April 17, 2021 ***Via PDF Electronic File***

[redacted]

RE: Wetland Determination Results: Property at 1861 Hilltop Ln., Bannockburn, IL
PIN 16-19-202-002; Lat/Lon 42.1958299; -87.8721367; [redacted]

Dear [redacted]

I provide the following results from a wetland delineation conducted at the property referenced above located in the Village of Bannockburn, Lake County, IL (Figure 1). You hired us to investigate the southern portion of the property for any areas meeting the definition of wetlands or waters of the U.S. (WOTUS) and/or Isolated Waters of Lake County (IWLC). Specifically, we investigated the areas that will be used residential improvements (See attached plans provided by the site engineer, Greengard Inc.). I did not find any wetlands in the proposed improvement areas. Note: wetlands may be present on other areas of the site. These include an excavated pond near the driveway and shrub/forested wetlands near the northern property border. These potential wetlands are not in areas that will be disturbed.

Site Description

The 3.78-acre residential property contains a one single-story structure, one small shed near west side of the driveway, and manicured turf grass and landscaping for the front, rear, and side yards. A small pond, presumably excavated, exists in the central portion of the site, and contains a 12-inch CMP culvert under the driveway. Lake County GIS indicates that the residence was built circa 1950-60 as it is first shown on the 1961 Lake County aerial photograph. The residence was one of the earlier structures accessing Hilltop Lane. At that time, farmland adjoined the eastern property boundary and pastureland or grassland appears present to the north and west of the site. Infill lots with development of other residential structures occurred shortly thereafter in the late 1970s and early 1980s. Other than small landscaping improvements and possible structure improvement (addition) between 1993 and 1997, the site appears unchanged since the original construction date. The site is in the NE ¼ of Section 19, Township 43N, Range 12E, of West Deerfield Township

The elevation near the residence is shown as the highest elevations (shown as 701 feet on the 2017 Lake County topography) and gently slopes toward the north/Hilltop Lane (elevation = 695 feet) as shown on Figure 7. From the structure south, the property slopes to elevation of 698 or around 4-foot higher near the structure. The Lake County Wetland Inventory (LCWI, Figure 2) does not show wetlands for the site but areas are shown for the adjoining properties to the west and south associated with ponds. However, the National Wetland Inventory (NWI, Figure 5) map does show a “Palustrine” wetland extending into the site along the southwestern border. No 100-year floodplain (i.e., Zone AE) or Floods of Record are indicated (Figures 3 and 6). Two soils are shown for the site: (1) Del Rey silt loam, 0 to 2% slopes identified by Lake County as having hydric inclusions, and (2) Ozaukee silt loam, 2 to 4% slopes. Hydric soils developed under wet or wetland conditions. Both Del Rey and Ozaukee may contain hydric inclusions (portions of hydric soil within an upland soil).

Results

I examined the site on April 16, 2021, and delineated wetlands in accordance with the methodology required by the Lake County Watershed Development Ordinance (WDO) which prescribes following the 1987 USACE wetland delineation manual (as amended, including applicable supplements). A note concerning growing season: the spring of 2021 has been a somewhat dry and warmer than usual beginning of the season. The USACE's Antecedent Precipitation Tool output (Figure 8) shows precipitation that is drier than normal but close to the lower "normal" range. The site evidence indicates "growing season" conditions existed for the data collection. I placed three data points to represent: (1) the proposed patio/hardscape area located in the backyard area ("1 UPL"), (2) a data point located near the proposed structure in the front yard area ("2 UPL"), and (3) a data point in the area near the proposed driveway improvement ("3 UPL"). Please see the attached data sheets and photographs. Figure 7 shows the wetland results aerial and data point locations.

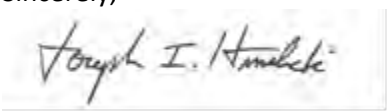
Maintained turf grasses are the dominant vegetation type near the residential structure along with landscape shrubs and trees. The vegetation dominance is similar for all data points and did not meet the "hydrophytic vegetation" criterion for Data Point nos. 1UPL and 2UPL but did meet the criterion for Data Point 3UPL. The turf grass is mostly seeded grasses dominated by Red Fescue (*Festuca rubra*), along with Spreading Bent (*Agrostis stolonifera*) for Data point 3UPL, a grass that can grow in wetter conditions. Also present are a few upland weedy species such as Red Clover (*Trifolium pratense*), Common Dandelion (*Taraxacum officinale*), and Creeping Charlie (*Glechoma hederacea*). Near Data Point 3UPL, European Buckthorn (*Rhamnus cathartica*) dominates the shrub layer. Soils did not meet the "hydric soil" or "wetland hydrology" criteria for any data point. As such, none of the data points contained wetlands.

We did not investigate the area near the excavated pond or shrub/sapling wooded area located in the northwest property boundary or along the Thornapple Lane as these were not areas near grading or proposed structures. However, we caution that these areas may contain wetlands and need to be further investigated if work is proposed near them. Also, a sump pump discharge at the southern portion of the residence (near a wooden deck) is causing a ponded condition as shown on Photograph 5. We recommend providing positive drainage away from the house for the sump pump discharge.

