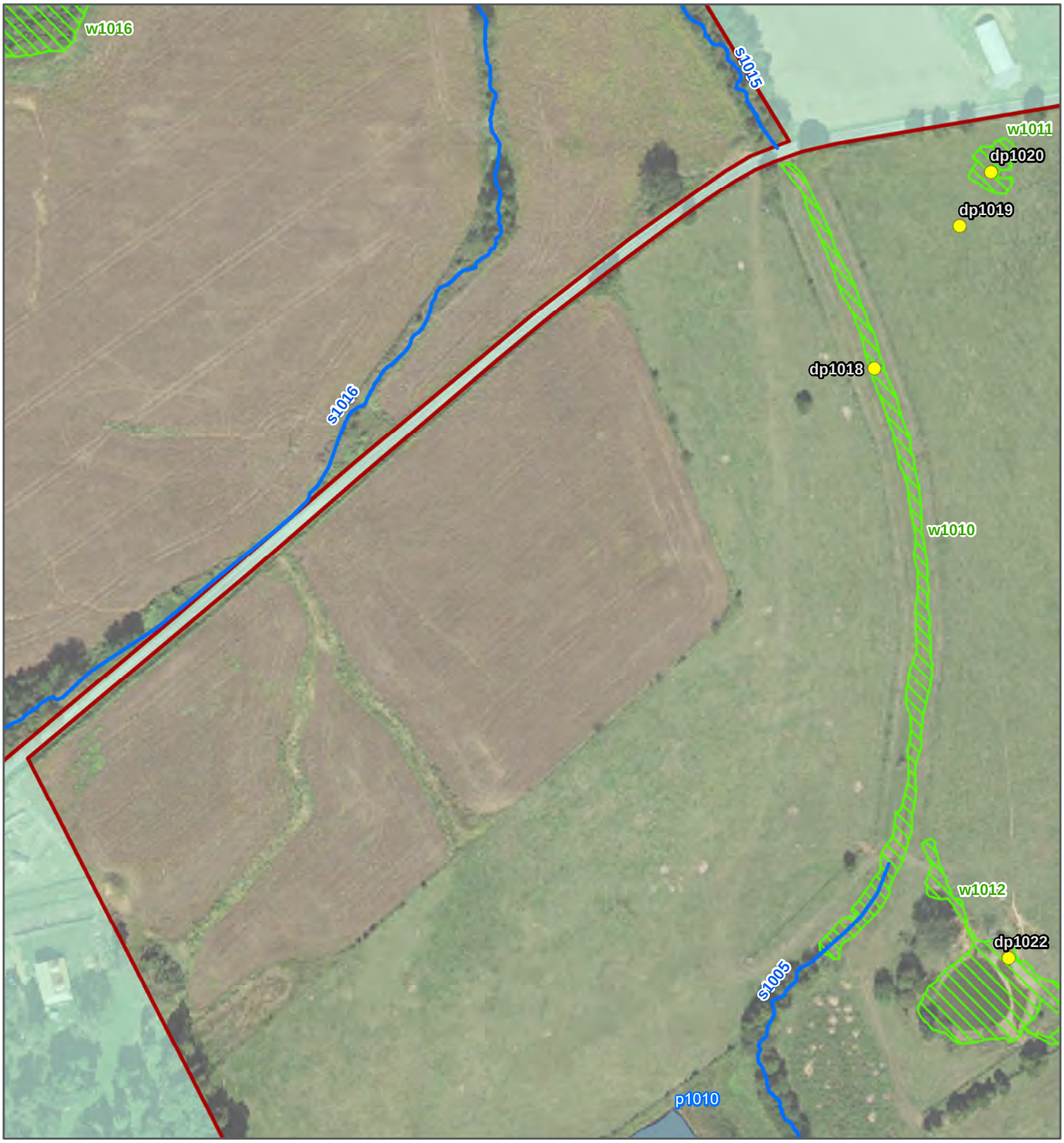
Figure 5.61: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon



0 100 200 Feet
0 20 40 60 Meters

Data Point
Delineated Stream
Pond
Delineated Wetland
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.62: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:
File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd
Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Delineated Stream
Pond
Delineated Wetland
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.63: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Delineated Stream
Delineated Wetland
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.64: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:
File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd
Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Delineated Stream
Pond
Delineated Wetland
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.65: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:
File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd
Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Delineated Stream
Delineated Wetland
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.66: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Delineated Stream
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.67: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Delineated Stream
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.68: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Delineated Stream
Pond
Delineated Wetland
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.69: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Delineated Stream
Pond
Delineated Wetland
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.70: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Delineated Stream
Delineated Wetland
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.71: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.72: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Delineated Stream
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.73: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Delineated Stream
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.74: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Delineated Wetland
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.75: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Pond
Delineated Wetland
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.76: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Delineated Wetland
Pond
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.77: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Delineated Stream
Pond
Delineated Wetland
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.78: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Delineated Stream
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.79: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Pond
Delineated Wetland
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.80: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Delineated Stream
Study Area
Pond

