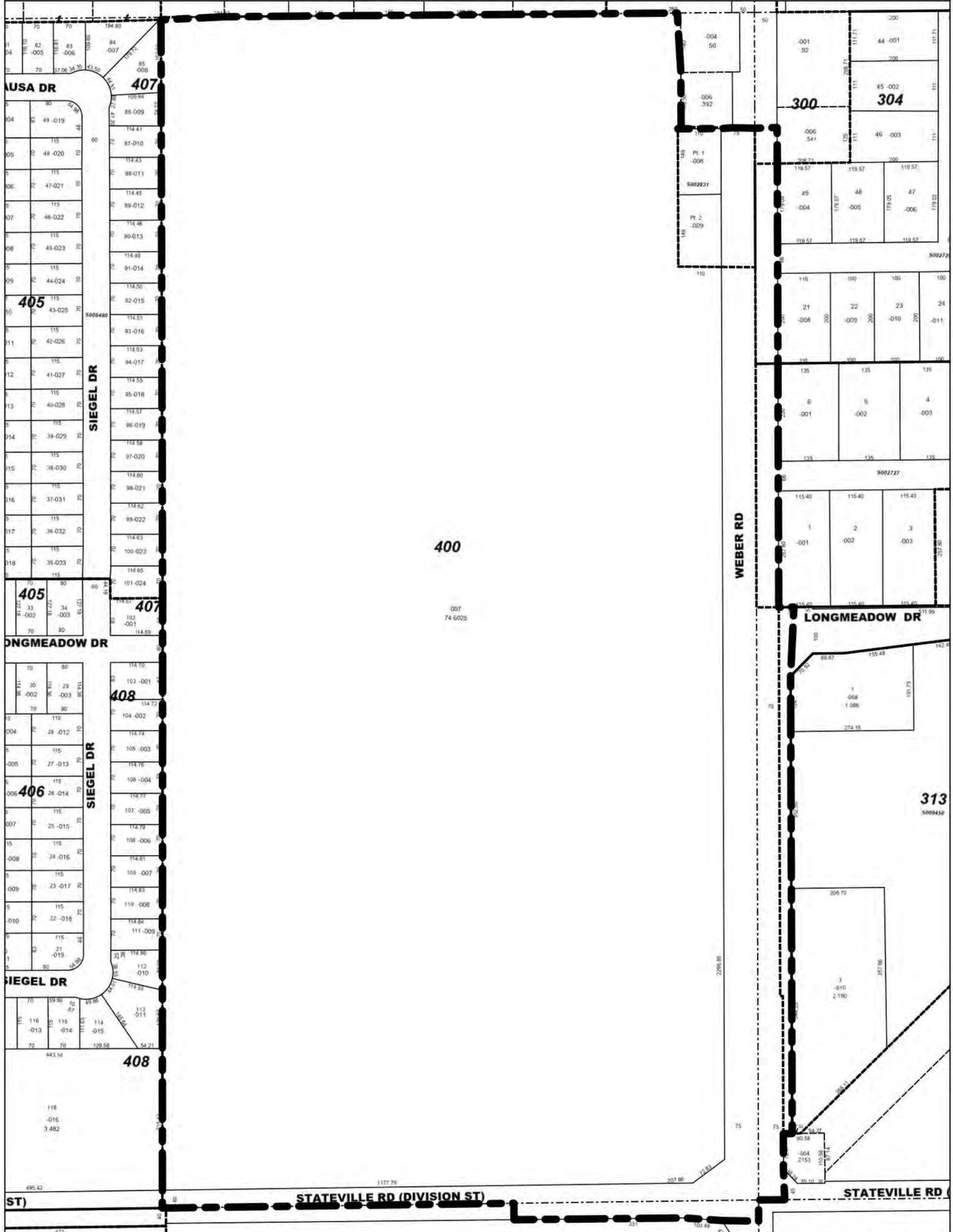


CITY OF CREST HILL

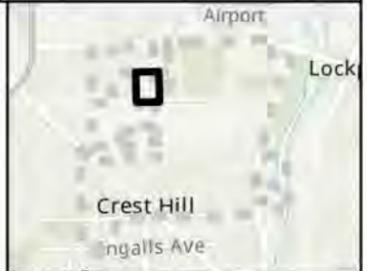
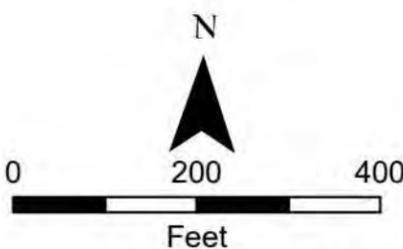
Weber Road/Division Street TIF

Exhibit 1: TIF Boundary



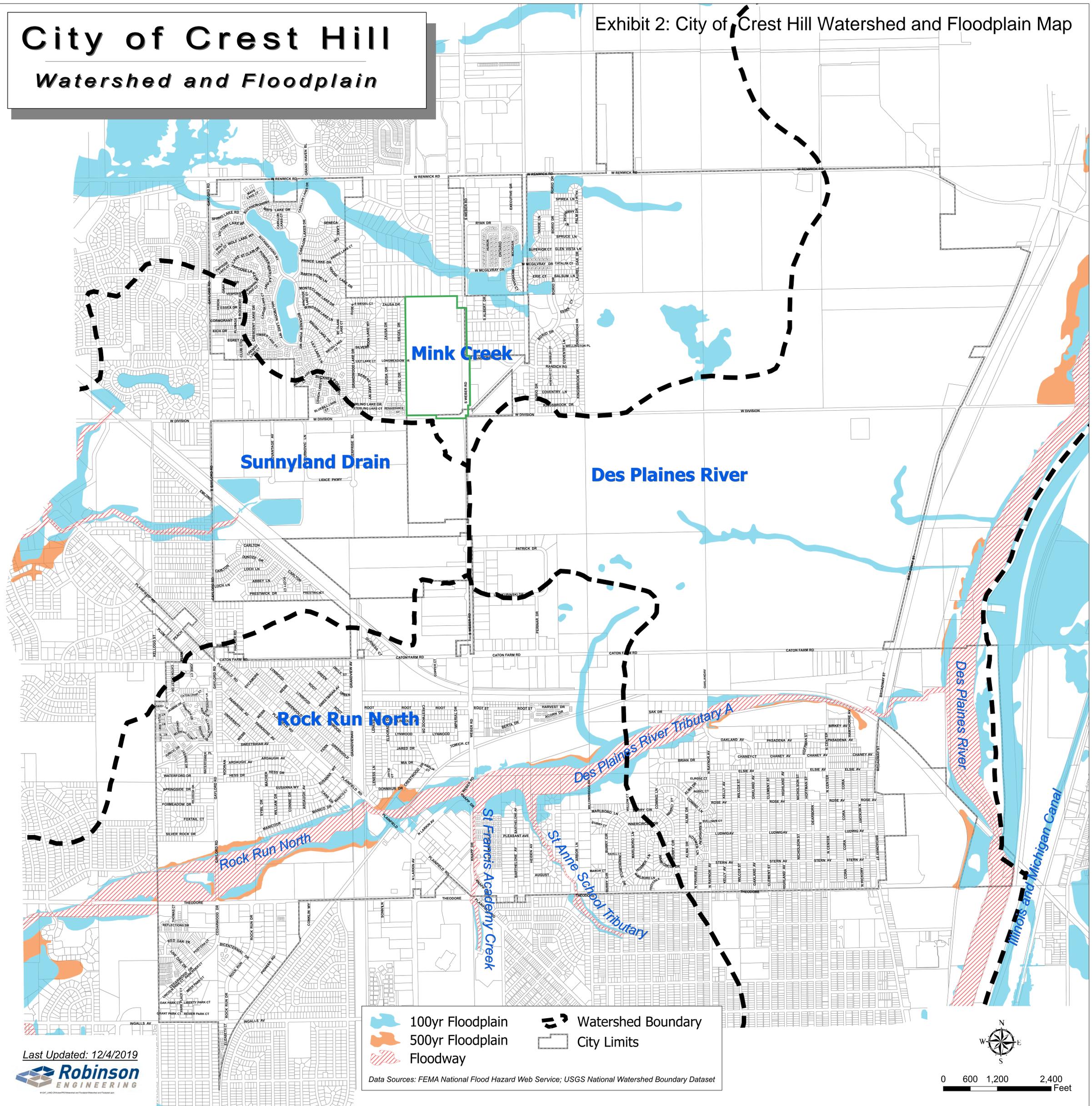
Legend

 Weber Road/
Division Street TIF



City of Crest Hill Watershed and Floodplain

Exhibit 2: City of Crest Hill Watershed and Floodplain Map



Last Updated: 12/4/2019

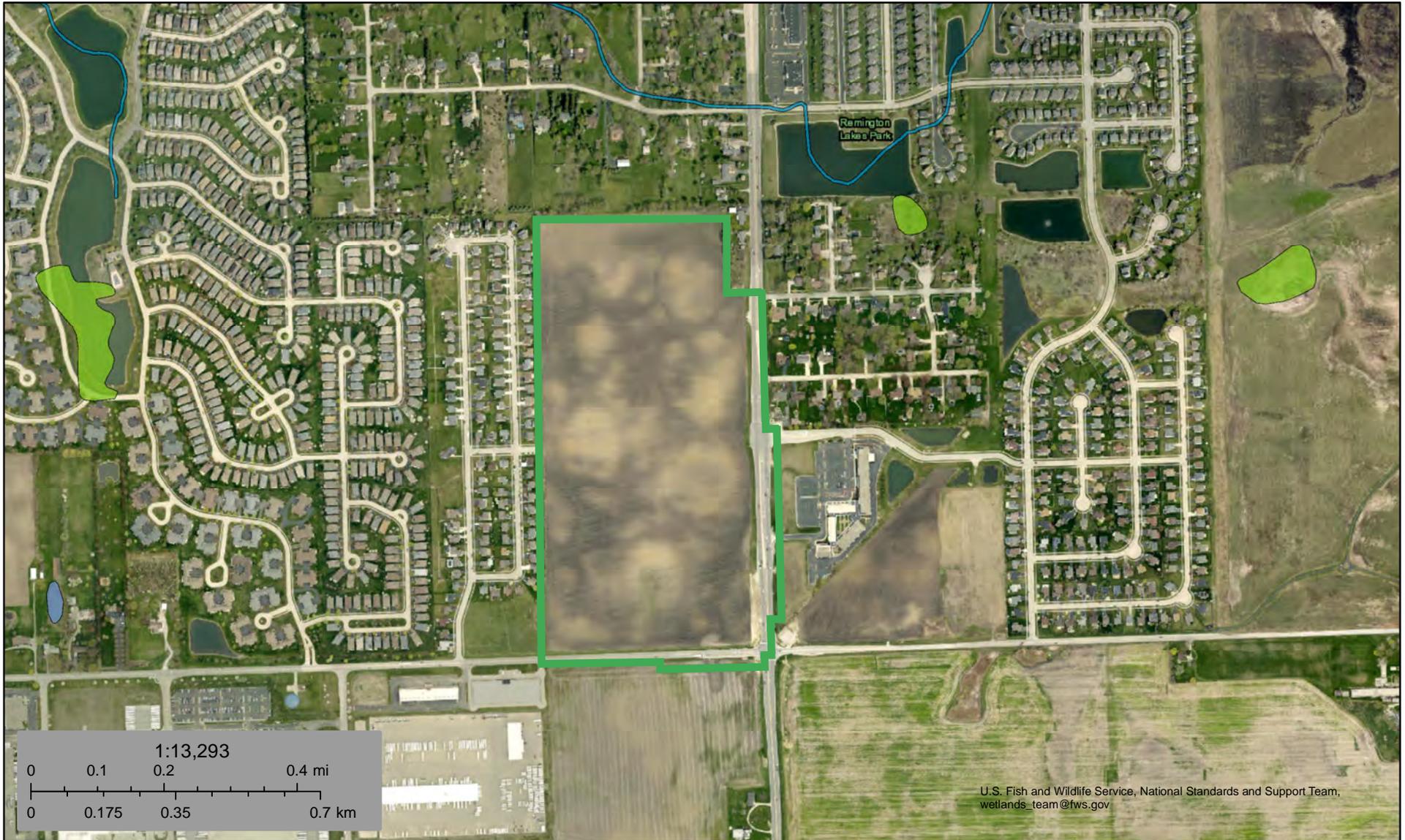


	100yr Floodplain		Watershed Boundary
	500yr Floodplain		City Limits
	Floodway		

Data Sources: FEMA National Flood Hazard Web Service; USGS National Watershed Boundary Dataset



0 600 1,200 2,400
Feet



December 9, 2022

Wetlands

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

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

Exhibit 4: FEMA Flood Plain Map, Panel 17197C0134G, dated February 15, 2019



FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT
THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT [HTTP://MSC.FEMA.GOV](http://MSC.FEMA.GOV)

- SPECIAL FLOOD HAZARD AREAS**
 - Without Base Flood Elevation (BFE) Zone A, V, AB9
 - With BFE or Depth Zone AE, AO, AH, VE, AR
 - Regulatory Floodway
- OTHER AREAS OF FLOOD HAZARD**
 - 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
 - Future Conditions 1% Annual Chance Flood Hazard Zone X
 - Area with Reduced Flood Risk due to Levee See Notes Zone X
 - Area with Flood Risk due to Levee Zone D
- OTHER AREAS**
 - NO SCREEN Area of Minimal Flood Hazard Zone X
 - Area of Undetermined Flood Hazard Zone D
- GENERAL STRUCTURES**
 - Channel, Culvert, or Storm Sewer
 - Dam, Jetty, or Weir
 - Levee, Dike or Floodwall
- CROSS SECTIONS**
 - Cross Sections with 1% Annual Chance Water Surface Elevation (BFE) 718.7, 717.5
 - Coastal Transect 12
 - Coastal Transect Baseline
 - Profile Baseline
 - Hydrographic Feature
 - Base Flood Elevation Line (BFE) 512
- OTHER FEATURES**
 - Limit of Study
 - Jurisdiction Boundary

NOTES TO USERS

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products, or the National Flood Insurance Program (NFIP) in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-368-6227) or visit the FEMA Flood Map Service Center website at <http://msc.fema.gov>. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website.

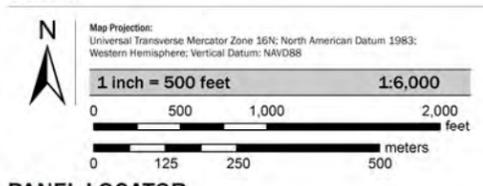
Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Flood Map Service Center at the number listed above.

For community and countywide map dates refer to the Flood Insurance Study report for this jurisdiction. To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

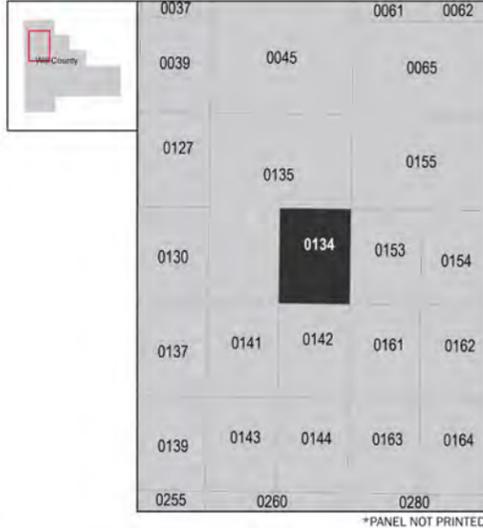
Base map information shown on this FIRM was provided in digital format by Will County, Illinois. This information was derived from digital orthorectification at a spatial resolution of 4 inches where available and 9 inches otherwise, from aerial photography dated 2013.