Wetland Regulatory Considerations

I did not find wetlands in the proposed development area as indicated on Figure 7. Based on the information provided above, I recommend transmitting this letter to the village of Bannockburn, along with the engineering plans showing the building footprint including all grading or recontouring, supporting the finding that no wetlands will be directly impacted by the activity. Please feel free to contact me if you have any questions about the above information or if I can assist you further.

Sincerely,



Joseph I. Hmieleski, PWS, CWS-01
JHWetco.com, Inc.

Attachments: Figures; Appendix A: Data Sheets
Appendix B: Photographs

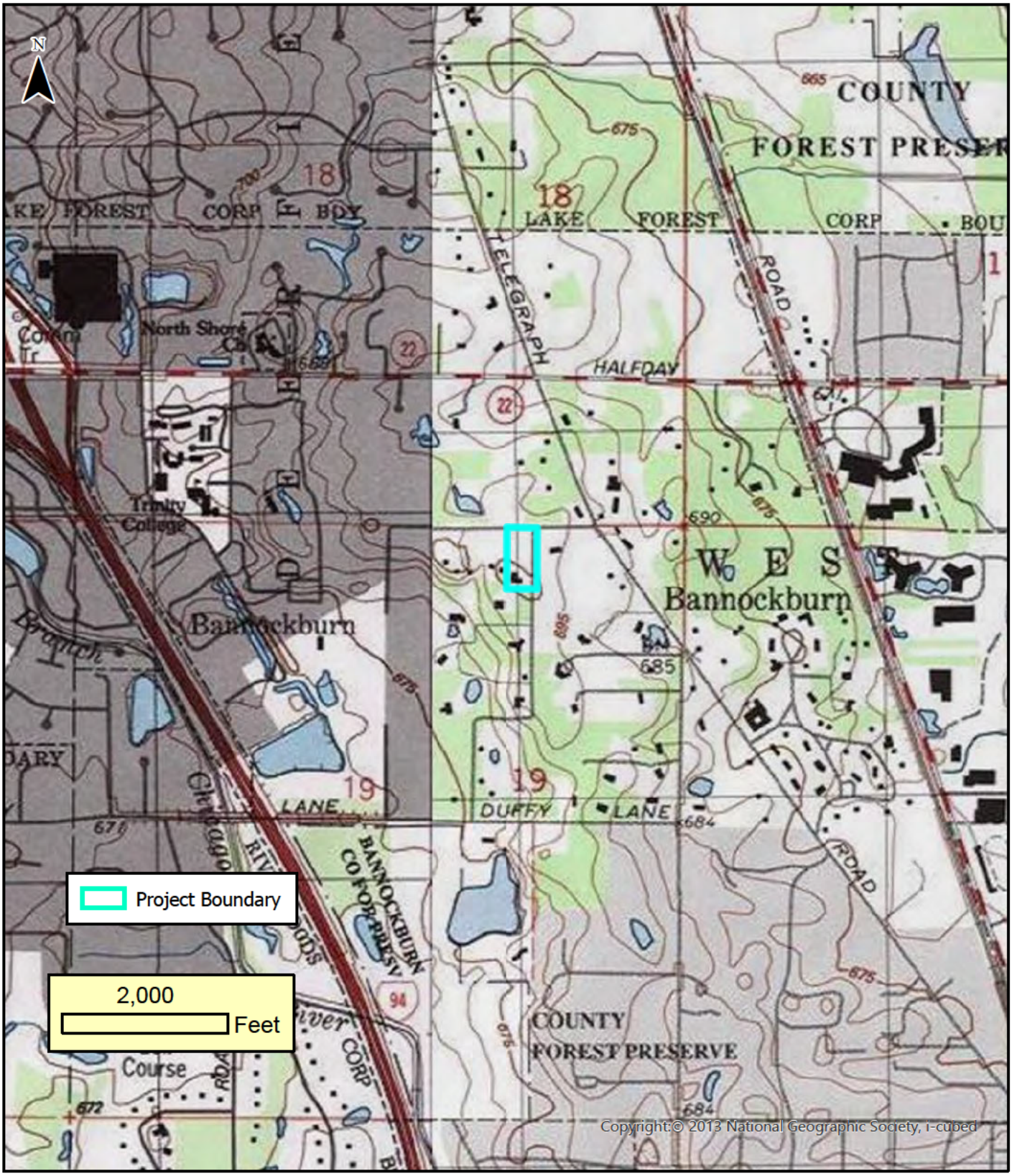


Figure 1. USGS Quad Map	WETCO.COM.INC 1861 Hilltop Lane Lincolnshire, IL	Field Date: April 16, 2021 Delineator: J. Hmieleski, CWS-001 Sect./T/R: NE19, T43N, R12E PIN#: 16-19-202-022 Lat/Long: 42.1958299; 87.8721367

Figure 2. Lake County Wetland Inventory Map	WETCO.COM.INC 1861 Hilltop Lane Lincolnshire, IL	Field Date: April 16, 2021 Delineator: J. Hmieleski, CWS-001 Sect./T/R: NE19, T43N, R12E PIN#: 16-19-202-022 Lat/Long: 42.1958299; 87.8721367