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.81: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Delineated Stream
Study Area
Pond

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.82: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

0 100 200 Feet
0 20 40 60 Meters

Data Point
Study Area

N
W E
S

7.5' Quadrangles:
Fredonia Quad
Crider Quad
Project No.
E320201000

Figure 5.83: Delineated Features (2018 Aerial)
Caldwell Solar
Regulated Waters Delineation Report
Caldwell Solar LLC
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

Date Created: 7/26/2021
Basemap:

File Path: R:\Projects\QF121 Client Folders\e320201000_Caldwell\GIS\MXD\Delineation_2021\F5b_DelineationSet.mxd

Saved By: Stephen.LaFon

Caldwell Solar, Caldwell County, Kentucky

APPENDIX B

SITE PHOTOGRAPHS

DP0001, View Looking North

DP0001, View Looking South

DP0002, View Looking North

DP0002, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP0003, View Looking North

DP0003, View Looking South

DP0004, View Looking North

DP0004, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP0005, View Looking North

DP0005, View Looking South

DP0006, View Looking North

DP0006, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP0007, View Looking North

DP0007, View Looking South

DP0008, View Looking North

DP0008, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP0009, View Looking North

DP0009, View Looking South

DP0010, View Looking North

DP0010, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP0011, View Looking North

DP0011, View Looking South

DP0012, View Looking North

DP0012, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP0013, View Looking North

DP0013, View Looking South

DP0014, View Looking North

DP0014, View Looking South

Project Number:
E320201000

Site Photographs
Caldwell Solar
Regulated Waters Delineation Report
Geronimo Energy
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP0015, View Looking North

DP0015, View Looking South

DP0016, View Looking North

DP0016, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP0017, View Looking North

DP0017, View Looking South

DP0018, View Looking North

DP0018, View Looking South

Project Number:
E320201000

Site Photographs
Caldwell Solar
Regulated Waters Delineation Report
Geronimo Energy
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP0019, View Looking North

DP0019, View Looking South

DP0020, View Looking North

DP0020, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP0021, View Looking North

DP0021, View Looking South

DP0022, View Looking North

DP0022, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP0023, View Looking North

DP0023, View Looking South

DP0024, View Looking North

DP0024, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP0025, View Looking North

DP0025, View Looking South

DP0101, View Looking North

DP0101, View Looking South

Project Number:
E320201000

Site Photographs
Caldwell Solar
Regulated Waters Delineation Report
Geronimo Energy
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP0102, View Looking North

DP0102, View Looking South

DP0103, View Looking North

DP0103, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP0104, View Looking North

DP0104, View Looking South

DP0105, View Looking North

DP0105, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP0106, View Looking North

DP0106, View Looking South

DP0107, View Looking North

DP0107, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP0108, View Looking North

DP0108, View Looking South

DP0109, View Looking North

DP0109, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP0110, View Looking North

DP0110, View Looking South

DP0111, View Looking North

DP0111, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP0112, View Looking North

DP0112, View Looking South

DP0113, View Looking North

DP0113, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP0114, View Looking North

DP0114, View Looking South

DP0115, View Looking North

DP0115, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP0116, View Looking North

DP0116, View Looking South

DP0117, View Looking North

DP0117, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP0118, View Looking North

DP0118, View Looking South

DP0119, View Looking North

DP0119, View Looking South

Project Number:
E320201000

Site Photographs
Caldwell Solar
Regulated Waters Delineation Report
Geronimo Energy
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP0120, View Looking North

DP0120, View Looking South

DP0121, View Looking North

DP0121, View Looking South

Project Number:
E320201000

Site Photographs
Caldwell Solar
Regulated Waters Delineation Report
Geronimo Energy
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP0122, View Looking North

DP0122, View Looking South

DP0123, View Looking North

DP0123, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP0124, View Looking North

DP0124, View Looking South

DP0201, View Looking North

DP0201, View Looking South

Project Number:
E320201000

Site Photographs
Caldwell Solar
Regulated Waters Delineation Report
Geronimo Energy
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP0202, View Looking North

DP0202, View Looking South

DP0203, View Looking North

DP0203, View Looking South

Project Number:
E320201000

Site Photographs
Caldwell Solar
Regulated Waters Delineation Report
Geronimo Energy
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP0204, View Looking North

