

**AQUATIC RESOURCES REPORT**  
**Ellis Tracts Project**  
Town of Dryden, Tompkins County, NY

**APRIL 2017**

***Prepared for:***

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## TABLE OF CONTENTS

SECTION	PAGE #
<b>1.0 INTRODUCTION</b> .....	<b>1</b>
<b>2.0 SURVEY METHODS</b> .....	<b>1</b>
2.1 <i>Background Research</i> .....	1
2.2 <i>On-Site Delineation</i> .....	1
2.3 <i>Waterbody Identification</i> .....	3
2.4 <i>GPS Mapping</i> .....	3
<b>3.0 SURVEY RESULTS</b> .....	<b>3</b>
3.1 <i>Background Data Review</i> .....	3
3.2 <i>Delineated Aquatic Resources</i> .....	4
<b>4.0 SUMMARY</b> .....	<b>6</b>
<b>5.0 REFERENCES</b> .....	<b>6</b>

## LIST OF TABLES

TABLE	PAGE #
Table 1. Mapped Soil Types for Ellis Tracts Wetland Delineation .....	4
Table 2. Delineated Wetlands on the Ellis Tracts Wetland Delineation.....	5
Table 3. Delineated Streams on the Ellis Tracts Wetland Delineation .....	6

## ATTACHMENTS

ATTACHMENT A – Figures  
ATTACHMENT B – Photographic Log  
ATTACHMENT C – Data Forms

## **Aquatic Resources Report Ellis Tracts Tompkins County, New York**

### **1.0 Introduction**

Tetra Tech, Inc. (Tetra Tech) was contracted by SUN8 PDC, LLC (“SUN8”) to perform an aquatic resources survey of three (3) areas, totaling approximately 170-acres. All three locations are adjacent to Stevenson Road, between Turkey Hill Road and Game Farm Road (tax identification numbers 56.-5-31, 57.0-1-6, 57.0-1-7.1, 67.0-1-3, 67.0-1-4, 67.0-1-7.2, and 67.-1-27.2) in the Town of Dryden, Tompkins County, New York.

The purpose of this investigation was to determine the presence and extent of resources within the survey area that meet the criteria for federal wetlands designation according to the United States Army Corps of Engineers (USACE) guidelines, and are potentially jurisdictional and regulated under Section 404 of the Clean Water Act (CWA). Additionally, the survey was used to determine the presence and extents of any New York State Department of Environmental Conservation (NYSDEC) Freshwater Wetlands (FWW) and their 100-foot wide adjacent area or buffer. Background review information, such as U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) mapped soils, presence of U.S. Fish and Wildlife Service National Wetlands Inventory (USFWS NWI) features, and presence of NYSDEC FWW features that fall within the survey limits are summarized within Survey Methods below.

The following report summarizes the characteristics of delineated resources and report attachments include: Attachment A - Figures, Attachment B - Photographic Log, and Attachment C – Data Forms.

### **2.0 Survey Methods**

#### ***2.1 Background Research***

Prior to conducting fieldwork, Tetra Tech reviewed existing information for the survey area, including:

- Draft site plan layouts of the proposed arrays for the Ellis Road Project produced by Labella Associates, D.P.C., dated April 7, 2017
- United States Geological Survey (USGS) 7.5-minute series topographic quadrangle maps for the survey areas (Ithaca East, NY 1978).
- Soil survey maps, descriptions, and lists, to determine presence and extent of hydric and upland soils (USDA, NRCS 1965), Soil Survey Geographic [SSURGO] database for: Tompkins County, NY (1965).
- NWI geospatial data available from the USFWS for the survey area (USFWS, Wetlands Mapper, data downloaded April 2017); and,
- NYSDEC FWW locations, last updated 1994 (NYSDEC, downloaded April 2017, available at <http://cugir.mannlib.cornell.edu/datatheme.jsp?id=111>)
- Aerial photographs to identify drainage and other hydrologic features (Environmental Sciences Research Institute, Inc. [ESRI] online mapping services, available at: [services.arcgisonline.com/arcgis/service](http://services.arcgisonline.com/arcgis/service)).

#### ***2.2 On-Site Delineation***

Following the review of background information, two experienced wetland scientists (each has over three years extensive experience with wetland delineations and aquatic resource restoration) performed a field survey on April 5 and 10, 2017. The surveys consisted of walk-through inspection of the survey area to identify topographic, drainage, and vegetation features that would indicate the potential for a wetland determination. Potential wetlands were further evaluated by collecting soil, vegetation, and hydrology data

at upland and wetland sample locations at suspected wetland boundaries. Sample plot data were recorded on Northcentral and Northeast Region Wetland Determination Data Forms provided within the regional supplement.