Figure 3. FEMA Floodplain Map (GIS)	WETCO.COM.INC 1861 Hilltop Lane Lincolnshire, IL	Field Date: April 16, 2021 Delineator: J. Hmieleski, CWS-001 Sect./T/R: NE19, T43N, R12E PIN#: 16-19-202-022 Lat/Long: 42.1958299; 87.8721367

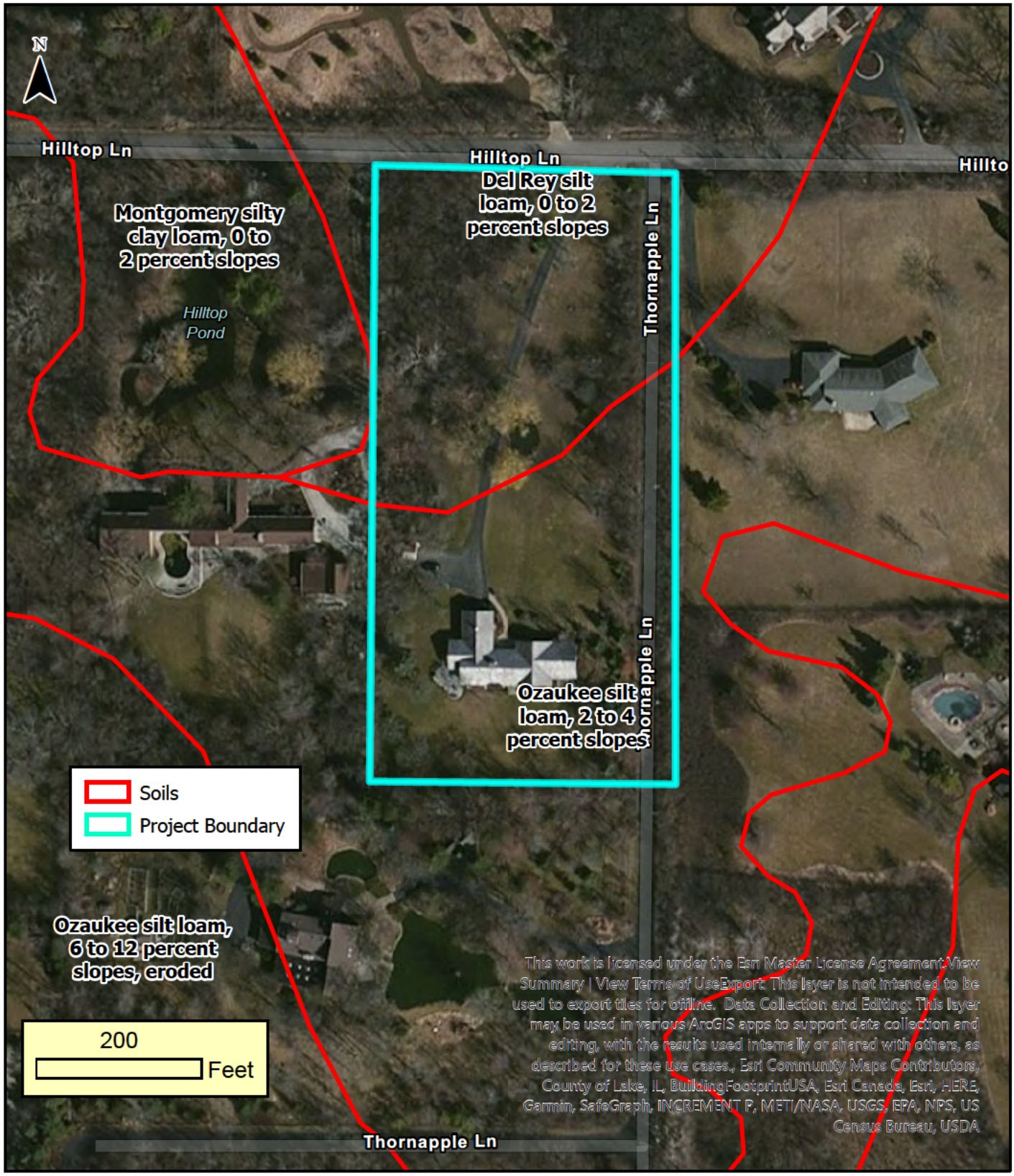


Figure 4. Soils Map (GIS)	JHWETCO.COM.INC 1861 Hilltop Lane Lincolnshire, IL	Field Date: April 16, 2021 Delineator: J. Hmieleski, CWS-001 Sect./T/R: NE19, T43N, R12E PIN#: 16-19-202-022 Lat/Long: 42.1958299; 87.8721367