DP0204, View Looking South

DP0205, View Looking North

DP0205, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP0206, View Looking North

DP0206, View Looking South

DP0207, View Looking North

DP0207, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP0208, View Looking North

DP0208, View Looking South

DP0209, View Looking North

DP0209, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP0210, View Looking North

DP0210, View Looking South

DP0211, View Looking North

DP0211, View Looking South

Project Number:
E320201000

Site Photographs
Caldwell Solar
Regulated Waters Delineation Report
Geronimo Energy
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1001, View Looking North

DP1001, View Looking South

DP1002, View Looking North

DP1002, View Looking South

Project Number:
E320201000

Site Photographs
Caldwell Solar
Regulated Waters Delineation Report
Geronimo Energy
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1003, View Looking North

DP1003, View Looking South

DP1004, View Looking North

DP1004, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1005, View Looking North

DP1005, View Looking South

DP1006, View Looking North

DP1006, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1007, View Looking North

DP1007, View Looking South

DP1008, View Looking North

DP1008, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1009, View Looking North

DP1009, View Looking South

DP1010, View Looking North

DP1010, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1011, View Looking North

DP1011, View Looking South

DP1012, View Looking North

DP1012, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1013, View Looking North

DP1013, View Looking South

DP1014, View Looking North

DP1014, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1015, View Looking North

DP1015, View Looking South

DP1016, View Looking North

DP1016, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1017, View Looking North

DP1017, View Looking South

DP1019, View Looking North

DP1019, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1020, View Looking North

DP1020, View Looking South

DP1021, View Looking North

DP1021, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1022, View Looking North

DP1022, View Looking South

DP1023, View Looking North

DP1023, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1024, View Looking North

DP1024, View Looking South

DP1025, View Looking North

DP1025, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1026, View Looking North

DP1026, View Looking South

DP1027, View Looking North

DP1027, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1028, View Looking North

DP1028, View Looking South

DP1029, View Looking North

DP1029, View Looking South

Project Number:
E320201000

Site Photographs
Caldwell Solar
Regulated Waters Delineation Report
Geronimo Energy
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1030, View Looking North

DP1030, View Looking South

DP1031, View Looking North

DP1031, View Looking South

Project Number:
E320201000

Site Photographs
Caldwell Solar
Regulated Waters Delineation Report
Geronimo Energy
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1032, View Looking North

DP1032, View Looking South

DP1033, View Looking North

DP1033, View Looking South

Project Number:
E320201000

Site Photographs
Caldwell Solar
Regulated Waters Delineation Report
Geronimo Energy
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1101, View Looking North

DP1101, View Looking South

DP1102, View Looking North

DP1102, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1103, View Looking North

DP1103, View Looking South

DP1104, View Looking North

DP1104, View Looking South

Project Number:
E320201000

Site Photographs
Caldwell Solar
Regulated Waters Delineation Report
Geronimo Energy
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1105, View Looking North

DP1105, View Looking South

DP1106, View Looking North

DP1106, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1107, View Looking North

DP1107, View Looking South

DP1108, View Looking North

DP1108, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1109, View Looking North

DP1109, View Looking South

DP1110, View Looking North

DP1110, View Looking South

Project Number:
E320201000

Site Photographs
Caldwell Solar
Regulated Waters Delineation Report
Geronimo Energy
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1111, View Looking North

DP1111, View Looking South

DP1112, View Looking North

DP1112, View Looking South

Project Number:
E320201000

Site Photographs
Caldwell Solar
Regulated Waters Delineation Report
Geronimo Energy
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1113, View Looking North

DP1113, View Looking South

DP1114, View Looking North

DP1114, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1115, View Looking North

DP1115, View Looking South

DP1116, View Looking North

DP1116, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1118, View Looking North

DP1118, View Looking South

DP1119, View Looking North

DP1119, View Looking South

Project Number:
E320201000

Site Photographs
Caldwell Solar
Regulated Waters Delineation Report
Geronimo Energy
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1120, View Looking North

DP1120, View Looking South

DP1121, View Looking North

DP1121, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1122, View Looking North

DP1122, View Looking South

DP1123, View Looking North

DP1123, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1124, View Looking North

DP1124, View Looking South

DP1125, View Looking North

DP1125, View Looking South

Project Number:
E320201000

Site Photographs
Caldwell Solar
Regulated Waters Delineation Report
Geronimo Energy
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1126, View Looking North

DP1126, View Looking South

DP1127, View Looking North

DP1127, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1128, View Looking North