ILLINOIS
 Illinois State Water Survey
 PEABODY RESEARCH INSTITUTE

SCALE



PANEL LOCATOR



NATIONAL FLOOD INSURANCE PROGRAM
 FLOOD INSURANCE RATE MAP

WILL COUNTY, ILLINOIS
 and Incorporated Areas

PANEL 134 of 585

FEMA
 National Flood Insurance Program

Panel Contains:

COMMUNITY	NUMBER	PANEL SUFFIX
CREST HILL, CITY OF	170699 0134	G
JOLIET, CITY OF	170702 0134	G
WILL COUNTY	170695 0134	G

VERSION NUMBER 2.3.3.3
 MAP NUMBER 17197C0134G
 MAP REVISED FEBRUARY 15, 2019



FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT
THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT [HTTP://MSC.FEMA.GOV](http://MSC.FEMA.GOV)

	Without Base Flood Elevation (BFE) Zone A, V, A19
	With BFE or Depth Zone AE, AO, AH, VE, AR
	Regulatory Floodway
	0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
	Future Conditions 1% Annual Chance Flood Hazard Zone X
	Area with Reduced Flood Risk due to Levee See Notes Zone X
	Area with Flood Risk due to Levee Zone D
	Area of Minimal Flood Hazard Zone X
	Area of Undetermined Flood Hazard Zone D
	Channel, Culvert, or Storm Sewer
	Dam, Jetty, or Weir
	Levee, Dike or Floodwall
	Cross Sections with 1% Annual Chance Water Surface Elevation (BFE)
	Coastal Transect
	Coastal Transect Baseline
	Profile Baseline
	Hydrographic Feature
	Base Flood Elevation Line (BFE)
	Limit of Study
	Jurisdiction Boundary

NOTES TO USERS

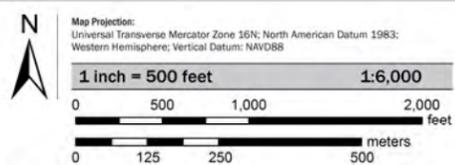
For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products, or the National Flood Insurance Program (NFIP) in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-368-6227) or visit the FEMA Flood Map Service Center website at <http://msc.fema.gov>. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Flood Map Service Center at the number listed above.

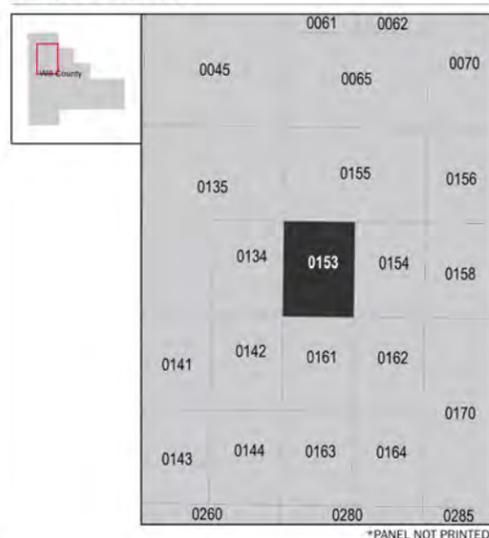
For community and countywide map dates refer to the Flood Insurance Study report for this jurisdiction. To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Base map information shown on this FIRM was provided in digital format by Will County, Illinois. This information was derived from digital orthorectification at a spatial resolution of 4 inches where available and 9 inches otherwise, from aerial photography dated 2013.

SCALE



PANEL LOCATOR



NATIONAL FLOOD INSURANCE PROGRAM
 FLOOD INSURANCE RATE MAP

WILL COUNTY, ILLINOIS
 and Incorporated Areas

PANEL 153 of 585

COMMUNITY	NUMBER	PANEL SUFFIX
CREST HILL, CITY OF	170699	0153 G
WILL COUNTY	170695	0153 G

FEMA
 National Flood Insurance Program

Exhibit 6: Soils Map showing Soil Classification Types

AASHTO Group Classification (Surface)—Will County, Illinois



Map Scale: 1:4,830 if printed on A portrait (8.5" x 11") sheet.

0 50 100 200 300 Meters

0 200 400 800 1200 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84



Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

12/12/2022
Page 1 of 3

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

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

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

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

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

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

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

Soil Survey Area: Will County, Illinois
 Survey Area Data: Version 17, Aug 31, 2022

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

Date(s) aerial images were photographed: Jul 7, 2020—Oct 13, 2020

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

MAP LEGEND

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

Soils

Soil Rating Polygons

A-1

A-1-a

A-1-b

A-2

A-2-4

A-2-5

A-2-6

A-2-7

A-3

A-4

A-5

A-6

A-7

A-7-5

A-7-6

A-8

Not rated or not available

Soil Rating Lines

A-1

A-1-a

A-1-b

A-2

A-2-4

A-2-5

A-2-6

A-2-7

A-3

A-4

A-5

A-6

A-7

A-7-5

A-7-6

A-8

Not rated or not available

Soil Rating Points

A-1

A-1-a

A-1-b

A-2

A-2-4

A-2-5

A-2-6

A-2-7

A-3

A-4

A-5

A-6

A-7

A-7-5

A-7-6

A-8

Not rated or not available

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

AASHTO Group Classification (Surface)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
146B	Elliott silt loam, 2 to 4 percent slopes	A-7-6	9.5	11.6%
146B2	Elliott silty clay loam, 2 to 4 percent slopes, eroded	A-7-6	3.0	3.7%
232A	Ashkum silty clay loam, 0 to 2 percent slopes	A-7-5	47.7	58.2%
294B	Symerton silt loam, 2 to 5 percent slopes	A-7-6	21.7	26.5%
Totals for Area of Interest			82.0	100.0%

Description

AASHTO group classification is a system that classifies soils specifically for geotechnical engineering purposes that are related to highway and airfield construction. It is based on particle-size distribution and Atterberg limits, such as liquid limit and plasticity index. This classification system is covered in AASHTO Standard No. M 145-82. The classification is based on that portion of the soil that is smaller than 3 inches in diameter.

The AASHTO classification system has two general classifications: (i) granular materials having 35 percent or less, by weight, particles smaller than 0.074 mm in diameter and (ii) silt-clay materials having more than 35 percent, by weight, particles smaller than 0.074 mm in diameter. These two divisions are further subdivided into seven main group classifications, plus eight subgroups, for a total of fifteen for mineral soils. Another class for organic soils is used.

For each soil horizon in the database one or more AASHTO Group Classifications may be listed. One is marked as the representative or most commonly occurring. The representative classification is shown here for the surface layer of the soil.

Rating Options

Aggregation Method: Dominant Condition

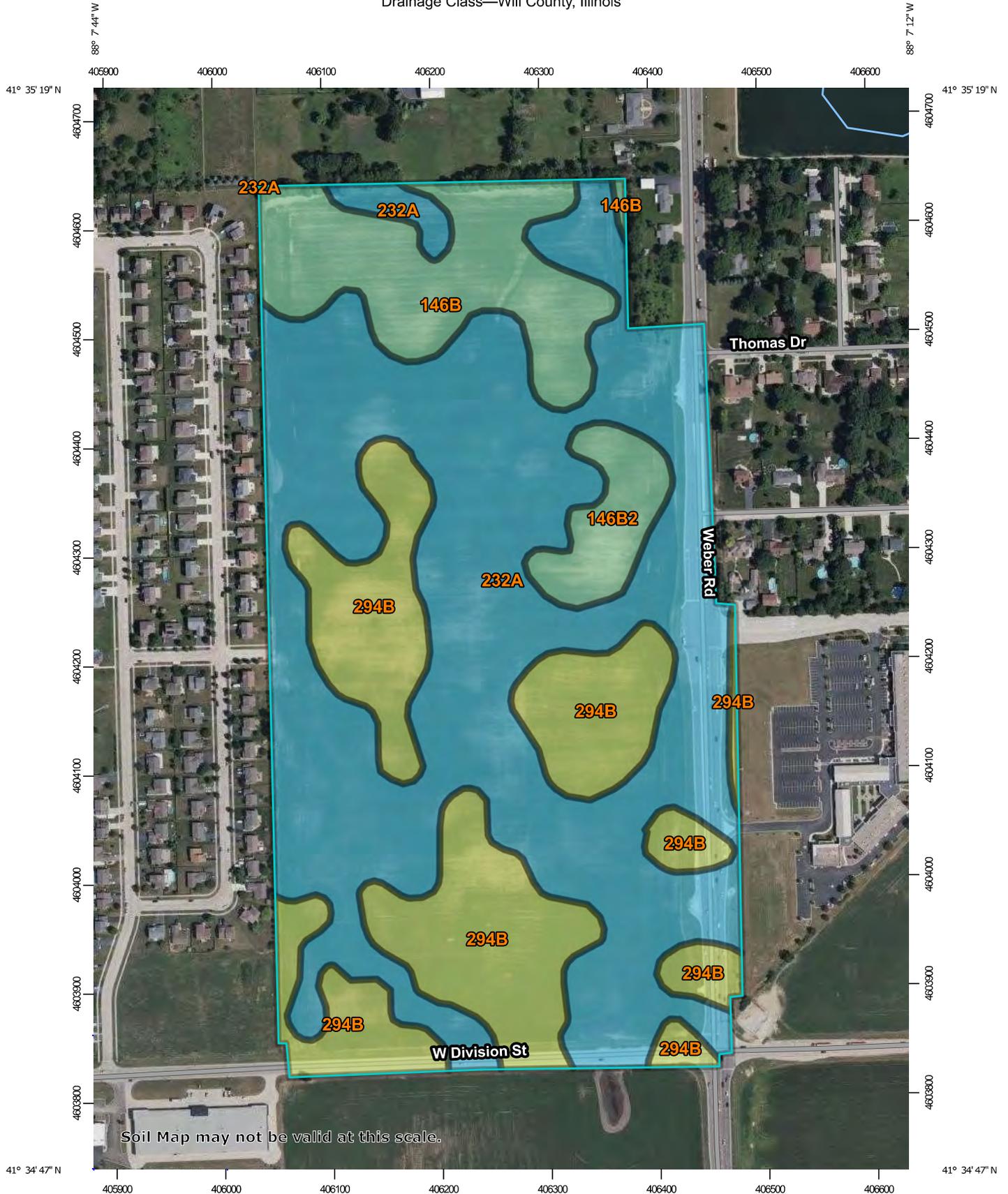
Component Percent Cutoff: None Specified

Tie-break Rule: Lower

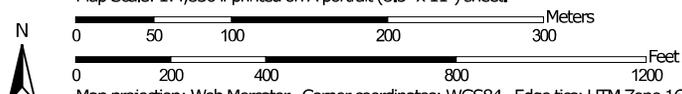
Layer Options (Horizon Aggregation Method): Surface Layer (Not applicable)

Exhibit 7: Soils Map showing Drainage Classification

Drainage Class—Will County, Illinois



Map Scale: 1:4,830 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

 Area of Interest (AOI)	 Excessively drained
Soils	 Somewhat excessively drained
Soil Rating Polygons	 Well drained
 Excessively drained	 Moderately well drained
 Somewhat excessively drained	 Somewhat poorly drained
 Well drained	 Poorly drained
 Moderately well drained	 Very poorly drained
 Somewhat poorly drained	 Subaqueous
 Poorly drained	 Not rated or not available
 Very poorly drained	
 Subaqueous	
 Not rated or not available	
	Water Features
	 Streams and Canals
	Transportation
	 Rails
	 Interstate Highways
	 US Routes
	 Major Roads
	 Local Roads
	Background
	 Aerial Photography
 Excessively drained	
 Somewhat excessively drained	
 Well drained	
 Moderately well drained	
 Somewhat poorly drained	
 Poorly drained	
 Very poorly drained	
 Subaqueous	
 Not rated or not available	
	Soil Rating Points

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

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

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

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

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

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

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

Soil Survey Area: Will County, Illinois
 Survey Area Data: Version 17, Aug 31, 2022

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

Date(s) aerial images were photographed: Jul 7, 2020—Oct 13, 2020

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

Drainage Class

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
146B	Elliott silt loam, 2 to 4 percent slopes	Somewhat poorly drained	9.5	11.6%
146B2	Elliott silty clay loam, 2 to 4 percent slopes, eroded	Somewhat poorly drained	3.0	3.7%
232A	Ashkum silty clay loam, 0 to 2 percent slopes	Poorly drained	47.7	58.2%
294B	Symerton silt loam, 2 to 5 percent slopes	Moderately well drained	21.7	26.5%
Totals for Area of Interest			82.0	100.0%

Description

"Drainage class (natural)" refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized—excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained, and very poorly drained. These classes are defined in the "Soil Survey Manual."

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Exhibit 8: Soils Map showing Ponding Frequency

Ponding Frequency Class—Will County, Illinois



Map Scale: 1:4,830 if printed on A portrait (8.5" x 11") sheet.

0 50 100 200 300 Meters

0 200 400 800 1200 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

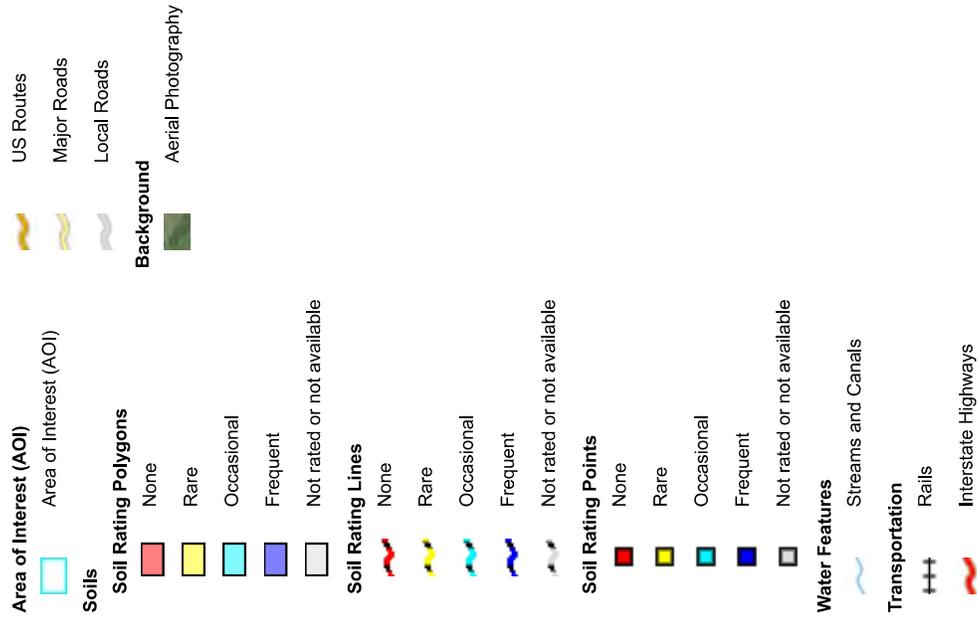


Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

12/12/2022
Page 1 of 3

MAP LEGEND



MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

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

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

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

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

Soil Survey Area: Will County, Illinois
 Survey Area Data: Version 17, Aug 31, 2022

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

Date(s) aerial images were photographed: Jul 7, 2020—Oct 13, 2020

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

Ponding Frequency Class

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
146B	Elliott silt loam, 2 to 4 percent slopes	None	9.5	11.6%
146B2	Elliott silty clay loam, 2 to 4 percent slopes, eroded	None	3.0	3.7%
232A	Ashkum silty clay loam, 0 to 2 percent slopes	Frequent	47.7	58.2%
294B	Symerton silt loam, 2 to 5 percent slopes	None	21.7	26.5%
Totals for Area of Interest			82.0	100.0%

Description

Ponding is standing water in a closed depression. The water is removed only by deep percolation, transpiration, or evaporation or by a combination of these processes. Ponding frequency classes are based on the number of times that ponding occurs over a given period. Frequency is expressed as none, rare, occasional, and frequent.

"None" means that ponding is not probable. The chance of ponding is nearly 0 percent in any year.

"Rare" means that ponding is unlikely but possible under unusual weather conditions. The chance of ponding is nearly 0 percent to 5 percent in any year.