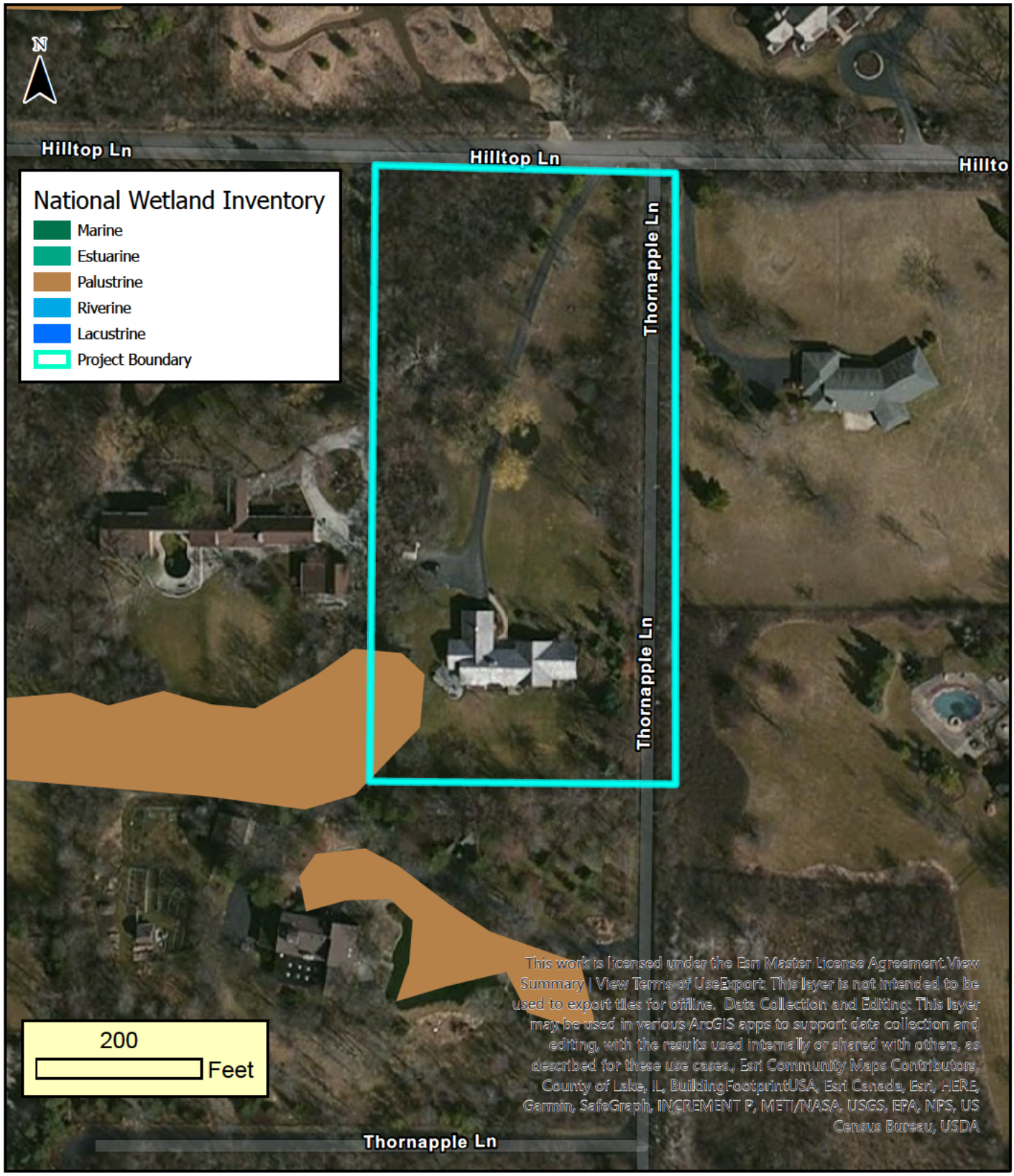


Figure 5. National Wetland Inventory Map (GIS)	WETCO.COM.INC 1861 Hilltop Lane Lincolnshire, IL	Field Date: April 16, 2021 Delineator: J. Hmieleski, CWS-001 Sect./T/R: NE19, T43N, R12E PIN#: 16-19-202-022 Lat/Long: 42.1958299; 87.8721367

Figure 6. Flood of Record Map (GIS)	WETCO.COM.INC	Field Date: April 16, 2021 Delineator: J. Hmieleski, CWS-001
	1861 Hilltop Lane Lincolnshire, IL	Sect./T/R: NE19, T43N, R12E PIN#: 16-19-202-022 Lat/Long: 42.1958299; 87.8721367