DP1128, View Looking South

DP1129, View Looking North

DP1129, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1130, View Looking North

DP1130, View Looking South

DP1131, View Looking North

DP1131, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1132, View Looking North

DP1132, View Looking South

DP1133, View Looking North

DP1133, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1201, View Looking North

DP1201, View Looking South

DP1202, View Looking North

DP1202, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1203, View Looking North

DP1203, View Looking South

DP1205, View Looking North

DP1205, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1206, View Looking North

DP1206, View Looking South

DP1207, View Looking North

DP1207, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1208, View Looking North

DP1208, View Looking South

DP1209, View Looking North

DP1209, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1210, View Looking North

DP1210, View Looking South

DP1211, View Looking North

DP1211, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1212, View Looking North

DP1212, View Looking South

DP1213, View Looking North

DP1213, View Looking South

Project Number:
E320201000

Site Photographs
Caldwell Solar
Regulated Waters Delineation Report
Geronimo Energy
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1214, View Looking North

DP1214, View Looking South

DP1215, View Looking North

DP1215, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1216, View Looking North

DP1216, View Looking South

DP1217, View Looking North

DP1217, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1218, View Looking North

DP1218, View Looking South

DP1219, View Looking North

DP1219, View Looking South

Site Photographs
Caldwell Solar
Regulated Waters Delineation Report
Geronimo Energy
Caldwell County, Kentucky

Project Number:
E320201000

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1220, View Looking North

DP1220, View Looking South

DP1221, View Looking North

DP1221, View Looking South

Project Number:
E320201000

Site Photographs
Caldwell Solar
Regulated Waters Delineation Report
Geronimo Energy
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1222, View Looking North

DP1222, View Looking South

DP1223, View Looking North

DP1223, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

DP1224, View Looking North

DP1224, View Looking South

S0001, View Looking Upstream

S0001, View Looking Downstream

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

S0002, View Looking Upstream

S0002, View Looking Downstream

S0003, View Looking Upstream

S0003, View Looing Downstream

Project Number:
E320201000

Site Photographs
Caldwell Solar
Regulated Waters Delineation Report
Geronimo Energy
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

S0004, View Looking Upstream

S0004, View Looking Downstream

S0005, View Looking Upstream

S0005, View Looking Downstream

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

S0006, View Looking Upstream

S0006, View Looking Downstream

S0007, View Looking Upstream

S0007, View Looking Downstream

Project Number:
E320201000

Site Photographs
Caldwell Solar
Regulated Waters Delineation Report
Geronimo Energy
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

S0008, View Looking Upstream

S0008, View Looking Downstream

S0009, View Looking Upstream

S0009, View Looking Downstream

Project Number:
E320201000

Site Photographs
Caldwell Solar
Regulated Waters Delineation Report
Geronimo Energy
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

S0010, View Looking Upstream

S0010, View Looking Downstream

S0011, View Looking Upstream

S0011, View Looking Downstream

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

S0101, View Looking Upstream

S0101, View Looking Downstream

S0102, View Looking Upstream

S0102, View Looking Downstream

Project Number:
E320201000

Site Photographs
Caldwell Solar
Regulated Waters Delineation Report
Geronimo Energy
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

S0103, View Looking Upstream

S0103, View Looking Downstream

S0104, View Looking Upstream

S0104, View Looking Downstream

Project Number:
E320201000

Site Photographs
Caldwell Solar
Regulated Waters Delineation Report
Geronimo Energy
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

S0105, View Looking Upstream

S0105, View Looking Downstream

S0201, View Looking Upstream

S0201, View Looking Downstream

Project Number:
E320201000

Site Photographs
Caldwell Solar
Regulated Waters Delineation Report
Geronimo Energy
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

S0202, View Looking Upstream

S0202, View Looking Downstream

S0203, View Looking Upstream

S0203, View Looking Downstream

Project Number:
E320201000

Site Photographs
Caldwell Solar
Regulated Waters Delineation Report
Geronimo Energy
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

S1001, View Looking Upstream

S1001, View Looking Downstream

S1002, View Looking Upstream

S1002, View Looking Downstream

Project Number:
E320201000

Site Photographs
Caldwell Solar
Regulated Waters Delineation Report
Geronimo Energy
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

S1003, View Looking Upstream

S1003, View Looking Downstream

S1004, View Looking Upstream

S1004, View Looking Downstream

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

S1005, View Looking Upstream

S1005, View Looking Downstream

S1006, View Looking Upstream

S1006, View Looking Downstream

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

S1008, View Looking Upstream

S1008, View Looking Downstream

S1009, View Looking Upstream

S1009, View Looking Downstream

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

S1010, View Looking Upstream

S1010, View Looking Downstream

S1011, View Looking Upstream

S1011, View Looking Downstream

Project Number:
E320201000

Site Photographs
Caldwell Solar
Regulated Waters Delineation Report
Geronimo Energy
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