"Occasional" means that ponding occurs, on the average, once or less in 2 years. The chance of ponding is 5 to 50 percent in any year.

"Frequent" means that ponding occurs, on the average, more than once in 2 years. The chance of ponding is more than 50 percent in any year.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

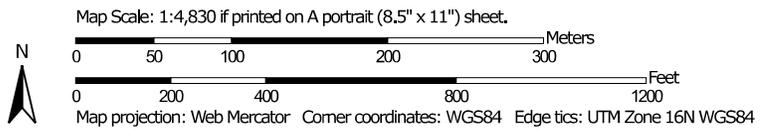
Tie-break Rule: More Frequent

Beginning Month: January

Ending Month: December

Exhibit 9: Soils Map showing Hydrologic Soils Groups

Hydrologic Soil Group—Will County, Illinois



MAP LEGEND

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

Soils

Soil Rating Polygons

	A
	A/D
	B
	B/D
	C
	C/D
	D
	Not rated or not available

Soil Rating Lines

	A
	A/D
	B
	B/D
	C
	C/D
	D
	Not rated or not available

Water Features

	Streams and Canals
--	--------------------

Transportation

	Rails
	Interstate Highways
	US Routes
	Major Roads
	Local Roads

Background

	Aerial Photography
--	--------------------

Soil Rating Points

	A
	A/D
	B
	B/D

C

	C
	C/D

D

	D
	Not rated or not available

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

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

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

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

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

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

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

Soil Survey Area: Will County, Illinois
 Survey Area Data: Version 17, Aug 31, 2022

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

Date(s) aerial images were photographed: Jul 7, 2020—Oct 13, 2020

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

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
146B	Elliott silt loam, 2 to 4 percent slopes	C/D	9.5	11.6%
146B2	Elliott silty clay loam, 2 to 4 percent slopes, eroded	C/D	3.0	3.7%
232A	Ashkum silty clay loam, 0 to 2 percent slopes	C/D	47.7	58.2%
294B	Symerton silt loam, 2 to 5 percent slopes	C	21.7	26.5%
Totals for Area of Interest			82.0	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

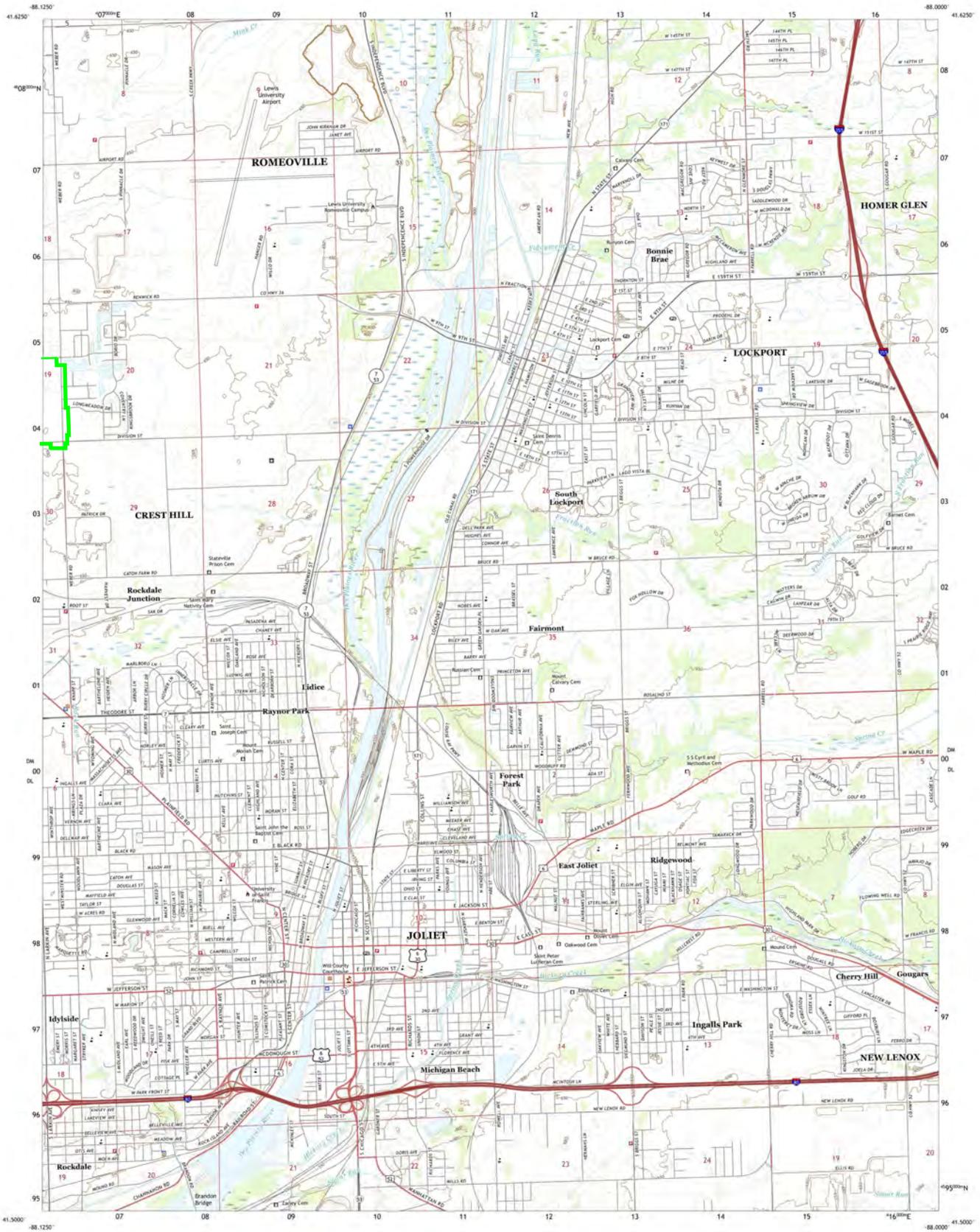
Exhibit 10: USGS US Topographic Map, Joliet Quadrangle



U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

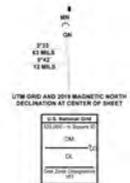


JOLIET QUADRANGLE
ILLINOIS - WILL COUNTY
7.5-MINUTE SERIES



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and
1:500-meter and 1:250-meter Transverse Mercator Zone 16E
This map is not a legal document. Boundaries may be
generated for this map only. Private lands within government
reservations may not be shown. Obtain permission before
entering private lands.

Imagery: NADP, August 2019 - August 2019
Roads: U.S. Census Bureau, 2017
Names: U.S. Census Bureau, 2020
Hydrography: National Hydrography Dataset, 2002-2020
Contours: National Elevation Dataset, 2016
Boundaries: Multiple sources; see metadata file 2018-2019
Public Land Survey System: BLM, 2020
Waterlines: FWS National Wetlands Inventory, Not Available



CONTOUR INTERVAL: 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988
This map was produced to conform with the
National Geospatial Program G-Topo Product Standard.



ROAD CLASSIFICATION

- Expressway
- Interstate Hwy
- State Route
- Local Connector
- Local Road
- US Route
- State Route

JOLIET, IL
2021

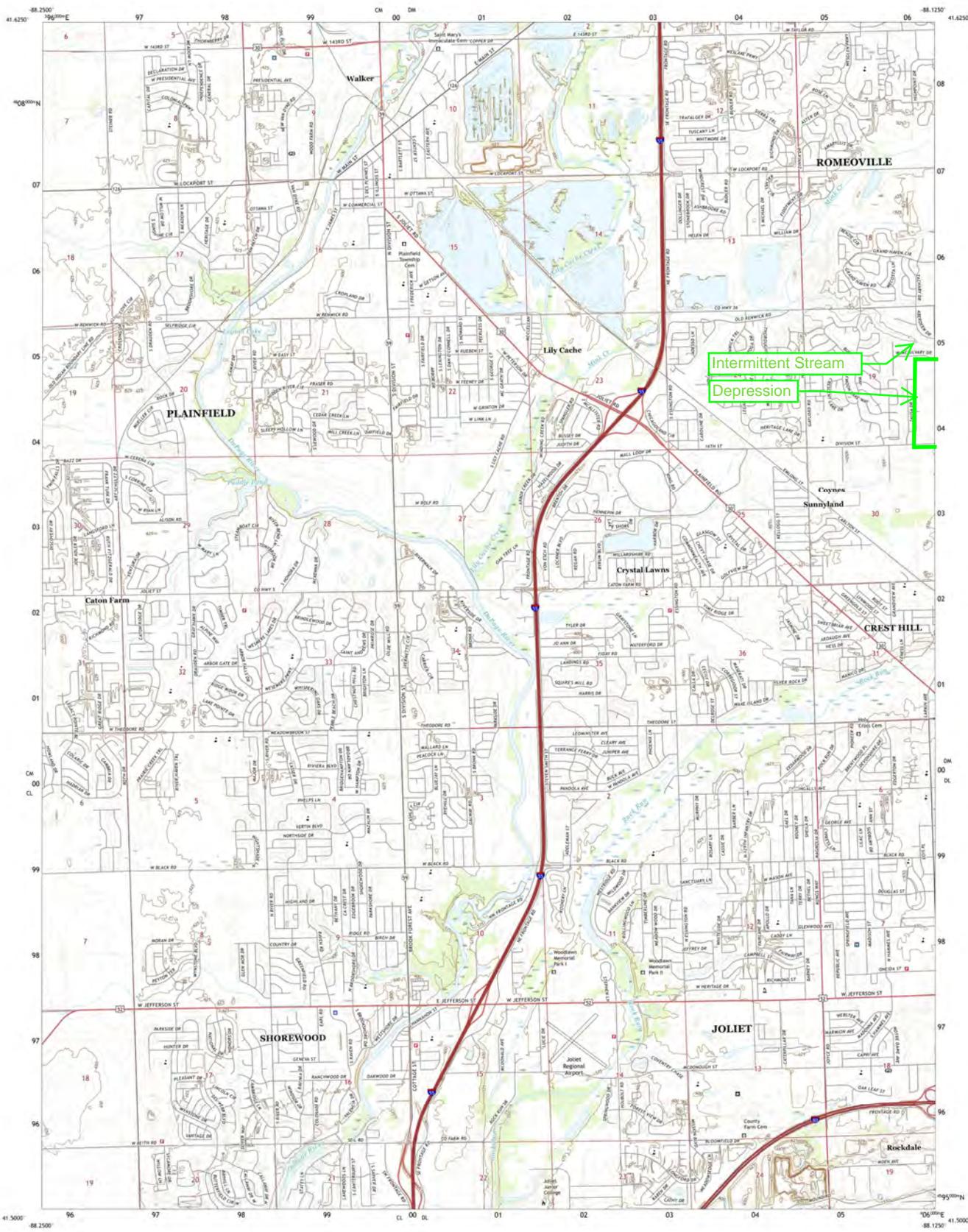
Exhibit 11: USGS US Topographic Map, Plainfield Quadrangle



U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

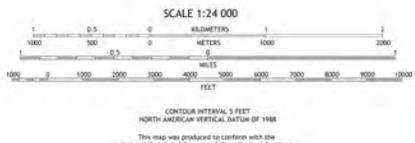


PLAINFIELD QUADRANGLE
ILLINOIS - WILL COUNTY
7.5-MINUTE SERIES



Produced by the United States Geological Survey
 Horizontal Datum of 1983 (NAD83)
 World Geodetic System of 1984 (WGS84). Projection and
 1:500-meter grid (Universal Transverse Mercator, Zone 16T)
 This map is not a legal document. Boundaries may be
 generalized for this map scale. Private lands within government
 jurisdictions may not be shown. Urban permission before
 entering private lands.

Map: 1:50,000, NAD, August 2019, September 2019
 Scale: 1:50,000
 Name: USGS
 Hydrography: National Hydrography Dataset, 2010, 2016
 Contour: National Elevation Dataset, 2016
 Boundary: National Wetlands Inventory, 2016
 Public Land Survey System: BLM, 2010
 Wetlands: National Wetlands Inventory, Not Available



ROAD CLASSIFICATION

Expressway	Local Collector
Secondary Hwy	Local Road
Ramp	EWI
Interstate Route	US Route
	State Route

1 Aurora South
 2 Aurora
 3 Aurora West
 4 Joliet SE
 5 Joliet
 6 Joliet
 7 Chicago
 8 Elwood



Bollinger Environmental, Inc.
P.O. Box 39
Downers Grove, Illinois 60515
630-968-1960

Exhibit 12: Wetland Assessment & Farmed Wetland Determination Report

WETLAND ASSESSMENT & FARMED WETLAND DETERMINATION REPORT
± 76 ACRE CREST HILL PROPERTY
CREST HILL, WILL COUNTY, ILLINOIS

Prepared for

Heidner Properties, Inc.
5277 Trillium Boulevard
Hoffman Estates, Illinois 60192

Prepared by

Bollinger Environmental, Inc.
P.O. Box 39
Downers Grove, Illinois 60515

Bollinger Environmental Project No. 144-004-16

September 2021

September 18, 2021

Email

Mr. Bruce Larson
Heidner Properties, Inc.
5277 Trillium Boulevard
Hoffman Estates, Illinois 60192

Subject: Wetland Assessment & Farmed Wetland Determination for the
± 76 Acre Crest Hill Property, Crest Hill, Will County, Illinois
(Bollinger Environmental Project No. 144-004-16)

Dear Mr. Larson:

On September 2, 2021, Bollinger Environmental, Inc. (BEI) completed a wetland assessment and farmed wetland determination for the ± 76 Acre Crest Hill Property located northwest of the intersection of Division Street and Weber Road, Crest Hill, Will County, Illinois. No wetlands were identified on the non-agricultural portions of the site. On the agricultural portions of the site **one (1) Farmed Wetland** (Farmed Wetland 1) was identified.

Below are general regulations regarding wetlands/waters of the U.S. (WOUS) and any potential wetland/waters of the U.S. impacts should be coordinated with the City of Crest Hill (City), the Will County Land Use Department (County), and the U.S. Army Corps of Engineers (USACE, Chicago District). This delineation is the opinion of BEI and, therefore, we recommend confirming wetland/WOUS boundaries with the USACE.

U.S. Army Corps of Engineers Regulations

USACE regulates the discharge of dredged or fill material into jurisdictional wetlands and “waters of the U.S.” under Section 404 of the Clean Water Act (Act). Jurisdictional areas covered by the Act are navigable waterways, tributaries to navigable waterways, and wetlands adjacent thereto. Isolated wetlands are exempt from federal regulations following the January 2001 Supreme Court decision (SWANCC v. USACE).

Under current USACE regulations (USACE 2012), to prevent a net loss of wetland, any disturbance of wetlands/waters of the U.S. area requires a permit application. Filling 0.10 acre or more of jurisdictional wetland/waters of the U.S. requires a permit with mitigation at a 1.5:1 replacement ratio. The mitigation ratio increases if an area is considered a High Quality Aquatic Resource (HQAR). Areas of wetland/waters of the U.S. fill less than 0.10 acre also require a permit; however, mitigation may or may not be required depending on USACE discretion. This discretionary judgment is determined by the overall quality of the wetland and what impact the loss of wetland would have on the surrounding area.

USACE regulations require an upland buffer of native plants adjacent to all created, restored, enhanced, and preserved wetlands 0.10 acre or larger. Buffer width requirements are as follows:

- For a linear body of water (e.g., river, stream, creek, etc.), the buffer shall be a minimum of 50 feet from the Ordinary High Water Mark (OHWM) on both sides of the linear water body.
- For any other “waters of the U.S.,” including wetlands from 0.25 acres up to 0.50 acres, the buffer shall be a minimum of 30 feet.
- For any “waters of the U.S.,” including wetland over 0.50 acres, the buffer shall be minimum of 50 feet.
- For any area determined to be a HQAR, the buffer shall be 100 feet wide (80 foot minimum).

Generally, the following three steps must be attempted before authorization is issued:

- (1) Avoid wetland and “waters of the U.S.,”
- (2) Minimize wetland and “waters of the U.S.” fill; and
- (3) Provide compensatory mitigation.