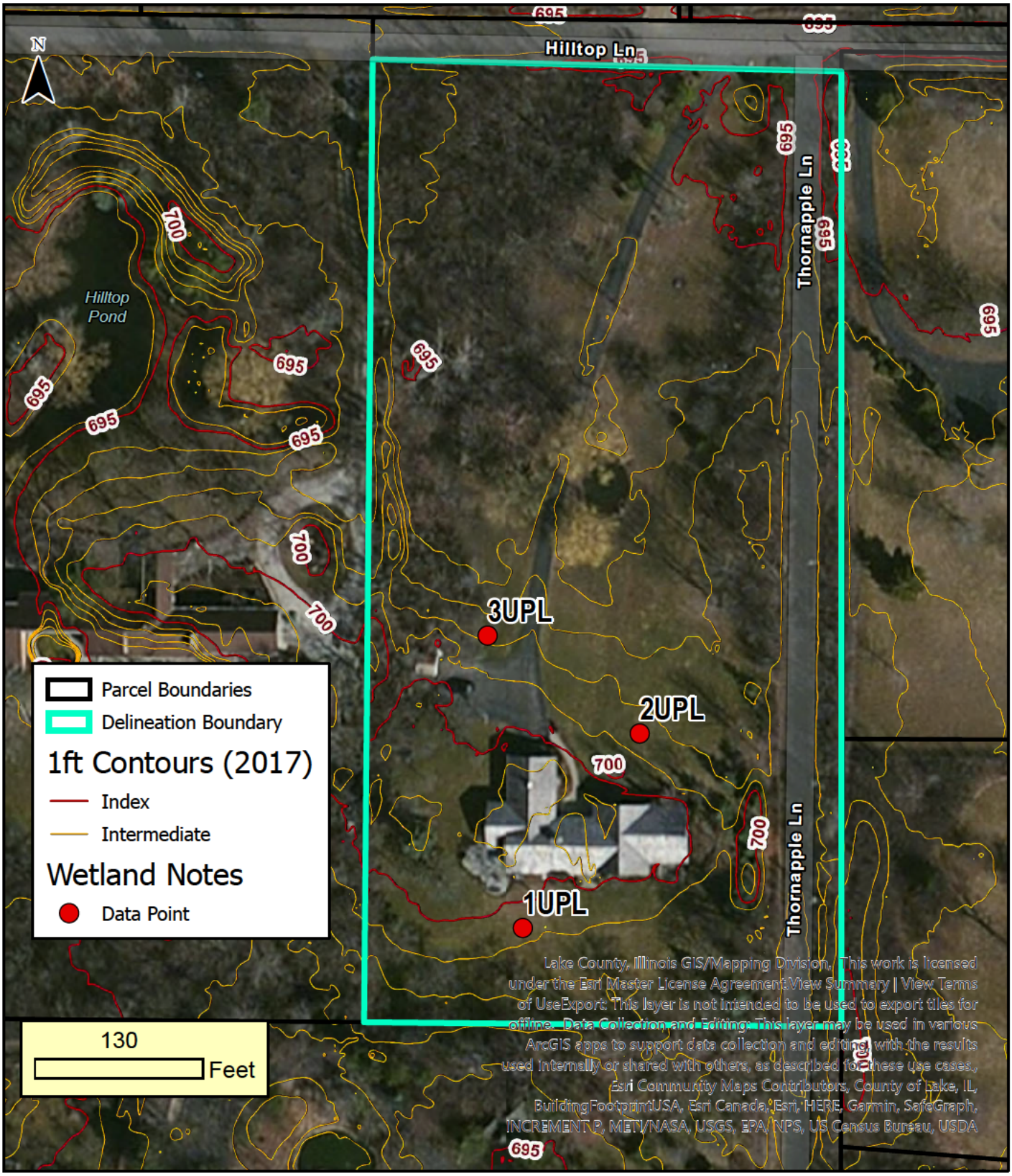
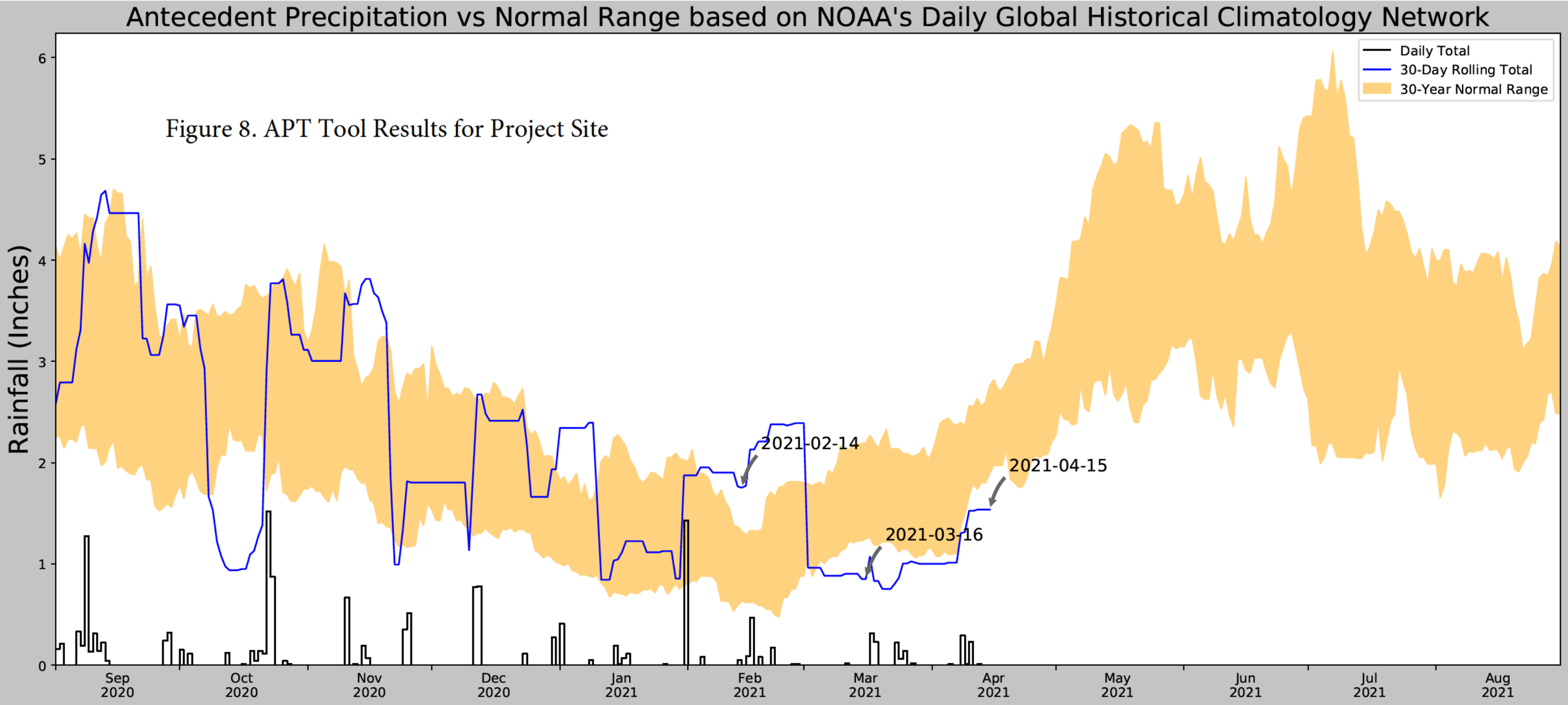