The survey area was evaluated for the presence and extent of wetlands using the routine, Level-2 determination method described in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0)* (USACE 2012). Wetlands identified and delineated were subsequently classified in accordance with the *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin *et al.* 1979). Classifications were restricted to palustrine emergent (PEM), palustrine scrub-shrub (PSS), and palustrine forested (PFO). Wetland boundaries were also flagged and marked in the field and each wetland area was photographed.

Each wetland and waterbody was further evaluated to characterize the hydrological connection to adjacent upland, wetland, and waterbody regions occurring in proximity to the survey area investigated. Specific methods for characterizing and evaluating the soils, vegetation, and hydrologic indicators are described below.

*Vegetation:* Dominant plant species in each major vegetation stratum (tree, sapling/shrub, herbaceous, and woody vine) were identified within 30-foot radius sample plots. The wetland indicator status of each species was assigned according to the *Eastern Mountains and Piedmont Region National Wetlands Plant List* (Lichvar *et al.* 2014a) and *Northcentral and Northeast Regional Wetland Plant List* (Lichvar *et al.* 2014b). Hydrophytic vegetation was determined to be present where more than 50 percent of the dominant species from all vegetation strata were classified as facultative (FAC), facultative wetland (FACW), or obligate wetland species (OBL). Other tests used to evaluate the dominance of hydrophytic species included the Dominance Test and the Prevalence Index (USACE 2012).

*Soils:* A soil auger was used at each sample plot to extract a core sample to a depth where either hydric indicators were observed, approximately 20 inches, or until rocky substrate resulted in auger refusal. The soils were characterized by determining the color and texture of each soil horizon. Soil matrix and mottle colors were identified using Munsell Soil Color Charts (Munsell Color 2009). Soils were considered hydric if they exhibited one (1) or more of the following indicators, including, but not limited to: histosols, histic epipedons, black histic, hydrogen sulfide, stratified layers, 2 cm muck, depletion below dark surface, thick dark surface, sandy mucky mineral, sandy gleyed matrix, sandy redox, stripped matrix, dark surface, polyvalue below surface, thin dark surface, loamy gleyed matrix, depleted matrix, redox dark surface, depleted dark surface, redox depressions, iron-manganese masses, umbric surface, Piedmont floodplain soils, and red parent material. These indicators support a hydric soil determination, although secondary or additional indicators may also be present.

*Hydrology:* Each sample plot was examined for evidence of wetland hydrology. Indicators of wetland hydrology include: surface water, high water table, saturations, water marks, sediment deposits, drift deposits, algal mat or crust, iron deposits, visible inundation on aerials, water stained leaves, aquatic fauna, true aquatic plants, hydrogen sulfide odor, oxidized rhizospheres on living roots, presence of reduced iron, recent iron reduction in tilled soils, or a thin muck surface. Presence of standing water or depth to soil saturation was recorded at each sampling location.

## **2.3 Waterbody Identification**

Prior to field surveys, known waterbodies in the survey area were identified on USGS topographic quadrangle maps. During the field investigation a qualified biologist examined the entire field survey area for mapped and unmapped waterbodies. Waterbodies identified included perennial, intermittent, and ephemeral streams and ponds. Data recorded included stream name, associated wetlands, flow regime (perennial, intermittent, or ephemeral), direction of flow, water width, bank-to-bank width, bank height and slope, water depth, bottom and bank substrates, observed water quality, channel meander, and adjacent vegetation type. In addition, indicators of aquatic habitat, wildlife use, and soil erosion potential were recorded.

## **2.4 GPS Mapping**

Wetland and waterbody boundaries/alignments were flagged at regular intervals to accurately represent the boundary between the aquatic resource and the adjacent upland. Flag points were then land surveyed using a Trimble, Inc. (Sunnyvale, CA) Geo XH Global Positioning System (GPS). Each point used an identification code and was numbered consecutively to facilitate the desktop mapping process. Flag points were differentially corrected in accordance with Trimble, Inc. sub-meter accuracy standards. All data was recorded in the WGS 84 coordinate zone and then projected into NAD 83 State Plane New York Central using ArcGIS 10.2.

Attribute data for all flag points was recorded, including the following information:

- Unique number or name;
- NAD 1983 coordinates;
- Date;
- Time;
- Number of positions recorded;
- Max value position dilution of precision (PDOP); and,
- Horizontal accuracy (in meters)

GPS data were differentially corrected using Pathfinder Office 5.60 software (Trimble Inc., Sunnyvale, CA) and commercial base station control points. Corrected flag points were then imported into ArcView 10.2 (ESRI; Redlands, CA) Geographic Information System (GIS) mapping software where points were connected in consecutive order and according to surveyor notes. Wetland boundaries were left “open” when the wetland extended beyond the survey boundaries and were “closed” when contained entirely within the survey boundaries. Stream alignments were connected in a similar manner and designated as “line” data. A geo-referenced wetland delineation boundary suitable for overlay onto themed base layers was created using ArcView 10.2 GIS software. The same GIS software was also used as an analytical tool, providing acreages of the delineated wetlands and coordinate location of the centroids of the polygons.