The attached report describes the identified wetlands and provides the methodology and reference material used to assist in the wetland assessment. Data Forms, required by the USACE are also included. This assessment is based on field conditions at the time of the BEI site visit and our understanding of current federal, state, and local regulations. An evaluation of historic site conditions was not performed.

Please contact our office should you have any additional questions or if we can be of further assistance.

Sincerely,

A handwritten signature in black ink, appearing to read "Paul Bollinger". The signature is stylized and written in cursive.

Paul Bollinger, PWS,
President/Ecologist
BOLLINGER ENVIRONMENTAL, INC.

**WETLAND ASSESSMENT & FARMED WETLAND DETERMINATION REPORT
± 76 ACRE CREST HILL PROPERTY
CREST HILL, WILL COUNTY, ILLINOIS**

INTRODUCTION

On September 2, 2021, Bollinger Environmental, Inc. (BEI) completed a wetland assessment and farmed wetland determination for the ± 76 Acre Crest Hill Property located northwest of the intersection of Division Street and Weber Road, Crest Hill, Will County, Illinois. No wetlands were identified on the non-agricultural portions of the site.

On the agricultural portions of the site one (1) Farmed Wetland (Farmed Wetland 1) was identified.

Below are general regulations regarding wetlands/waters of the U.S. (WOUS) and any potential wetland/waters of the U.S. impacts should be coordinated with the City of Crest Hill (City), the Will County Land Use Department (County), and the U.S. Army Corps of Engineers (USACE, Chicago District). This delineation is the opinion of BEI and, therefore, we recommend confirming wetland/WOUS boundaries with the USACE.

This report was prepared to document our findings and to determine if the on-site wetland areas are jurisdictional under Section 404 of the Clean Water Act. Wetland boundaries were delineated in accordance with methodology established by the U.S. Army Corps of Engineers (USACE). The approximate wetland boundaries are shown in Appendix A. Appendices illustrate the following:

- A) Exhibits
 - 1) Location Map
 - 2) National Wetland Inventory (NWI) Map
 - 3) Soil Survey Map
 - 4) FEMA FIRM Map
 - 5) USGS Topographic Map
 - 6) Aerial Photograph - Wetland Boundaries and Data Point Locations
 - 7) Large-scale Aerial Photograph of Property and Vicinity
- B) Site Photographs
- C) U.S. Army Corps Forms
- D) Floristic Quality Assessments
- E) Farmed Wetland Aerials

The “± 76 Acre Crest Hill Property” is located northwest of the intersection of Division Street and Weber Road in Crest Hill, Will County, Illinois, see Appendix A, Exhibit 1 for locations. Geographically, the study area is primarily found in the southeastern quarter of Section 19 of T36N, R10E, and East of the Third Principal Meridian. The property appears to be within the Mink Creek watershed that connects to the DuPage River. The DuPage River

terminates at the confluence with the Des Plaines River (HUC Code 07120004). The central portion of the study area is located at +41.584132°N Latitude, -88.124714°W Longitude.

The study area consists of fallow agricultural field. Farmed Wetland 1, identified within the former on-site agricultural fields, is summarized in Table 1 below.

Table 1: Wetland Investigation Summary

AREA*	NATIVE MEAN C	NATIVE FQAI	DOMINANT VEGETATION	TYPE
Farmed Wetland 1	0.00	0.00	red root (<i>Amaranthus retroflexus</i>) & common panic grass (<i>Panicum capillare</i>)	Emergent

*Jurisdictional Status should be confirmed by the USACE.

METHODOLOGY

Two methods were used during this investigation. Therefore, the methods and results section are broken down into two sections: A) Wetland Assessment (Non-Agricultural portions of the site) and B) Farmed Wetland Determination (Agricultural portions of the site).

A) Wetland Assessment (Non-Agricultural portions of the site)

Our methodology followed *The Corps of Engineers Wetland Delineation Manual*, dated January 1987 as well as the *Regional supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region*, dated August 2010. Both identify the mandatory technical criteria for wetland identification. The three essential characteristics of a jurisdictional wetland are hydrophytic vegetation, hydric soils and wetland hydrology as described below:

I) Hydrophytic Vegetation: Hydrophytic vegetation is defined as the community of macrophytes that occurs in areas where inundation or soil saturation is either permanent or of sufficient frequency and duration to exert a controlling influence on the plant species present. Hydrophytic vegetation is present when the plant community is dominated by species that can tolerate prolonged inundation or soil saturation during the growing season. Wetland indicator status is the estimated probability a plant species occurs in a wetland area. Lichvar (2020) designated indicator statuses for the U.S. Fish and Wildlife Service, Region 3, which are based on separating plants into five basic groups:

- (1) OBL (Obligate Wetland) almost always occur (estimated probability >99%) in wetlands under natural conditions;
- (2) FACW (Facultative Wetland) usually occur in wetlands (estimated probability 67-99%), but occasionally are found in nonwetlands;

- (3) FAC (Facultative) are equally likely to occur in wetlands or nonwetlands (estimated probability 34-66%);
- (4) FACU (Facultative Upland) usually occur in nonwetlands (estimated probability 67-99%), but occasionally are found in wetlands (estimated probability 1-33%); and
- (5) UPL (Upland) almost always occur (estimated probability >99%) in nonwetlands under natural conditions.

If greater than 50% of the plants present are FAC, FACW, or OBL the subject area is considered jurisdictional in terms of vegetation.

Indicator statuses were assigned to plants based on observations on their behavior throughout the region. However, some have been modified to best describe the plants in the Chicago region.

Vegetation was sampled within plots to quantitatively characterize wetland and/or upland plant communities within a given area. Within each plot visual estimates of percent cover of each plant species was made for each stratum (trees, saplings and shrubs, herbaceous plants and woody vines). The Dominance Test is then calculated by applying the 50/20 rule. If a plant community passes the Dominance Test, then the vegetation is hydrophytic and no further vegetative analysis is required. However, if the plant community fails the dominance test, and indicators of hydric soil and/or wetland hydrology are present then the Prevalence Index is applied. The Prevalence Index is a weighted average of wetland indicator status of all plant species within a sample plot. If the plant community satisfies the Prevalence Index, then the vegetation is hydrophytic. If the plant community fails Prevalence Index, then it must meet the test Morphological Adaptations to be considered hydrophytic. If this last test fails, then the vegetation is considered non-hydrophytic. Results of vegetative sampling are illustrated on the attached USACE Data Forms.

A vegetative inventory was compiled for the wetland community. The inventory was collected from a meander search documenting every plant species observed at the time of the site visit. The inventory was then inputted into the US Army Corps of Engineers (2017) *Chicago Region FQA (Floristic Quality Assessment) Calculator*. Each native plant species has been given a coefficient of Conservatism value (C-value), ranging from 0-10. Conservatism meaning plants displaying varying degrees of tolerance to disturbance, as well as varying degrees of fidelity to specific habitat integrity. A rating of zero represents common species or species not likely to be found only in natural areas and a rating of 10 represents rare species or species most likely to be found only in natural areas. The Floristic Quality Assessment Index (FQAI) was developed in an attempt to evaluate the level of intrinsic biodiversity from areas with similar C-values, but otherwise differ significantly. This is accomplished by the following equation:

$$FQAI = \text{mean } C\text{-value } \sqrt{N}$$

According to Swink and Wilhelm (1994) and Wilhelm and Rericha (2017), if an area has an average C-value of 3.5 or higher or a FQAI of 35 or more, one can be fairly confident that the site has sufficient floristic quality to be at least of marginal natural area quality. If the average C-value is 4.5 or higher or has a FQAI of 45 or more, then it is almost certain that the remnant has natural area potential. According the USACE, Chicago District, Regional Permit Program (2007), one of the ways a wetland can be considered a “high quality aquatic resource” if the average C-value is 3.5 or greater or if the areas has a FQAI is 20 or greater.

II) Hydric Soils: According to the National Technical Committee for Hydric Soils a hydric soil is a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (USDA Soil Conservation Service 1994). Repeated periods of saturation or inundation combined with microbial activity causes morphological changes within the soil. This promotes biogeochemical processes, such as the accumulation of organic matter and the reduction, translocation, or accumulation of iron and other reducible elements. (USDA Natural Resources Conservation Service (NRCS) 2014). There are 20 hydric soil indicators in the Land Resource Region (LRR) M per the *Field Indicators of Hydric Soils in the United States* (Ver. 8.2, 2018) and if one is present, it is considered a hydric soil. The hydric soil indicators include:

- A1. Histisol
- A2. Histic Epipedon
- A3. Black Histic
- A4. Hydrogen Sulfide
- A5. Stratified Layers
- A10. 2 cm Muck
- A11. Depleted Below A Dark Surface
- A12. Thick Dark Surface
- S1. Sandy Mucky Mineral
- S2. 5 cm Mucky Peat or Peat
- S4. Sandy Gleyed Matrix
- S5. Sandy Redox
- S6. Stripped Matrix
- S7. Dark Surface
- F1. Loamy Mucky Mineral
- F2. Loamy Gleyed Matrix
- F3. Depleted Matrix
- F6. Redox Dark Surface
- F7. Depleted Dark Surface
- F8. Redox Depressions

A soil pit is dug to the appropriate depth to describe the soils profile. Color of the soil matrix and redox, mottling, and gleying within the profile are described using the Munsell Soil Color Charts (Gretagmacbeth 2009). Generally, a hydric soil is present when there is an organic soil, histic epipedon, sulfidic material, aquic or paraquic moisture regime, reducing soils conditions, soil colors gleyed, bright mottles and/or low matrix chroma, soil listed on the hydric soil list, and iron and manganese. Results of soil sampling and if they meet one of the indicators are illustrated on the attached USACE Data Forms.

III) Wetland Hydrology: Wetland hydrology indicators are used in combination with indicators of hydric soil and hydrophytic vegetation. These other indicators reflect a sites history of past episodes of inundation or soil saturation and if it was repeated over a period of time. Areas that have hydrophytic vegetation and hydric soils generally have wetland hydrology (National Research Council 1995). Hydrologic indicators are the most brief of all wetland indicators as occur from recent or long-term meteorological conditions. Typically, the presence of water for a week or more during the growing season creates anaerobic conditions. Anaerobic conditions lead to the prevalence of wetland plants.

An area needs to meet one or more of the primary wetland hydrology indicators, which include: surface water, high water table, saturation, water marks, sediment deposits, drift deposits, algal mat or crust, iron deposits, inundation visible on aerial imagery, sparsely vegetated concave surface, water-stained leaves, aquatic fauna, true aquatic plants, hydrogen sulfide odor, oxidized rhizopheres on living roots, presence of reduced iron, recent iron reduction in tilled soils, thin muck surface, and gauge or well data. Or an area needs to meet two or more of the secondary indicators, which include: surface soil cracks, dry-season water table, crayfish burrows, saturation visible on aerial imagery, stunted or stressed plants, geomorphic position, and the FAC-Neutral test. Results of hydrology are illustrated on the attached USACE Data Forms.

B) Farmed Wetland Determination (Agricultural portions of the site)

BEI staff completed a Farmed Wetland Determination of the Crest Hill Property in Crest Hill, Will County, Illinois to determine on-site farmed wetland boundaries. The review coincided with guidance from the NRCS 1998 wetland mapping conventions. These conventions require a review of various reference maps and five (5) years of USDA-Farm Services Agency (FSA) aerial to identify “wetland signatures”. Aerial slides used were for designated years of approximate normal precipitation based on local precipitation data. If wetland signatures are identified in 3 or more of the 5 normal precipitation years reviewed (>50%), the area is considered to be a potential farmed wetland. Signatures that coincide with mapped NWI wetlands count as 1 year. Potential farmed wetlands were reviewed in the field to determine if they met final criteria to be designated as a farmed wetland.

The Joliet National Weather Service precipitation recording station (Station# IL4530) was the closest to the Property. Therefore, according to procedure the following recommended normal precipitation year slides available were examined: 2003, 2002, 2001, 1998, and 1995. Data Points were taken in Potential Wetland Areas (PWAs) as well as other farmed areas that appear suspicious from current aerial photography.

RESULTS AND DISCUSSION

The following is a brief description of the wetland areas identified on-site, if any, including a list of the dominant plant species, positive wetland hydrology and soils when observed. Detailed information regarding the USACE Data Forms can be found Appendix C. A wetland plant inventory and the results of the US Army Corps of Engineers (2017) *Chicago Region FQA (Floristic Quality Assessment) Calculator* illustrating the wetlands C-value and FQAI can be found in the attached Appendix D.

A) Wetland Assessment (Non-Agricultural portions of the site)

As previously stated, no wetlands were identified within the non-agricultural portions of the subject property/

B) Farmed Wetland Determination (Agricultural portions of the site)

Table 2. Existing Data Sources Summary			
Exhibit	Title of data source	Wetland(s) and/or hydric soils indicated	Comments
1	Location Map	N/A	
2	NWI Map	NO	
3	NRCS Soils Map	YES	232A – Ashkum silty clay loam
4	FIRM	NO	
5	USGS Topographic Map	YES	Several depressional low spots
6	Aerial Photograph	YES	Dark signature

BEI completed a site visit of the subject property on September 2, 2021. The purpose of the site visit was to delineate on-site wetlands/waters of the U.S. and investigate potential farmed wetland areas. If data points are required, site photographs and USACE forms are to be completed at each PWA.

All recommended Farm Service Agency (FSA) slides were examined and all PWAs were indicated on an aerial photograph (Appendix E). Each PWA was evaluated year-by-year and results are summarized in Table 3.

Table 3. Precipitation and Slide Analysis Summary												
Year	Spectral Signature of Potential Wetland Areas (PWA)											
	1	2	3	4	5	6	7	8	9	10	11	12
2003	X	X	X	X	X	X	X					
2002	X	X			X	X	X	X	X	X	X	X
2001		X										
1998		X										
1995		X										
NWI												
Total	2	5	1	1	2	2	2	1	1	1	1	1

X = Crop Damage

The final farmed wetland determination results are shown in Exhibit 6; one farmed wetland was identified during this investigation. Only agricultural land was evaluated in this determination. Twelve PWA’s were identified but did not meet the criteria for farmed wetland, as shown in Table 4. The following spectral signatures/responses were noted in making this determination:

- Potential Wetland Area “1”. Crop damage is present in 2 of the 5 years of normal

precipitation. The PWA did not appear in at least 3 of 5 normal precipitation years. Therefore, Potential Wetland Area “1” is not considered a farmed wetland.

- Potential Wetland Area “2”. Crop damage is present in 5 of the 5 years of normal precipitation. The PWA appears in at least 3 of 5 normal precipitation years. Therefore, Potential Wetland Area “1” is considered a farmed wetland. This was labeled as Farmed Wetland 1 in Appendix A, Exhibit 6.
- Potential Wetland Area “3”. Crop damage is present in 1 of the 5 years of normal precipitation. The PWA did not appear in at least 3 of 5 normal precipitation years. Therefore, Potential Wetland Area “3” is not considered a farmed wetland.
- Potential Wetland Area “4”. Crop damage is present in 1 of the 5 years of normal precipitation. The PWA did not appear in at least 3 of 5 normal precipitation years. Therefore, Potential Wetland Area “4” is not considered a farmed wetland.
- Potential Wetland Area “5”. Crop damage is present in 2 of the 5 years of normal precipitation. The PWA did not appear in at least 3 of 5 normal precipitation years. Therefore, Potential Wetland Area “5” is not considered a farmed wetland.
- Potential Wetland Area “6”. Crop damage is present in 2 of the 5 years of normal precipitation. The PWA did not appear in at least 3 of 5 normal precipitation years. Therefore, Potential Wetland Area “6” is not considered a farmed wetland.
- Potential Wetland Area “7”. Crop damage is present in 2 of the 5 years of normal precipitation. The PWA did not appear in at least 3 of 5 normal precipitation years. Therefore, Potential Wetland Area “7” is not considered a farmed wetland.
- Potential Wetland Area “8”. Crop damage is present in 1 of the 5 years of normal precipitation. The PWA did not appear in at least 3 of 5 normal precipitation years. Therefore, Potential Wetland Area “8” is not considered a farmed wetland.
- Potential Wetland Area “9”. Crop damage is present in 1 of the 5 years of normal precipitation. The PWA did not appear in at least 3 of 5 normal precipitation years. Therefore, Potential Wetland Area “9” is not considered a farmed wetland.
- Potential Wetland Area “10”. Crop damage is present in 1 of the 5 years of normal precipitation. The PWA did not appear in at least 3 of 5 normal precipitation years. Therefore, Potential Wetland Area “10” is not considered a farmed wetland.
- Potential Wetland Area “11”. Crop damage is present in 1 of the 5 years of normal precipitation. The PWA did not appear in at least 3 of 5 normal precipitation years. Therefore, Potential Wetland Area “11” is not considered a farmed wetland.
- Potential Wetland Area “12”. Crop damage is present in 1 of the 5 years of normal precipitation. The PWA did not appear in at least 3 of 5 normal precipitation years. Therefore, Potential Wetland Area “12” is not considered a farmed wetland.