Figure 7. Wetland Results Map	WETCO.COM.INC 1861 Hilltop Lane Lincolnshire, IL	Field Date: April 16, 2021 Delineator: J. Hmieleski, CWS-001 Sect./T/R: NE19, T43N, R12E PIN#: 16-19-202-022 Lat/Long: 42.1958299; 87.8721367



Coordinates	42.1958299, -87.8721367
Observation Date	2021-04-15
Elevation (ft)	696.06
Drought Index (PDSI)	Not available
WebWIMP H_2O Balance	Wet Season

30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2021-04-15	1.894095	2.761417	1.535433	Dry	1	3	3
2021-03-16	1.250787	2.197244	0.850394	Dry	1	2	2
2021-02-14	0.632677	1.324016	1.751969	Wet	3	1	3
Result							Drier than Normal - 8

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
CHICAGO PALWAUKEE AP	42.1208, -87.9047	636.155	5.446	59.905	2.777	8186	86
BANNOCKBURN 0.5 ESE	42.1896, -87.86	672.9	0.756	23.16	0.358	4	4
RIVERWOODS 0.4 ENE	42.1726, -87.8884	691.929	1.808	4.131	0.821	11	0
LINCOLNSHIRE 0.9 N	42.2082, -87.9188	686.024	2.537	10.036	1.167	7	0
CHICAGO BOTANIC GARDEN	42.14, -87.7853	629.921	5.887	66.139	3.038	3112	0
GLENVIEW NAS	42.0833, -87.8333	645.997	8.026	50.063	4.013	29	0
LIBERTYVILLE 4 NNW	42.3097, -87.9908	720.144	9.936	24.084	4.711	3	0
WAUKEGAN	42.3492, -87.8828	700.131	10.611	4.071	4.818	1	0

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Appendix A – USACE Data Sheets

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: 1861 Hilltop Ln., Bannockburn, IL City/County: Bannockburn/ Lake Sampling Date: 2021-04-16

Applicant/Owner: Shalowitz State: Illinois Sampling Point: 1UPL

Investigator(s): J. Hmieleski Section, Township, Range: NE 19, T43N, R12E

Landform (hillslope, terrace, etc.): Upland, Flat Local relief (concave, convex, none): None

Slope (%): 0.0 Lat: 42.1951904 Long: -87.8747087 Datum: WGS 84

Soil Map Unit Name: Ozaukee NWI classification: None

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

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

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

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

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

Remarks:

Mowed turf grass area near residential structure.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer saccharinum	30	✔	FACW
2.			
3.			
4.			
5.			
	30%	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1.			FAC
2.			
3.			FACU
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft r)			
1. Festuca rubra	60	✔	FACU
2. Trifolium pratense	30	✔	FACU
3. Poa pratensis	5		FAC
4. Taraxacum officinale	5		FACU
5.			
6.			
7.			
8.			
9.			
10.			
	100%	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	30	x 2 =	60
FAC species	5	x 3 =	15
FACU species	95	x 4 =	380
UPL species	0	x 5 =	0
Column Totals:	130 (A)		455 (B)

Prevalence Index = B/A = 3.5

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✔

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

Mowed regularly but Hasn't been mowed yet this season.