S1012, View Looking Upstream

S1012, View Looking Downstream

S1013, View Looking Upstream

S1013, View Looking Downstream

Project Number:
E320201000

Site Photographs
Caldwell Solar
Regulated Waters Delineation Report
Geronimo Energy
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

S1014, View Looking Upstream

S1014, View Looking Downstream

S1015, View Looking Upstream

S1015, View Looking Downstream

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

S1016, View Looking Upstream

S1016, View Looking Downstream

S1017, View Looking Upstream

S1017, View Looking Downstream

Project Number:
E320201000

Site Photographs
Caldwell Solar
Regulated Waters Delineation Report
Geronimo Energy
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

S1018, View Looking Upstream

S1101, View Looking Upstream

S1101, View Looking Downstream

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

S1102, View Looking Upstream

S1102, View Looking Downstream

S1103, View Looking Upstream

S1103, View Looking Downstream

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

S1104, View Looking Upstream

S1104, View Looking Downstream

S1105, View Looking Upstream

S1105, View Looking Downstream

Project Number:
E320201000

Site Photographs
Caldwell Solar
Regulated Waters Delineation Report
Geronimo Energy
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

S1106, View Looking Upstream

S1106, View Looking Downstream

S1107, View Looking Upstream

S1107, View Looking Downstream

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

S1108, View Looking Upstream

S1108, View Looking Downstream

S1109, View Looking Upstream

S1109, View Looking Downstream

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

S1110, View Looking Upstream

S1110, View Looking Downstream

S1111, View Looking Upstream

S1111, View Looking Downstream

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

S1112, View Looking Upstream

S1112, View Looking Downstream

S1113, View Looking Upstream

S1113, View Looking Downstream

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

S1114, View Looking Upstream

S1114, View Looking Downstream

S1115, View Looking Upstream

S1115, View Looking Downstream

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

S1116, View Looking Upstream

S1116, View Looking Downstream

S1117, View Looking Upstream

S1117, View Looking Downstream

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

S1118, View Looking Upstream

S1118, View Looking Downstream

S1119, View Looking Upstream

S1119, View Looking Downstream

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

S1120, View Looking Upstream

S1120, View Looking Downstream

S1121, View Looking Upstream

S1121, View Looking Downstream

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

S1122, View Looking Upstream

S1122, View Looking Downstream

S1123, View Looking Upstream

S1123, View Looking Downstream

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

S1125, View Looking Upstream

S1125, View Looking Downstream

S1202, View Looking Upstream

S1202, View Looking Downstream

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

S1204, View Looking Upstream

S1204, View Looking Downstream

S1205, View Looking Upstream

S1205, View Looking Downstream

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

S1206, View Looking Upstream

S1206, View Looking Downstream

S1207, View Looking Upstream

S1207, View Looking Downstream

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

P0001, View Looking West

P0001, View Looking South

P0002, View Looking Southwest

P0002, View Looking West

Project Number:
E320201000

Site Photographs
Caldwell Solar
Regulated Waters Delineation Report
Geronimo Energy
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

P0003, View Looking South

P0003, View Looking West

P0004, View Looking West

P0005, View Looking East

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

P0006, View Looking Southwest

P0006, View Looking West

P0102, View Looking Northeast

P0103, View Looking East

P0201, View Looking South

P0202, View Looking North

P0204, View Looking Northeast

P1001, View Looking Southwest

Project Number:
E320201000

Site Photographs
Caldwell Solar
Regulated Waters Delineation Report
Geronimo Energy
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

P1002, View Looking Southeast

P1003, View Looking Southwest

P1004, View Looking Southwest

P1005, View Looking Southeast

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

P1006, View Looking Southeast

P1007, View Looking West

P1008, View Looking North

P1009, View Looking South

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

P1010, View Looking South

P1011, View Looking West

P1012, View Looking South

P1013, View Looking Northeast

Project Number:
E320201000

Site Photographs
Caldwell Solar
Regulated Waters Delineation Report
Geronimo Energy
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com

P1102, View Looking South

P1201, View Looking Southwest

Zigadenus

Green Tree Frog

Project Number:
E320201000

Site Photographs
Caldwell Solar
Regulated Waters Delineation Report
Geronimo Energy
Caldwell County, Kentucky

Cardno
3901 Industrial Blvd. Indianapolis, IN 46254 USA
Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
www.cardno.com