Based on our evaluation of existing data and the site visit, Appendix A, Exhibit 6 is considered our Final Farmed Wetland Determination. Only PWA 2 (Farmed Wetland 1) meets the criteria for being a farmed wetland area.

REFERENCE MATERIAL

The following reference materials were reviewed and used to assist in the wetland field reconnaissance. Exhibits are included in Appendix A.

LOCATION

The “Crest Hill Property” is located northwest of the intersection of Division Street and Weber Road in Crest Hill, Will County, Illinois, see Appendix A, Exhibit 1 for locations. Geographically, the study area is primarily found in the southeastern quarter of Section 19 of T36N, R10E, and East of the Third Principal Meridian. The property appears to be within the Mink Creek watershed that connects to the DuPage River. The DuPage River terminates at the confluence with the Des Plaines River (HUC Code 07120004). The central portion of the study area is located at +41.584132°N Latitude, -88.124714°W Longitude.

USFWS NATIONAL WETLAND INVENTORY (NWI)

The U.S. Fish and Wildlife Service National Wetland Inventory map (NWI) does not indicate any wetlands are located within the study area (Exhibit 2). The NWI serves only as a large-scale guide and actual wetland locations and types often vary from that mapped.

USDA SOIL SURVEY

The Soil Survey of Will County, Illinois (Hanson 2004) was reviewed to determine the location of hydric soils on site (Exhibit 3). Mapped hydric soils can be indicative of wetland conditions. One (1) soil unit series, Ashkum silty clay loam (232A), is considered hydric by the NRCS. Three (3) soil unit series are considered partially hydric due to the presence of hydric inclusions within these soil unit series.

The following four soils are mapped within the study area:

146B	Elliot silt loam, 2 to 4% slopes	[PARTIALLY HYDRIC]
146B2	Elliot silt loam, 2 to 4% slopes, eroded	[PARTIALLY HYDRIC]
232A	Ashkum silty clay loam, 0 to 2% slopes	[HYDRIC]
294B	Symerton silt loam, 2 to 5% slopes	[PARTIALLY HYDRIC]

FEMA FLOOD INSURANCE RATE MAP (FIRM)

The FEMA Flood Insurance Rate Maps (FIRMs) for Will County, Illinois, and Incorporated Areas, (Exhibit 4) were reviewed to determine the presence of floodplain, which can be indicative of wetland hydrology. The FIRMs (Panel #'s: 17197C0134E, 17197C0153E, 9/6/1995) do not indicate any floodway or floodplain zones within the boundaries of the study area.

USGS TOPOGRAPHIC MAP

The USGS Topographic Map (Exhibit 5) was reviewed to estimate the area topography and general drainage pattern on-site. The property is relatively flat, but the general pattern of on-site drainage appears to flow northward towards Mink Creek.

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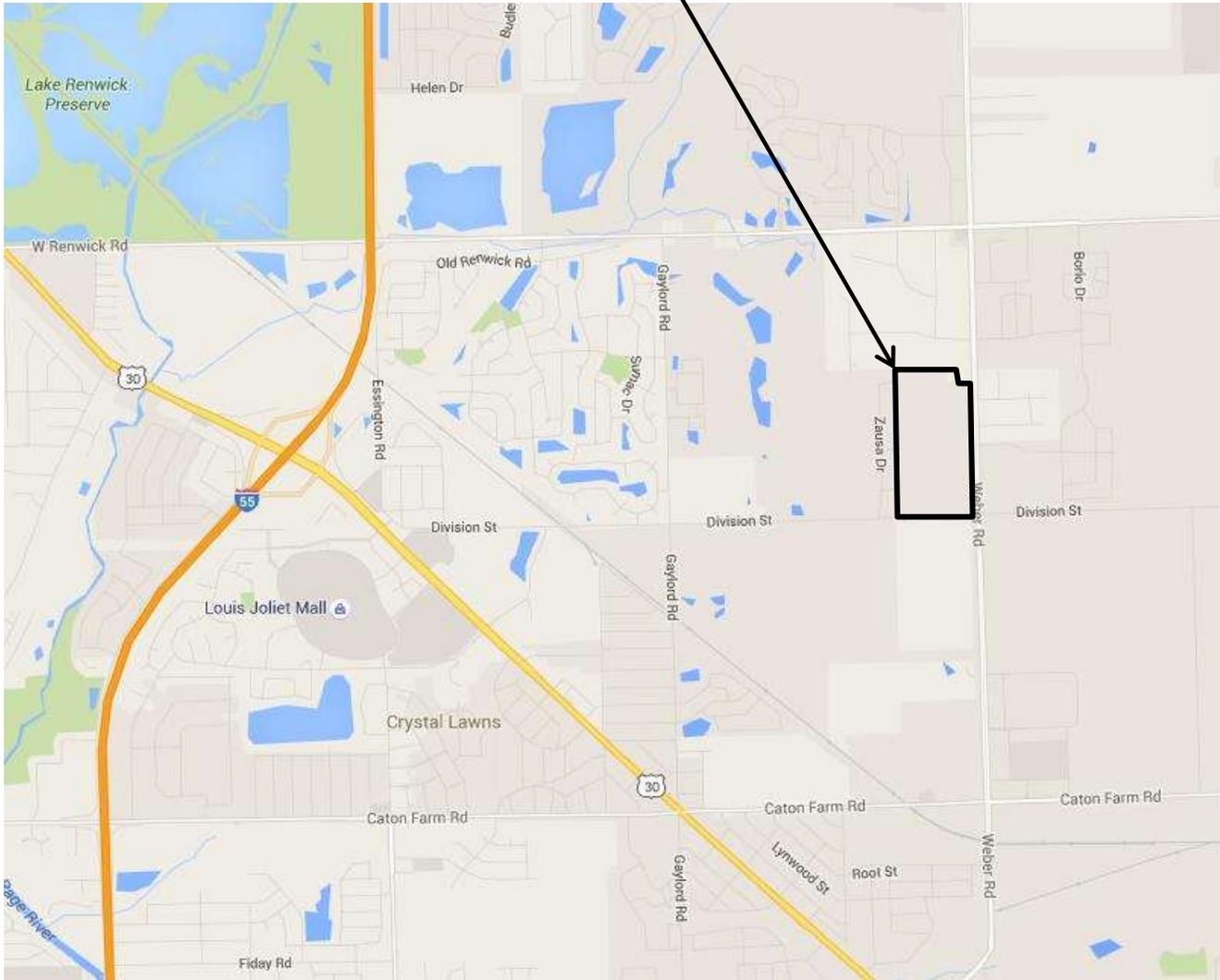
Wilhelm, Gerould & Laura Rericha. 2017. Flora of the Chicago Region: A Floristic and Ecological Synthesis. Indiana Academy of Science. Indianapolis. IN.

APPENDIX A

EXHIBITS



PROJECT LOCATION



Source: Google Maps



Title: Location Map
Project Number: 144-004-16
Site: Crest Hill Property
Client: Heidner Properties
Exhibit: 1

PROJECT LOCATION



Source: USFWS National Wetland Mapper

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



Title: National Wetland Inventory
Project Number: 144-004-16
Site: Crest Hill Property
Client: Heidner Properties
Exhibit: 2



PROJECT LOCATION



LEGEND

Soil Rating Polygons

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

Map unit symbol	Map unit name	Rating
46B	Elliott silt loam, 2 to 4 percent slopes	4
46B2	Elliott silty clay loam, 2 to 4 percent slopes, eroded	5
32A	Ashkum silty clay loam, 0 to 2 percent slopes	97
94B	Symerton silt loam, 2 to 5 percent slopes	6

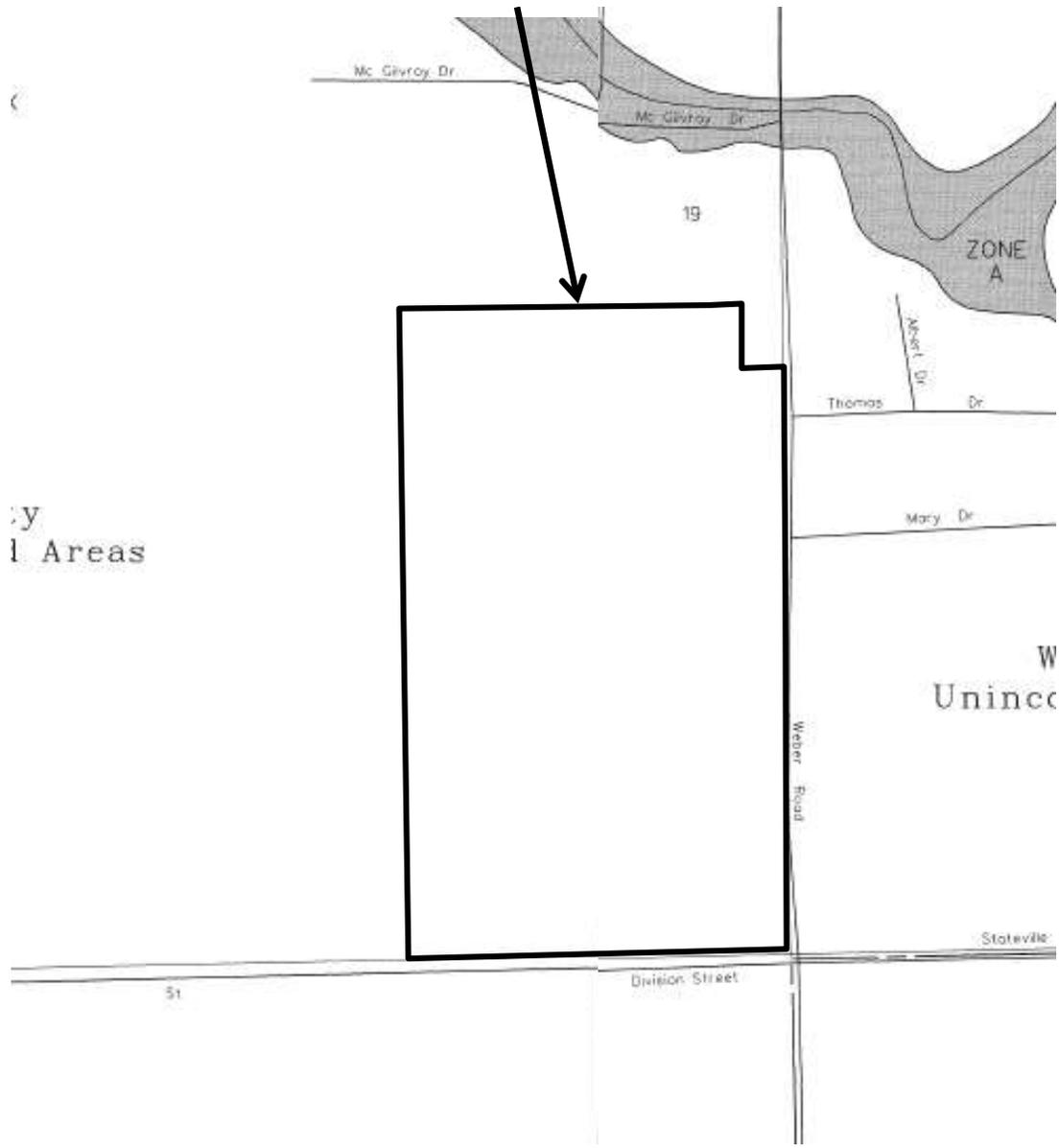
Source: NRCS Web Soil Survey



Title: USDA Soil Survey
Project Number: 144-004-16
Site: Crest Hill Property
Client: Heidner Properties
Exhibit: 3



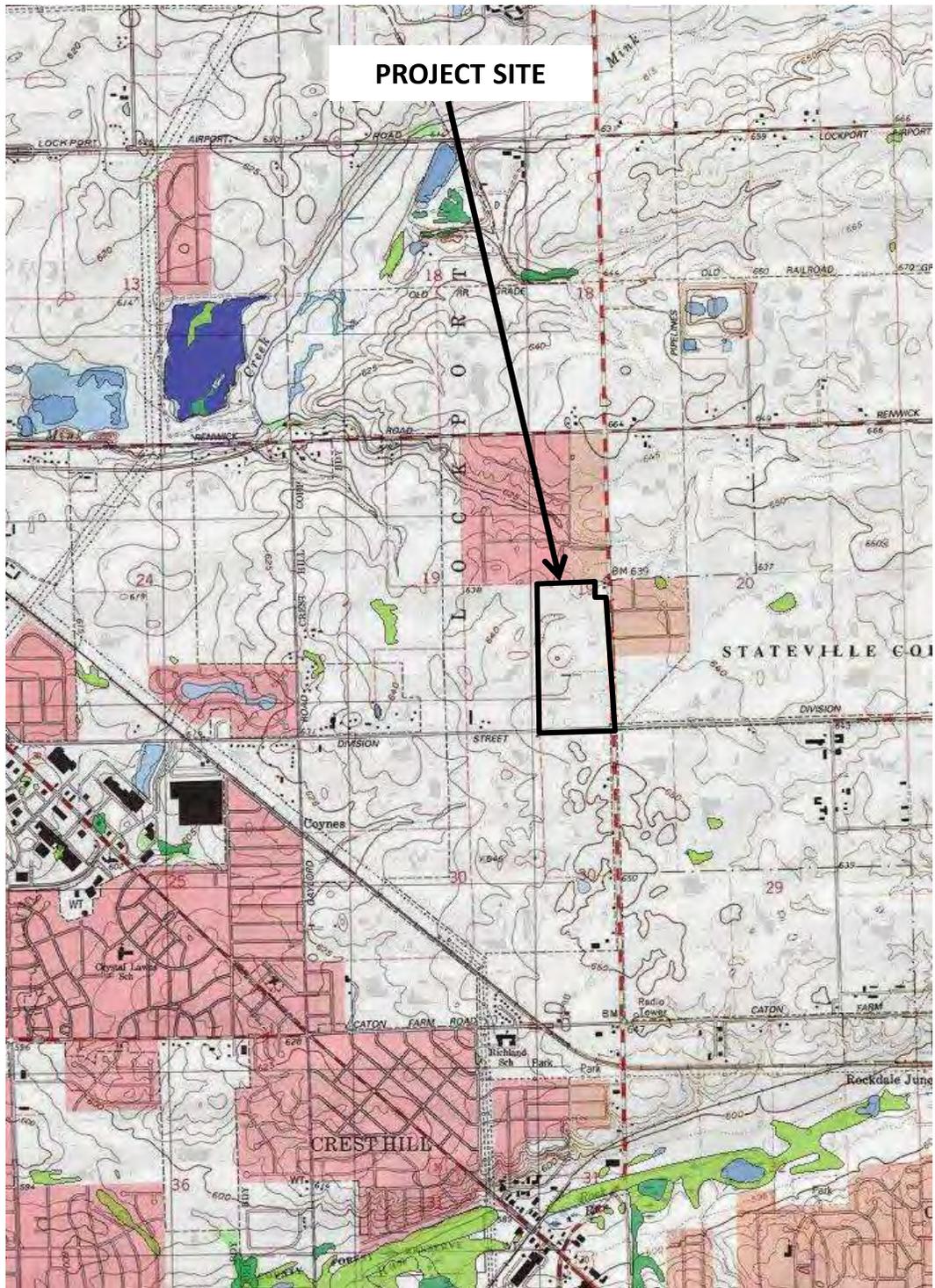
PROJECT LOCATION



Source: FEMA Map Store
Panel#17197C0134E, 17197C0153E
Effective Date: September 6, 1995



Title: Floodplain Map
Project Number: 144-004-16
Site: Crest Hill Property
Client: Heidner Properties
Exhibit: 4



Source: USFWS National Wetland Mapper



Title: USGS Topographic Map
Project Number: 144-004-16
Site: Crest Hill Property
Client: Heidner Properties
Exhibit: 5



PROJECT LOCATION



Legend

Data Point Location = **DP 1A**

Farmed Wetland = 

Source: Google Earth

Title: May 2021 Aerial Photograph
Project Number: 0000
Site: Crest Hill Property
Client: Heidner Properties
Exhibit 6



APPENDIX B
SITE PHOTOGRAPHS



Data Point 1B (Upland) facing south, September 2, 2021.