SOIL

Sampling Point: 1UPL

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 3	10YR 3/2	100					Silt Loam	Crumbly.
3 - 12	10YR 5/3	98	10YR 5/8	2	C	M	Clay Loam	
12 - 26	10YR 4/3	99	10YR 3/1	1	D	M	Clay	
26 - 36	10YR 5/3	50	10YR 4/2	50	D	M	Clay	
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

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

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

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

Wetland Hydrology Present? Yes _____ No ✔

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

Remarks:

Grade slopes away from house.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: 1861 Hilltop Ln., Bannockburn, IL City/County: Bannockburn/ Lake Sampling Date: 2021-04-16

Applicant/Owner: Shalowitz State: Illinois Sampling Point: 2UPL

Investigator(s): J. Hmieleski Section, Township, Range: NE 19, T43N, R12E

Landform (hillslope, terrace, etc.): Upland, Flat Local relief (concave, convex, none): None

Slope (%): 0.0 Lat: 42.1958923 Long: -87.8705597 Datum: WGS 84

Soil Map Unit Name: Ozaukee NWI classification: None

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

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

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

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

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

Remarks:

Mowed turf grass area near residential structure.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			FACW
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1.			
2.			
3.			FAC
4.			FACU
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Festuca rubra	75	✔	FACU
2. Trifolium pratense	20	✔	FACU
3. Glechoma hederacea	5		FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100% = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	100	x 4 =	400
UPL species	0	x 5 =	0
Column Totals:	100 (A)		400 (B)

Prevalence Index = B/A = 4.0

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✔

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

Mowed regularly but Hasn't been mowed yet this season.

SOIL

Sampling Point: 2UPL

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 8	10YR 3/2	100					Silt Loam	Crumbly.
8 - 18	10YR 4/3	98	7.5YR 4/6	1	C	M	Clay	Maybe old fill has some small gravel and soil looks mixed up.
8 - 18			10YR 3/1	1	D	M		
18 - 30	10YR 2/1	75	7.5YR 5/4	25	C	M	Clay Loam	
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

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

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

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

Wetland Hydrology Present? Yes _____ No ✔

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

Remarks:

Grade slopes away from house.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: 1861 Hilltop Ln., Bannockburn, IL City/County: Bannockburn/ Lake Sampling Date: 2021-04-16

Applicant/Owner: Shalowitz State: Illinois Sampling Point: 3UPL

Investigator(s): J. Hmieleski Section, Township, Range: NE 19, T43N, R12E

Landform (hillslope, terrace, etc.): Upland, Flat Local relief (concave, convex, none): None

Slope (%): 0 Lat: 42.1955261 Long: -87.8722768 Datum: WGS 84

Soil Map Unit Name: NWI classification:

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

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

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

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

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

Remarks:

Mowed turf grass near driveway.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Rhamnus cathartica	10	✔	FAC
2.			
3.			
4.			
5.			
	10% = Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Agrostis stolonifera	50	✔	FACW
2. Festuca rubra	30	✔	FACU
3. Taraxacum officinale	10		FACU
4. Trifolium pratense	10		FACU
5.			
6.			
7.			
8.			
9.			
10.			
	100% = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	50	x 2 =	100
FAC species	10	x 3 =	30
FACU species	50	x 4 =	200
UPL species	0	x 5 =	0
Column Totals:	110 (A)		330 (B)

Prevalence Index = B/A = 3.0

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✔ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No ____

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

Occasionally maintained. Buckthorn is a long western property edge.

SOIL

Sampling Point: 3UPL

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 5	10YR 3/2	100					Silt Loam	
5 - 12	10YR 4/3	80	10YR 3/2	19	D	M	Clay Loam	
5 - 12			7.5YR 5/4	1	C	M		
12 - 24	10YR 4/3	100					Clay	
24 - 32	10YR 4/3	90	10YR 5/1	10	D	M	Clay	
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

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

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

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

Wetland Hydrology Present? Yes _____ No ✔

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

Remarks:

Appendix B – Photographs

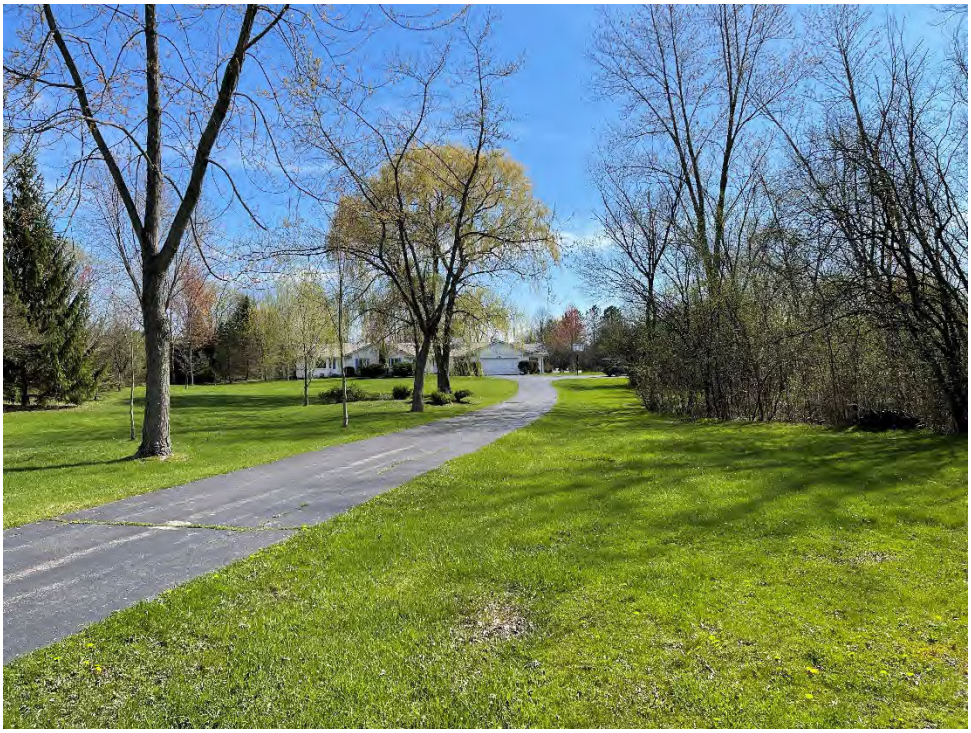
1. Data point 1UPL (Upland) showing turfgrass and existing residence facing northeast.