Data Point 2B (Upland) facing east, September 2, 2021.



Data Point 3B (Upland) facing southwest, September 2, 2021.



Data Point 4B (Upland) facing southwest, September 2, 2021.



Data Point 5B (Upland) facing north, September 2, 2021.



Data Point 6B (Upland) facing southeast, September 2, 2021.



Data Point 7B (Upland) facing northwest, September 2, 2021.



Data Point 8B (Upland) facing northeast, September 2, 2021.

APPENDIX C

U.S. ARMY CORPS FORMS

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Crest Hill Property City/County: Crest Hill / Will Sampling Date: 9/2/2021
 Applicant/Owner: Heidner Properties, Inc. State: IL Sampling Point: 1B (Upland)
 Investigator(s): P. Bollinger Section, Township, Range: SE 1/4 Sec. 19, T36N, R10E, 3rd P.M.
 Landform (hillslope, terrace, etc.): n/a Local relief (concave, convex, none): flat
 Slope (%): 1 - 3 Lat: +41.586815°N Long: -88.122740°W Datum: n/a
 Soil Map Unit Name Ashkum silty clay loam, 0 to 2% slopes (232A) NWI Classification: n/a

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
 Are vegetation , soil , or hydrology significantly disturbed? Are "normal circumstances"
 Are vegetation , soil , or hydrology naturally problematic? present? Yes

SUMMARY OF FINDINGS (If needed, explain any answers in remarks.)

Hydrophytic vegetation present? <u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: <u>n/a</u>
Hydric soil present? <u>Y</u>	
Wetland hydrology present? <u>N</u>	

Remarks: (Explain alternative procedures here or in a separate report.)
 Slight depressional area.

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: _____)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet	
1	_____	_____	_____	_____		Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A)
2	_____	_____	_____	_____	Total Number of Dominant Species Across all Strata: <u>0</u> (B)	
3	_____	_____	_____	_____	Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B)	
4	_____	_____	_____	_____		
5	_____	_____	_____	_____		
		<u>0</u>	= Total Cover			
Sapling/Shrub stratum	(Plot size: _____)				Prevalence Index Worksheet	
1	_____	_____	_____	_____		Total % Cover of:
2	_____	_____	_____	_____	OBL species <u>0</u> x 1 = <u>0</u>	
3	_____	_____	_____	_____	FACW species <u>0</u> x 2 = <u>0</u>	
4	_____	_____	_____	_____	FAC species <u>0</u> x 3 = <u>0</u>	
5	_____	_____	_____	_____	FACU species <u>0</u> x 4 = <u>0</u>	
		<u>0</u>	= Total Cover		UPL species <u>0</u> x 5 = <u>0</u>	
					Column totals <u>0</u> (A) <u>0</u> (B)	
					Prevalence Index = B/A = _____	
Herb stratum	(Plot size: _____)				Hydrophytic Vegetation Indicators:	
1	<u>Dipsacus laciniatus</u>	_____	_____	UPL		_____ Rapid test for hydrophytic vegetation
2	<u>Cirsium arvense</u>	_____	_____	FACU		_____ Dominance test is >50%
3	_____	_____	_____	_____		_____ Prevalence index is ≤3.0*
4	_____	_____	_____	_____		_____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
5	_____	_____	_____	_____		_____ Problematic hydrophytic vegetation* (explain)
6	_____	_____	_____	_____		_____ *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
7	_____	_____	_____	_____		
8	_____	_____	_____	_____		
9	_____	_____	_____	_____		
10	_____	_____	_____	_____		
		<u>0</u>	= Total Cover			
Woody vine stratum	(Plot size: _____)				Hydrophytic vegetation present? <u>N</u>	
1	_____	_____	_____	_____		
2	_____	_____	_____	_____		
		<u>0</u>	= Total Cover			

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: 1B (Upland)

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0 - 12	2.5Y2.5/1	100					silty clay loam	
12 - 20	2.5Y4/1	93	2.5Y5/6	7	C	M	silty clay	mottling

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators: <input type="checkbox"/> Histisol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)		<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)		Indicators for Problematic Hydric Soils: <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) <input type="checkbox"/> Dark Surface (S7) (LRR K, L) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (explain in remarks)	
---	--	--	--	---	--

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric soil present? <u> Y </u>
---	-----------------------------------

Remarks:

Redoximorphic features observed within the soil profile.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Other (Explain in Remarks)		Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> FAC-Neutral Test (D5)	
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Field Observations: Surface water present? Yes _____ No <u> X </u> Depth (inches): _____ Water table present? Yes _____ No <u> X </u> Depth (inches): _____ Saturation present? Yes _____ No <u> X </u> Depth (inches): <u> > 20 </u> (includes capillary fringe)	Wetland hydrology present? <u> N </u>
---	---

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Crest Hill Property City/County: Crest Hill / Will Sampling Date: 9/2/2021
 Applicant/Owner: Heidner Properties, Inc. State: IL Sampling Point: 2B (Upland)
 Investigator(s): P. Bollinger Section, Township, Range: SE 1/4 Sec. 19, T36N, R10E, 3rd P.M.
 Landform (hillslope, terrace, etc.): n/a Local relief (concave, convex, none): concave
 Slope (%): 0 - 1 Lat: +41.586253°N Long: -88.123120°W Datum: n/a
 Soil Map Unit Name Ashkum silty clay loam, 0 to 2% slopes (232A) NWI Classification: n/a

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
 Are vegetation X, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? present? Yes

SUMMARY OF FINDINGS (If needed, explain any answers in remarks.)

Hydrophytic vegetation present? <u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: <u>n/a</u>
Hydric soil present? <u>Y</u>	
Wetland hydrology present? <u>Y</u>	

Remarks: (Explain alternative procedures here or in a separate report.)
 Depressional Area

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet	
1 _____	_____	_____	_____	Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A)	
2 _____	_____	_____	_____	Total Number of Dominant Species Across all Strata: <u>1</u> (B)	
3 _____	_____	_____	_____	Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B)	
4 _____	_____	_____	_____		
5 _____	_____	_____	_____		
<u>0</u> = Total Cover					
Sapling/Shrub stratum (Plot size: _____)	Absolute % Cover	Dominant Species	Indicator Status	Prevalence Index Worksheet	
1 _____	_____	_____	_____	Total % Cover of:	
2 _____	_____	_____	_____	OBL species <u>0</u> x 1 = <u>0</u>	
3 _____	_____	_____	_____	FACW species <u>0</u> x 2 = <u>0</u>	
4 _____	_____	_____	_____	FAC species <u>5</u> x 3 = <u>15</u>	
5 _____	_____	_____	_____	FACU species <u>95</u> x 4 = <u>380</u>	
<u>0</u> = Total Cover				UPL species <u>5</u> x 5 = <u>25</u>	
				Column totals <u>105</u> (A) <u>420</u> (B)	
				Prevalence Index = B/A = <u>4.00</u>	
Herb stratum (Plot size: _____)	Absolute % Cover	Dominant Species	Indicator Status	Hydrophytic Vegetation Indicators:	
1 <u>Amaranthus retroflexus</u>	<u>90</u>	<u>Y</u>	<u>FACU</u>	_____ Rapid test for hydrophytic vegetation	
2 <u>Hibiscus trionum</u>	<u>5</u>	<u>N</u>	<u>UPL</u>	_____ Dominance test is >50%	
3 <u>Setaria pumila</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	_____ Prevalence index is ≤3.0*	
4 <u>Abutilon theophrasti</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	_____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)	
5 _____	_____	_____	_____	_____ Problematic hydrophytic vegetation* (explain)	
6 _____	_____	_____	_____		
7 _____	_____	_____	_____		
8 _____	_____	_____	_____		
9 _____	_____	_____	_____		
10 _____	_____	_____	_____		
<u>105</u> = Total Cover					
Woody vine stratum (Plot size: _____)	Absolute % Cover	Dominant Species	Indicator Status	Hydrophytic vegetation present? <u>N</u>	
1 _____	_____	_____	_____		
2 _____	_____	_____	_____		
<u>0</u> = Total Cover					

Remarks: (Include photo numbers here or on a separate sheet)
 Fallow field

SOIL

Sampling Point: 2B (Upland)

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0 - 3	10YR2/1	100					silty clay loam	
3 - 20	10YR2/1	90	5YR3/4	10	C	PL	silty clay loam	mottling

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

<p>Hydric Soil Indicators:</p> <p><input type="checkbox"/> Histisol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> 2 cm Muck (A10)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)</p> <p><input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)</p>	<p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input checked="" type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p>	<p>Indicators for Problematic Hydric Soils:</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR K, L)</p> <p><input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (explain in remarks)</p> <p>*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic</p>
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<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric soil present? <u>Y</u></p>
--	--------------------------------------

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

<p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <p><input type="checkbox"/> Surface Water (A1)</p> <p><input type="checkbox"/> High Water Table (A2)</p> <p><input type="checkbox"/> Saturation (A3)</p> <p><input type="checkbox"/> Water Marks (B1)</p> <p><input type="checkbox"/> Sediment Deposits (B2)</p> <p><input type="checkbox"/> Drift Deposits (B3)</p> <p><input type="checkbox"/> Algal Mat or Crust (B4)</p> <p><input type="checkbox"/> Iron Deposits (B5)</p> <p><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</p> <p><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</p> <p><input type="checkbox"/> Water-Stained Leaves (B9)</p>	<p><u>Secondary Indicators (minimum of two required)</u></p> <p><input type="checkbox"/> Aquatic Fauna (B13)</p> <p><input type="checkbox"/> True Aquatic Plants (B14)</p> <p><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</p> <p><input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</p> <p><input type="checkbox"/> Presence of Reduced Iron (C4)</p> <p><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</p> <p><input type="checkbox"/> Thin Muck Surface (C7)</p> <p><input type="checkbox"/> Gauge or Well Data (D9)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>	<p><input type="checkbox"/> Surface Soil Cracks (B6)</p> <p><input type="checkbox"/> Drainage Patterns (B10)</p> <p><input type="checkbox"/> Dry-Season Water Table (C2)</p> <p><input type="checkbox"/> Crayfish Burrows (C8)</p> <p><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</p> <p><input type="checkbox"/> Stunted or Stressed Plants (D1)</p> <p><input type="checkbox"/> Geomorphic Position (D2)</p> <p><input type="checkbox"/> FAC-Neutral Test (D5)</p>
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<p>Field Observations:</p> <p>Surface water present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____</p> <p>Water table present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____</p> <p>Saturation present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)</p>	<p>Wetland hydrology present? <u>Y</u></p>
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Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Crest Hill Property City/County: Crest Hill / Will Sampling Date: 9/2/2021
 Applicant/Owner: Heidner Properties, Inc. State: IL Sampling Point: 3B (Upland)
 Investigator(s): P. Bollinger Section, Township, Range: SE 1/4 Sec. 19, T36N, R10E, 3rd P.M.
 Landform (hillslope, terrace, etc.): n/a Local relief (concave, convex, none): flat
 Slope (%): 0 - 1 Lat: +41.586030°N Long: -88.124256°W Datum: n/a
 Soil Map Unit Name Ashkum silty clay loam, 0 to 2% slopes (232A) NWI Classification: n/a

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
 Are vegetation X, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? present? Yes

SUMMARY OF FINDINGS (If needed, explain any answers in remarks.)

Hydrophytic vegetation present? <u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: <u>n/a</u>
Hydric soil present? <u>N</u>	
Wetland hydrology present? <u>N</u>	

Remarks: (Explain alternative procedures here or in a separate report.)

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet	
1 _____	_____	_____	_____	Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A)	
2 _____	_____	_____	_____	Total Number of Dominant Species Across all Strata: <u>2</u> (B)	
3 _____	_____	_____	_____	Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B)	
4 _____	_____	_____	_____		
5 _____	_____	_____	_____		
<u>0</u> = Total Cover					
Sapling/Shrub stratum (Plot size: _____)	Absolute % Cover	Dominant Species	Indicator Status	Prevalence Index Worksheet	
1 _____	_____	_____	_____	Total % Cover of:	
2 _____	_____	_____	_____	OBL species <u>0</u> x 1 = <u>0</u>	
3 _____	_____	_____	_____	FACW species <u>0</u> x 2 = <u>0</u>	
4 _____	_____	_____	_____	FAC species <u>0</u> x 3 = <u>0</u>	
5 _____	_____	_____	_____	FACU species <u>95</u> x 4 = <u>380</u>	
<u>0</u> = Total Cover				UPL species <u>0</u> x 5 = <u>0</u>	
				Column totals <u>95</u> (A) <u>380</u> (B)	
				Prevalence Index = B/A = <u>4.00</u>	
Herb stratum (Plot size: _____)	Absolute % Cover	Dominant Species	Indicator Status	Hydrophytic Vegetation Indicators:	
1 <u>Amaranthus retroflexus</u>	<u>45</u>	<u>Y</u>	<u>FACU</u>	_____ Rapid test for hydrophytic vegetation	
2 <u>Chenopodium album</u>	<u>45</u>	<u>Y</u>	<u>FACU</u>	_____ Dominance test is >50%	
3 <u>Abutilon theophrasti</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	_____ Prevalence index is ≤3.0*	
4 _____	_____	_____	_____	_____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)	
5 _____	_____	_____	_____	_____ Problematic hydrophytic vegetation* (explain)	
6 _____	_____	_____	_____		
7 _____	_____	_____	_____		
8 _____	_____	_____	_____		
9 _____	_____	_____	_____		
10 _____	_____	_____	_____		
<u>95</u> = Total Cover					
Woody vine stratum (Plot size: _____)	Absolute % Cover	Dominant Species	Indicator Status	*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
1 _____	_____	_____	_____		
2 _____	_____	_____	_____		
<u>0</u> = Total Cover					

Remarks: (Include photo numbers here or on a separate sheet)

Fallow field

SOIL

Sampling Point: 3B (Upland)

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0 - 20	10YR2/1	100					silty clay loam	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

<p>Hydric Soil Indicators:</p> <p><input type="checkbox"/> Histisol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> 2 cm Muck (A10)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)</p> <p><input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)</p>	<p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p>	<p>Indicators for Problematic Hydric Soils:</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR K, L)</p> <p><input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (explain in remarks)</p> <p>*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic</p>
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<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric soil present? <u> N </u></p>
--	--

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

<p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <p><input type="checkbox"/> Surface Water (A1)</p> <p><input type="checkbox"/> High Water Table (A2)</p> <p><input type="checkbox"/> Saturation (A3)</p> <p><input type="checkbox"/> Water Marks (B1)</p> <p><input type="checkbox"/> Sediment Deposits (B2)</p> <p><input type="checkbox"/> Drift Deposits (B3)</p> <p><input type="checkbox"/> Algal Mat or Crust (B4)</p> <p><input type="checkbox"/> Iron Deposits (B5)</p> <p><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</p> <p><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</p> <p><input type="checkbox"/> Water-Stained Leaves (B9)</p>	<p><u>Secondary Indicators (minimum of two required)</u></p> <p><input checked="" type="checkbox"/> Surface Soil Cracks (B6)</p> <p><input type="checkbox"/> Drainage Patterns (B10)</p> <p><input type="checkbox"/> Dry-Season Water Table (C2)</p> <p><input type="checkbox"/> Crayfish Burrows (C8)</p> <p><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</p> <p><input type="checkbox"/> Stunted or Stressed Plants (D1)</p> <p><input type="checkbox"/> Geomorphic Position (D2)</p> <p><input type="checkbox"/> FAC-Neutral Test (D5)</p>
<p><input type="checkbox"/> Aquatic Fauna (B13)</p> <p><input type="checkbox"/> True Aquatic Plants (B14)</p> <p><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</p> <p><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</p> <p><input type="checkbox"/> Presence of Reduced Iron (C4)</p> <p><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</p> <p><input type="checkbox"/> Thin Muck Surface (C7)</p> <p><input type="checkbox"/> Gauge or Well Data (D9)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>	

<p>Field Observations:</p> <p>Surface water present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____</p> <p>Water table present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____</p> <p>Saturation present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u> > 20 </u></p> <p>(includes capillary fringe)</p>	<p>Wetland hydrology present? <u> N </u></p>
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Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Crest Hill Property City/County: Crest Hill / Will Sampling Date: 9/2/2021
 Applicant/Owner: Heidner Properties, Inc. State: IL Sampling Point: 4B (Upland)
 Investigator(s): P. Bollinger Section, Township, Range: SE 1/4 Sec. 19, T36N, R10E, 3rd P.M.
 Landform (hillslope, terrace, etc.): n/a Local relief (concave, convex, none): concave
 Slope (%): 0 - 1 Lat: +41.585412°N Long: -88.127028°W Datum: n/a
 Soil Map Unit Name Ashkum silty clay loam, 0 to 2% slopes (232A) NWI Classification: n/a

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
 Are vegetation X, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? present? Yes

SUMMARY OF FINDINGS (If needed, explain any answers in remarks.)

Hydrophytic vegetation present? <u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: <u>n/a</u>
Hydric soil present? <u>Y</u>	
Wetland hydrology present? <u>N</u>	

Remarks: (Explain alternative procedures here or in a separate report.)
Closed depression

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: _____)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>0</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B)
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		Prevalence Index Worksheet Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>0</u> (A) <u>0</u> (B) Prevalence Index = B/A = _____
Sapling/Shrub stratum	(Plot size: _____)				
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		
Herb stratum	(Plot size: _____)				Hydrophytic Vegetation Indicators: _____ Rapid test for hydrophytic vegetation _____ Dominance test is >50% _____ Prevalence index is ≤3.0* _____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) _____ Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1	<u>Panicum dichotomiflorum</u>			FACW	
2	<u>Polygonum lapathifolium</u>			FACW	
3					
4					
5					
6					
7					
8					
9					
10					
		<u>0</u>	= Total Cover		
Woody vine stratum	(Plot size: _____)				
1					
2					
		<u>0</u>	= Total Cover		

Remarks: (Include photo numbers here or on a separate sheet)
Fallow field

SOIL

Sampling Point: 4B (Upland)

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0 - 20	10YR2.5/1	90	7.5YR5/8	10	C	M	silty clay loam	mottling

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators: <input type="checkbox"/> Histisol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)		<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input checked="" type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)	Indicators for Problematic Hydric Soils: <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) <input type="checkbox"/> Dark Surface (S7) (LRR K, L) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (explain in remarks)
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*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric soil present? <u> Y </u>
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Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Other (Explain in Remarks)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface water present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water table present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u> > 20 </u> (includes capillary fringe)	Wetland hydrology present? <u> N </u>
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Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Crest Hill Property City/County: Crest Hill / Will Sampling Date: 9/2/2021
 Applicant/Owner: Heidner Properties, Inc. State: IL Sampling Point: 5B (Upland)
 Investigator(s): P. Bollinger Section, Township, Range: SE 1/4 Sec. 19, T36N, R10E, 3rd P.M.
 Landform (hillslope, terrace, etc.): n/a Local relief (concave, convex, none): flat
 Slope (%): 0 - 1 Lat: +41.585551°N Long: -88.127137°W Datum: n/a
 Soil Map Unit Name Ashkum silty clay loam, 0 to 2% slopes (232A) NWI Classification: n/a

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
 Are vegetation , soil , or hydrology significantly disturbed? Are "normal circumstances"
 Are vegetation , soil , or hydrology naturally problematic? present? Yes

SUMMARY OF FINDINGS (If needed, explain any answers in remarks.)

Hydrophytic vegetation present? <u>Y</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: <u>n/a</u>
Hydric soil present? <u>N</u>	
Wetland hydrology present? <u>N</u>	

Remarks: (Explain alternative procedures here or in a separate report.)
 Area is unfarmed and is located between the agricultural field and a residential lot.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet	
1 _____	_____	_____	_____	Number of Dominant Species that are OBL, FACW, or FAC: <u>1</u> (A)	
2 _____	_____	_____	_____	Total Number of Dominant Species Across all Strata: <u>1</u> (B)	
3 _____	_____	_____	_____	Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)	
4 _____	_____	_____	_____		
5 _____	_____	_____	_____		
	<u>0</u> = Total Cover				
Sapling/Shrub stratum (Plot size: _____)	Absolute % Cover	Dominant Species	Indicator Status	Prevalence Index Worksheet	
1 _____	_____	_____	_____	Total % Cover of:	
2 _____	_____	_____	_____	OBL species <u>95</u> x 1 = <u>95</u>	
3 _____	_____	_____	_____	FACW species <u>0</u> x 2 = <u>0</u>	
4 _____	_____	_____	_____	FAC species <u>3</u> x 3 = <u>9</u>	
5 _____	_____	_____	_____	FACU species <u>4</u> x 4 = <u>16</u>	
	<u>0</u> = Total Cover			UPL species <u>0</u> x 5 = <u>0</u>	
				Column totals <u>102</u> (A) <u>120</u> (B)	
				Prevalence Index = B/A = <u>1.18</u>	
Herb stratum (Plot size: _____)	Absolute % Cover	Dominant Species	Indicator Status	Hydrophytic Vegetation Indicators:	
1 <u>Polygonum amphibium var. stipulaceum</u>	<u>95</u>	<u>Y</u>	<u>OBL</u>	<u> </u> Rapid test for hydrophytic vegetation	
2 <u>Erechtites hieracifolia</u>	<u>3</u>	<u>N</u>	<u>FAC</u>	<u>X</u> Dominance test is >50%	
3 <u>Setaria faberi</u>	<u>3</u>	<u>N</u>	<u>FACU</u>	<u>X</u> Prevalence index is ≤3.0*	
4 <u>Asclepias syriaca</u>	<u>1</u>	<u>N</u>	<u>FACU</u>	<u> </u> Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)	
5 _____	_____	_____	_____	<u> </u> Problematic hydrophytic vegetation* (explain)	
6 _____	_____	_____	_____		
7 _____	_____	_____	_____		
8 _____	_____	_____	_____		
9 _____	_____	_____	_____		
10 _____	_____	_____	_____		
	<u>102</u> = Total Cover				
Woody vine stratum (Plot size: _____)	Absolute % Cover	Dominant Species	Indicator Status		
1 _____	_____	_____	_____		
2 _____	_____	_____	_____		
	<u>0</u> = Total Cover				

Remarks: (Include photo numbers here or on a separate sheet)
 Fallow field

SOIL

Sampling Point: 5B (Upland)

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0 - 20	10YR2/1	100					silty clay loam	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

<p>Hydric Soil Indicators:</p> <p><input type="checkbox"/> Histisol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> 2 cm Muck (A10)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)</p> <p><input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)</p>	<p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p>	<p>Indicators for Problematic Hydric Soils:</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR K, L)</p> <p><input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (explain in remarks)</p> <p>*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic</p>
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<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric soil present? <u> N </u></p>
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Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

<p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <p><input type="checkbox"/> Surface Water (A1)</p> <p><input type="checkbox"/> High Water Table (A2)</p> <p><input type="checkbox"/> Saturation (A3)</p> <p><input type="checkbox"/> Water Marks (B1)</p> <p><input type="checkbox"/> Sediment Deposits (B2)</p> <p><input type="checkbox"/> Drift Deposits (B3)</p> <p><input type="checkbox"/> Algal Mat or Crust (B4)</p> <p><input type="checkbox"/> Iron Deposits (B5)</p> <p><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</p> <p><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</p> <p><input type="checkbox"/> Water-Stained Leaves (B9)</p>	<p><u>Secondary Indicators (minimum of two required)</u></p> <p><input type="checkbox"/> Aquatic Fauna (B13)</p> <p><input type="checkbox"/> True Aquatic Plants (B14)</p> <p><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</p> <p><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</p> <p><input type="checkbox"/> Presence of Reduced Iron (C4)</p> <p><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</p> <p><input type="checkbox"/> Thin Muck Surface (C7)</p> <p><input type="checkbox"/> Gauge or Well Data (D9)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>	<p><input type="checkbox"/> Surface Soil Cracks (B6)</p> <p><input type="checkbox"/> Drainage Patterns (B10)</p> <p><input type="checkbox"/> Dry-Season Water Table (C2)</p> <p><input type="checkbox"/> Crayfish Burrows (C8)</p> <p><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</p> <p><input type="checkbox"/> Stunted or Stressed Plants (D1)</p> <p><input type="checkbox"/> Geomorphic Position (D2)</p> <p><input checked="" type="checkbox"/> FAC-Neutral Test (D5)</p>
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<p>Field Observations:</p> <p>Surface water present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____</p> <p>Water table present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____</p> <p>Saturation present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u> > 20 </u></p> <p>(includes capillary fringe)</p>	<p>Wetland hydrology present? <u> N </u></p>
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Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Crest Hill Property City/County: Crest Hill / Will Sampling Date: 9/2/2021
 Applicant/Owner: Heidner Properties, Inc. State: IL Sampling Point: 6B (Upland)
 Investigator(s): P. Bollinger Section, Township, Range: SE 1/4 Sec. 19, T36N, R10E, 3rd P.M.
 Landform (hillslope, terrace, etc.): n/a Local relief (concave, convex, none): flat
 Slope (%): 0 - 1 Lat: +41.583501°N Long: -88.126914°W Datum: n/a
 Soil Map Unit Name Ashkum silty clay loam, 0 to 2% slopes (232A) NWI Classification: n/a

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
 Are vegetation , soil , or hydrology significantly disturbed? Are "normal circumstances"
 Are vegetation , soil , or hydrology naturally problematic? present? Yes

SUMMARY OF FINDINGS (If needed, explain any answers in remarks.)

Hydrophytic vegetation present? <u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: <u>n/a</u>
Hydric soil present? <u>N</u>	
Wetland hydrology present? <u>N</u>	

Remarks: (Explain alternative procedures here or in a separate report.)
 This area meets 5 of 5 years of farmed wetland hydrology based upon aerial photograph analysis.

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: _____)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet
1	_____	_____	_____	_____	
2	_____	_____	_____	_____	Total Number of Dominant Species Across all Strata: <u>1</u> (B)
3	_____	_____	_____	_____	Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B)
4	_____	_____	_____	_____	
5	_____	_____	_____	_____	
		<u>0</u>	= Total Cover		
Sapling/Shrub stratum	(Plot size: _____)				Prevalence Index Worksheet
1	_____	_____	_____	_____	
2	_____	_____	_____	_____	OBL species <u>0</u> x 1 = <u>0</u>
3	_____	_____	_____	_____	FACW species <u>3</u> x 2 = <u>6</u>
4	_____	_____	_____	_____	FAC species <u>3</u> x 3 = <u>9</u>
5	_____	_____	_____	_____	FACU species <u>96</u> x 4 = <u>384</u>
		<u>0</u>	= Total Cover		UPL species <u>0</u> x 5 = <u>0</u>
					Column totals <u>102</u> (A) <u>399</u> (B)
					Prevalence Index = B/A = <u>3.91</u>
Herb stratum	(Plot size: _____)				Hydrophytic Vegetation Indicators: _____ Rapid test for hydrophytic vegetation _____ Dominance test is >50% _____ Prevalence index is ≤3.0* _____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) _____ Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1	<u>Amaranthus retroflexus</u>	<u>90</u>	<u>Y</u>	<u>FACU</u>	
2	<u>Panicum capillare</u>	<u>3</u>	<u>N</u>	<u>FAC</u>	
3	<u>Cyperus esculentus</u>	<u>3</u>	<u>N</u>	<u>FACW</u>	
4	<u>Abutilon theophrasti</u>	<u>3</u>	<u>N</u>	<u>FACU</u>	
5	<u>Setaria faberi</u>	<u>3</u>	<u>N</u>	<u>FACU</u>	
6	_____	_____	_____	_____	
7	_____	_____	_____	_____	
8	_____	_____	_____	_____	
9	_____	_____	_____	_____	
10	_____	_____	_____	_____	
		<u>102</u>	= Total Cover		
Woody vine stratum	(Plot size: _____)				Hydrophytic vegetation present? <u>N</u>
1	_____	_____	_____	_____	
2	_____	_____	_____	_____	
		<u>0</u>	= Total Cover		

Remarks: (Include photo numbers here or on a separate sheet)
 Fallow field

SOIL

Sampling Point: 6B (Upland)

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0 - 10	10YR2/1	100					silty clay loam	
10 - 20	10YR 2/1	95	2.5YR 3/3	5	C	M	silty clay loam	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators: <input type="checkbox"/> Histisol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)		<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)		Indicators for Problematic Hydric Soils: <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) <input type="checkbox"/> Dark Surface (S7) (LRR K, L) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (explain in remarks)	
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*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric soil present? <u> N </u>
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Remarks:

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)			Secondary Indicators (minimum of two required)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Surface Soil Cracks (B6)			
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Stunted or Stressed Plants (D1)			
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)			
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Gauge or Well Data (D9)	<input type="checkbox"/> FAC-Neutral Test (D5)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)				
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)					
<input type="checkbox"/> Water-Stained Leaves (B9)					

Field Observations: Surface water present? Yes _____ No <u> X </u> Depth (inches): _____ Water table present? Yes _____ No <u> X </u> Depth (inches): _____ Saturation present? Yes _____ No <u> X </u> Depth (inches): <u> > 20 </u> (includes capillary fringe)	Wetland hydrology present? <u> N </u>
---	---

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

This area meets 5 of 5 years of farmed wetland hydrology based upon aerial photograph analysis.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Crest Hill Property City/County: Crest Hill / Will Sampling Date: 9/2/2021
 Applicant/Owner: Heidner Properties, Inc. State: IL Sampling Point: 7B (Upland)
 Investigator(s): P. Bollinger Section, Township, Range: SE 1/4 Sec. 19, T36N, R10E, 3rd P.M.
 Landform (hillslope, terrace, etc.): n/a Local relief (concave, convex, none): flat
 Slope (%): 0 - 1 Lat: +41.583013°N Long: -88.126223°W Datum: n/a
 Soil Map Unit Name Ashkum silty clay loam, 0 to 2% slopes (232A) NWI Classification: n/a

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
 Are vegetation X, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? present? Yes

SUMMARY OF FINDINGS (If needed, explain any answers in remarks.)