2. Data point 2UPL (Upland) facing south viewing front (north side) of residence.

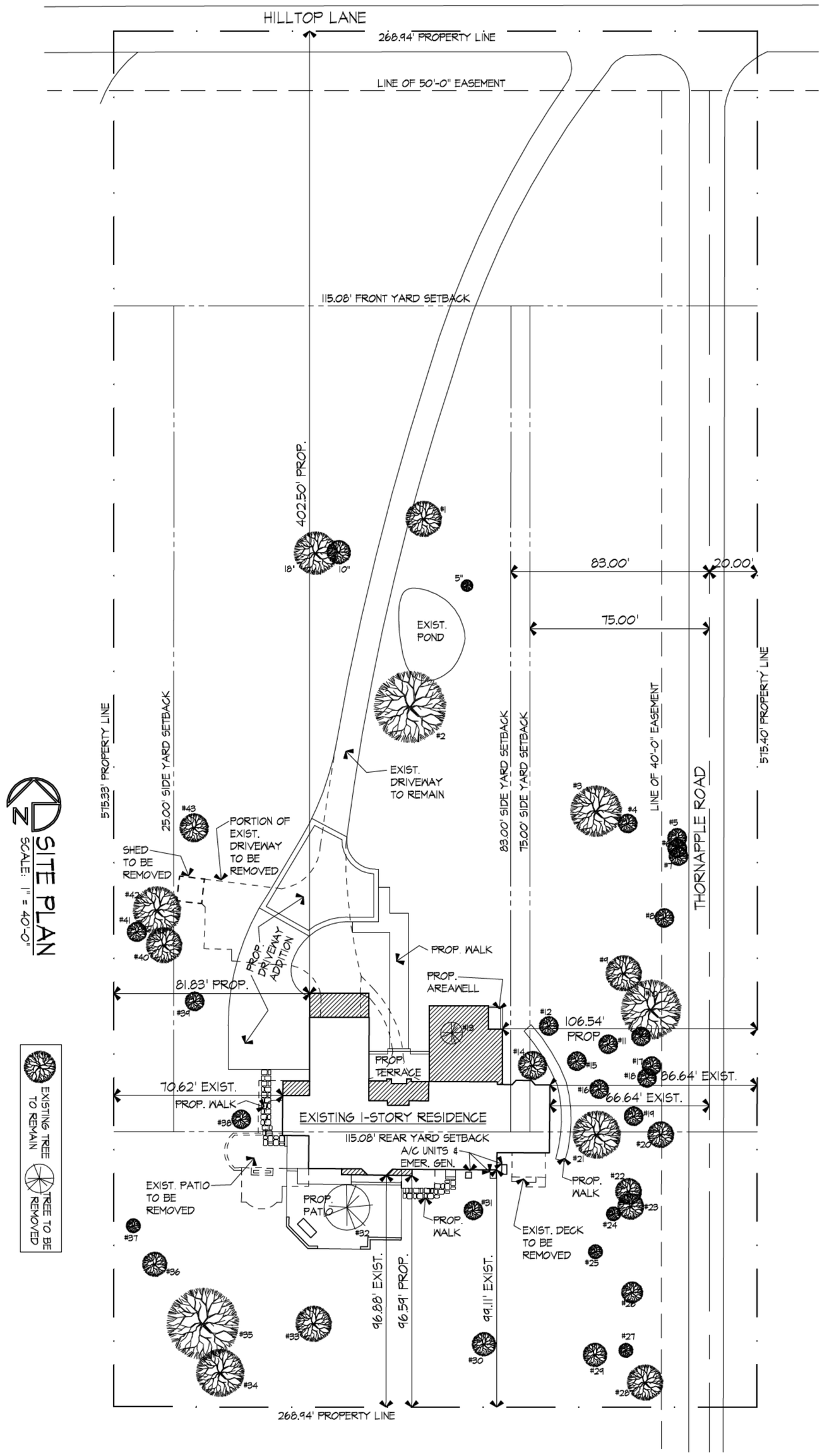
3. Data point 3UPL (Upland) facing north with residential driveway to the right (east).

4. Pond (presumably excavated) with landscaping and culvert facing northwest.

5. Sump pump outlet showing ponded conditions near deck on south side of residence.



6. View of residence, yard, driveway, and landscaping facing south from the northern property boundary.



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