Hydrophytic vegetation present? <u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: <u>n/a</u>
Hydric soil present? <u>Y</u>	
Wetland hydrology present? <u>N</u>	

Remarks: (Explain alternative procedures here or in a separate report.)
 This area meets 5 of 5 years of farmed wetland hydrology based upon aerial photograph analysis.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet	
1 _____	_____	_____	_____	Number of Dominant Species that are OBL, FACW, or FAC: <u>1</u> (A)	
2 _____	_____	_____	_____	Total Number of Dominant Species Across all Strata: <u>2</u> (B)	
3 _____	_____	_____	_____	Percent of Dominant Species that are OBL, FACW, or FAC: <u>50.00%</u> (A/B)	
4 _____	_____	_____	_____		
5 _____	_____	_____	_____		
<u>0</u> = Total Cover					
Sapling/Shrub stratum (Plot size: _____)	Absolute % Cover	Dominant Species	Indicator Status	Prevalence Index Worksheet	
1 _____	_____	_____	_____	Total % Cover of:	
2 _____	_____	_____	_____	OBL species <u>0</u> x 1 = <u>0</u>	
3 _____	_____	_____	_____	FACW species <u>0</u> x 2 = <u>0</u>	
4 _____	_____	_____	_____	FAC species <u>50</u> x 3 = <u>150</u>	
5 _____	_____	_____	_____	FACU species <u>53</u> x 4 = <u>212</u>	
	<u>0</u> = Total Cover			UPL species <u>0</u> x 5 = <u>0</u>	
				Column totals <u>103</u> (A) <u>362</u> (B)	
				Prevalence Index = B/A = <u>3.51</u>	
Herb stratum (Plot size: _____)	Absolute % Cover	Dominant Species	Indicator Status	Hydrophytic Vegetation Indicators:	
1 <u>Panicum capillare</u>	<u>50</u>	<u>Y</u>	<u>FAC</u>	_____ Rapid test for hydrophytic vegetation	
2 <u>Amaranthus retroflexus</u>	<u>50</u>	<u>Y</u>	<u>FACU</u>	_____ Dominance test is >50%	
3 <u>Abutilon theophrasti</u>	<u>3</u>	<u>N</u>	<u>FACU</u>	_____ Prevalence index is ≤3.0*	
4 _____	_____	_____	_____	_____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)	
5 _____	_____	_____	_____	_____ Problematic hydrophytic vegetation* (explain)	
6 _____	_____	_____	_____		
7 _____	_____	_____	_____		
8 _____	_____	_____	_____		
9 _____	_____	_____	_____		
10 _____	_____	_____	_____		
	<u>103</u> = Total Cover				
Woody vine stratum (Plot size: _____)	Absolute % Cover	Dominant Species	Indicator Status	Hydrophytic vegetation present? <u>N</u>	
1 _____	_____	_____	_____		
2 _____	_____	_____	_____		
	<u>0</u> = Total Cover				

Remarks: (Include photo numbers here or on a separate sheet)
 Fallow field

SOIL

Sampling Point: 7B (Upland)

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0 - 12	2.5Y2.5/1	100					silty clay loam	
12 - 20	2.5Y4/1	20	2.5Y6/6	10	C	M	silty clay loam	mottling
			5Y3/2	10	C	M		

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils:
<input type="checkbox"/> Histisol (A1)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Other (explain in remarks)
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	
<input checked="" type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric soil present? <u>Y</u>
---	--------------------------------------

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> True Aquatic Plants (B14)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Gauge or Well Data (D9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Water-Stained Leaves (B9)	
<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> FAC-Neutral Test (D5)	

Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): _____ Water table present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland hydrology present? <u>N</u>
--	--

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

This area meets 5 of 5 years of farmed wetland hydrology based upon aerial photograph analysis.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Crest Hill Property City/County: Crest Hill / Will Sampling Date: 9/2/2021
 Applicant/Owner: Heidner Properties, Inc. State: IL Sampling Point: 8B (Upland)
 Investigator(s): P. Bollinger Section, Township, Range: SE 1/4 Sec. 19, T36N, R10E, 3rd P.M.
 Landform (hillslope, terrace, etc.): n/a Local relief (concave, convex, none): flat
 Slope (%): 0 - 1 Lat: +41.582285°N Long: -88.122869°W Datum: n/a
 Soil Map Unit Name Ashkum silty clay loam, 0 to 2% slopes (232A) NWI Classification: n/a

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
 Are vegetation X, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? present? Yes

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present? <u>Y</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: <u>n/a</u>
Hydric soil present? <u>N</u>	
Wetland hydrology present? <u>N</u>	

Remarks: (Explain alternative procedures here or in a separate report.)

somewhat closed depression

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: _____)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across all Strata: <u>1</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		Prevalence Index Worksheet Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>95</u> x 2 = <u>190</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>8</u> x 4 = <u>32</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>103</u> (A) <u>222</u> (B) Prevalence Index = B/A = <u>2.16</u>
Sapling/Shrub stratum	(Plot size: _____)				
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		
Herb stratum	(Plot size: _____)				Hydrophytic Vegetation Indicators: _____ Rapid test for hydrophytic vegetation <u>X</u> Dominance test is >50% <u>X</u> Prevalence index is ≤3.0* _____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) _____ Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1	<i>Panicum dichotomiflorum</i>	90	Y	FACW	
2	<i>Polygonum lapathifolium</i>	5	N	FACW	
3	<i>Setaria faberi</i>	5	N	FACU	
4	<i>Amaranthus retroflexus</i>	3	N	FACU	
5					
6					
7					
8					
9					
10					
		<u>103</u>	= Total Cover		
Woody vine stratum	(Plot size: _____)				Hydrophytic vegetation present? <u>Y</u>
1					
2					
		<u>0</u>	= Total Cover		

Remarks: (Include photo numbers here or on a separate sheet)

Fallow field

SOIL

Sampling Point: 8B (Upland)

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0 - 20	10YR 2/1	100					silty clay loam	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

<p>Hydric Soil Indicators:</p> <p><input type="checkbox"/> Histisol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> 2 cm Muck (A10)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)</p> <p><input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)</p>	<p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p>	<p>Indicators for Problematic Hydric Soils:</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR K, L)</p> <p><input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (explain in remarks)</p> <p>*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic</p>
--	---	--

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric soil present? <u> N </u></p>
--	--

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

<p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <p><input type="checkbox"/> Surface Water (A1)</p> <p><input type="checkbox"/> High Water Table (A2)</p> <p><input type="checkbox"/> Saturation (A3)</p> <p><input type="checkbox"/> Water Marks (B1)</p> <p><input type="checkbox"/> Sediment Deposits (B2)</p> <p><input type="checkbox"/> Drift Deposits (B3)</p> <p><input type="checkbox"/> Algal Mat or Crust (B4)</p> <p><input type="checkbox"/> Iron Deposits (B5)</p> <p><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</p> <p><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</p> <p><input type="checkbox"/> Water-Stained Leaves (B9)</p>	<p><u>Secondary Indicators (minimum of two required)</u></p> <p><input type="checkbox"/> Aquatic Fauna (B13)</p> <p><input type="checkbox"/> True Aquatic Plants (B14)</p> <p><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</p> <p><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</p> <p><input type="checkbox"/> Presence of Reduced Iron (C4)</p> <p><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</p> <p><input type="checkbox"/> Thin Muck Surface (C7)</p> <p><input type="checkbox"/> Gauge or Well Data (D9)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>	<p><input type="checkbox"/> Surface Soil Cracks (B6)</p> <p><input type="checkbox"/> Drainage Patterns (B10)</p> <p><input type="checkbox"/> Dry-Season Water Table (C2)</p> <p><input type="checkbox"/> Crayfish Burrows (C8)</p> <p><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</p> <p><input type="checkbox"/> Stunted or Stressed Plants (D1)</p> <p><input type="checkbox"/> Geomorphic Position (D2)</p> <p><input type="checkbox"/> FAC-Neutral Test (D5)</p>
---	---	---

<p>Field Observations:</p> <p>Surface water present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____</p> <p>Water table present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____</p> <p>Saturation present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)</p>	<p>Wetland hydrology present? <u> N </u></p>
--	---

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

APPENDIX D
FLORISTIC QUALITY ASSESSMENTS

SITE: Crest Hill Property
LOCALE: Farmed Wetland 1
BY: Paul Bollinger (BEI)
NOTES: 9/2/2021

CONSERVATISM-BASED METRICS		ADDITIONAL METRICS	
MEAN C (NATIVE SPECIES)	0.00	SPECIES RICHNESS (ALL)	15
MEAN C (ALL SPECIES)	0.00	SPECIES RICHNESS (NATIVE)	6
MEAN C (NATIVE TREES)	n/a	% NON-NATIVE	0.60
MEAN C (NATIVE SHRUBS)	n/a	WET INDICATOR (ALL)	-0.20
MEAN C (NATIVE HERBACEOUS)	0.00	WET INDICATOR (NATIVE)	-0.67
FQAI (NATIVE SPECIES)	0.00	% HYDROPHYTE (MIDWEST)	0.67
FQAI (ALL SPECIES)	0.00	% NATIVE PERENNIAL	0.07
ADJUSTED FQAI	0.00	% NATIVE ANNUAL	0.33
% C VALUE 0	1.00	% ANNUAL	0.87
% C VALUE 1-3	0.00	% PERENNIAL	0.13
% C VALUE 4-6	0.00		
% C VALUE 7-10	0.00		

SPECIES ACRONYM	SPECIES NAME (NWPL/ MOHLENBROCK)	SPECIES (SYNONYM)	COMMON NAME	C VALUE	MIDWEST		WET		HABIT	DURATION	NATIVITY
					WET INDICATOR	NC-NE WET INDICATOR	INDICATOR (NUMERIC)				
abuthe	Abutilon theophrasti	ABUTILON THEOPHRASTI	Velvetleaf	0	FACU	FACU	1		Forb	Annual	Adventive
amaret	Amaranthus retroflexus	AMARANTHUS RETROFLEXUS	Red-Root	0	FACU	FACU	1		Forb	Annual	Adventive
cypesc	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1		Sedge	Perennial	Native
digisc	Digitaria ischaemum	DIGITARIA ISCHAEMUM	Smooth Crab Grass	0	FACU	FACU	1		Grass	Annual	Adventive
dipfus	Diplachne fusca	LEPTOCHLOA ACUMINATA; LEPTOCHLOA FASCULARIS	Bearded Sprangletop	0	OBL	OBL	-2		Grass	Annual	Adventive
echruc	Echinochloa crus-galli	Echinochloa crusgalli	Large Barnyard Grass	0	FACW	FAC	-1		Grass	Annual	Native
pacgla	Packera glabella	SENECIO GLABELLUS	Cress-Leaf Groundsel	0	FACW	FACW	-1		Forb	Annual	Adventive
pancap	Panicum capillare	Panicum capillare	Common Panic Grass	0	FAC	FAC	0		Grass	Annual	Native
panic	Panicum dichotomiflorum	Panicum dichotomiflorum	Fall Panic Grass	0	FACW	FACW	-1		Grass	Annual	Native
perlap	Persicaria lapathifolia	Polygonum lapathifolium; POLYGONUM SCABRUM; PERSICARIA SCABRA	Dock-Leaf Smartweed	0	FACW	FACW	-1		Forb	Annual	Native
permac	Persicaria maculosa	Polygonum persicaria	Lady's-Thumb	0	FACW	FAC	-1		Forb	Annual	Adventive
erehie	Senecio hieracifolius	Erechtites hieracifolia	American Burnweed	0	FAC	FACU	0		Forb	Annual	Native
setfab	Setaria faberi	SETARIA FABERI	Japanese Bristle Grass	0	FACU	FACU	1		Grass	Annual	Adventive
setgla	Setaria pumila	SETARIA GLAUCA	Yellow Bristle Grass	0	FAC	FAC	0		Grass	Annual	Adventive
taroff	Taraxacum officinale	TARAXACUM OFFICINALE	Common Dandelion	0	FACU	FACU	1		Forb	Perennial	Adventive

APPENDIX E

FARMED WETLAND AERIALS

2003



2002



2001



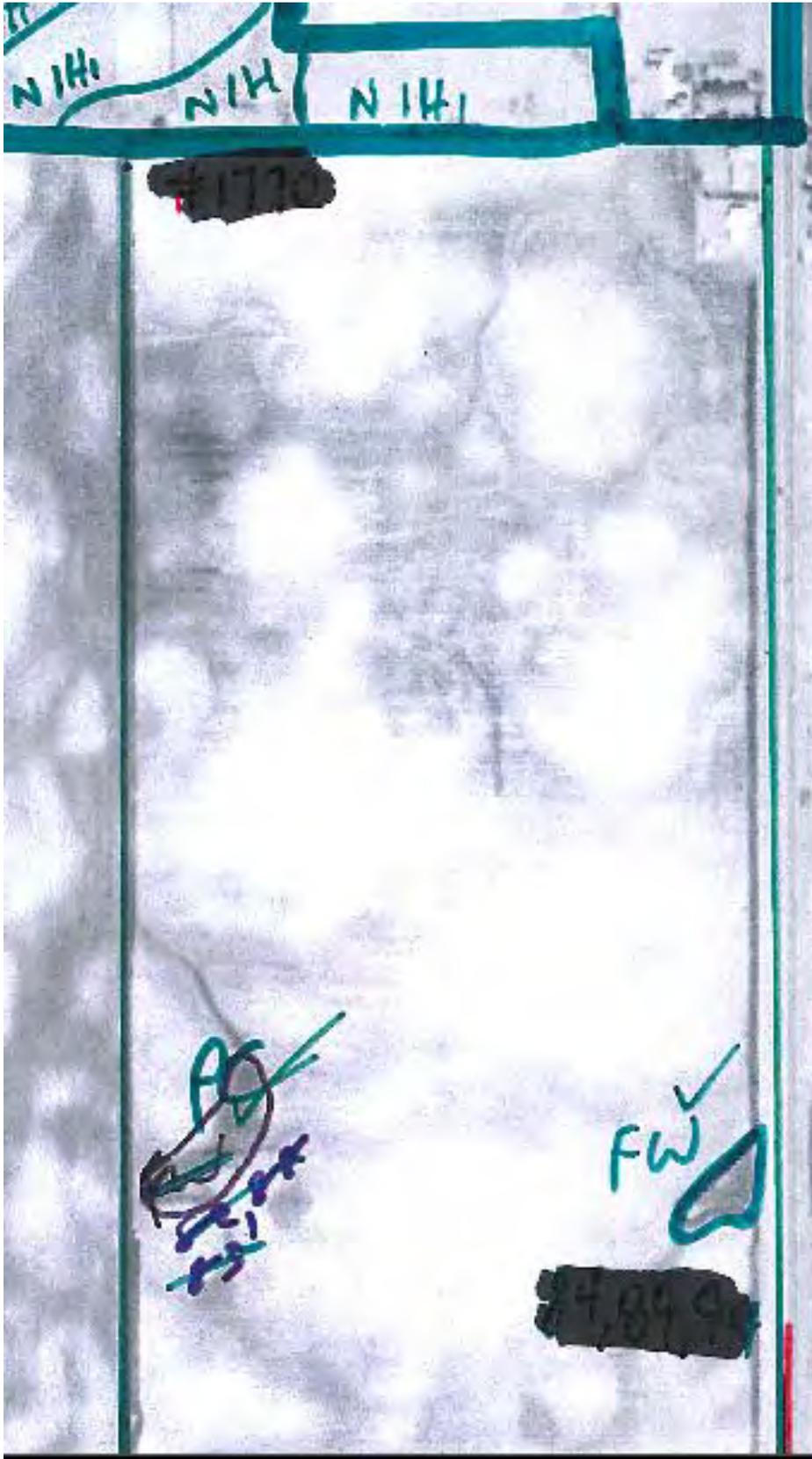
1998



1995



1987 Swampbuster Map



CITY OF CREST HILL

Weber Road/Division Street TIF

Exhibit 13: Low Areas



Legend

-  Weber Road/Division Street TIF
-  Will County GIS - 2021 Topography
-  Index
-  Index Depression
-  Intermediate
-  Intermediate Depression