## **3.0 Survey Results**

### **3.1 Background Data Review**

#### *General Area Description*

Land use within the survey boundary consists shrubland, cropland, undeveloped forest, shrublands, and a variety of wetland habitats. Attachment A, Figure 2 provides an aerial basemap of the survey area.

### Soils

A review of published and publicly available soils data for the survey area indicates that twenty (20) soils series are mapped within the survey boundary (Attachment A, Figure 1). Mapped soil series are summarized in Table 1 below.

**Table 1. Mapped Soil Types for the Ellis Tracts Wetland Delineation**

Soil Symbol	Soil Name and Brief Description <sup>1</sup>	Hydric Soil Classification
BoE	Bath and Valois soils, 25 to 35 percent slopes	N
BvA	Braceville gravelly silt loam, 0 to 5 percent slopes	N
Ca	Canandaigua and Lamson soils	Y
CdC	Chenango gravelly loam, 5 to 15 percent slopes	Y
DgB	Darien gravelly silt loam, 2 to 8 percent slopes	Y
EbB	Erie channery silt loam, 3 to 8 percent slopes	Y
EbC	Erie channery silt loam, 8 to 15 percent slopes	Y
EbC3	Erie channery silt loam, 8 to 15 percent slopes, eroded	Y
ErA	Erie-Chippewa channery silt loams, 0 to 3 percent slopes	Y
HsB	Hudson silty clay loam, 2 to 6 percent slopes	N
IcB	Ilion silty clay loam, 2 to 6 percent slopes	Y
LaB	Langford channery silt loam, 2 to 8 percent slopes	N
LaC	Langford channery silt loam, 8 to 15 percent slopes	N
LaC3	Langford channery silt loam, 8 to 15 percent slopes, eroded	N
Mm	Madalin mucky silty clay loam	Y
NaB	Niagara silt loam, 2 to 6 percent slopes	Y
OcC3	Ovid silty clay loam, 6 to 12 percent slopes eroded	Y
RkA	Rhinebeck silt loam, 0 to 2 percent slopes	Y
RkB	Rhinebeck silt loam, 2 to 6 percent slopes	Y
Ws	Wayland soils complex, 0 to 3 percent slopes, frequently flooded	Y

<sup>1</sup>USDA, NRCS, Soil Series Descriptions for Tompkins County, NY, 1965.

### Mapped Wetlands

Eight (8) USFWS mapped NWI features were identified in the Site boundary. That includes four (4) riverine (R4SBC) features, two (2) freshwater emergent wetland (PEM1A and PEM1E) features, one (1) freshwater forested/shrub (PSS4A) feature, and one (1) freshwater pond (PUBHh) feature. No NYSDEC Freshwater Wetlands Program wetland features or 100-foot adjacent areas were located in the immediate proximity or within the Site boundary.

### Mapped Waterbodies

The USGS 7.5-minute series topographic quadrangle maps depict two (2) streams in or adjacent to the survey areas. The northern survey area on the west side has a NYSDEC Class A stream. The southwestern survey area has a Class C stream flowing along the eastern limits, and additionally, two more Class C streams are identified flowing through the southwestern survey area.

### 3.2 Delineated Aquatic Resources

Thirteen (13) wetlands meeting USACE identification criteria were identified in the survey. Three (3) of the identified wetlands contain multiple cover classes (PFO, PSS, and/or PEM) as defined by Cowardin classification. Table 2 below summarizes these wetlands and their current conditions. Geometry and alignments of these wetlands are provided in Attachment A, Figure 2, and photos of these wetlands can be found in Attachment B.

**Table 2. Delineated Wetlands on the Ellis Tracts Wetland Delineation**

Wetland ID	Cover Class <sup>1</sup>	Hydrology Indicator <sup>2</sup>	Hydric Vegetation Indicator <sup>2,3</sup>	Hydric Soils Indicator <sup>2</sup>	Brief Wetland Description
W5a	PEM	A1, A2, A3, C4, B10, D2, D4	RT, DT	A3, F3	Large wetland complex with a drainage feeding through the active agricultural areas into stream S5a. Plateau formation at the base of a large hill.
	PFO	A3, B1, B9, C4, B10, B16, D1, D2, D4	RT, DT	A3, F3, F8	
W6a	PEM	A1, A2, A3, B8, B10, D2	RT, DT	F3	Depressional areas where ponded water gathers. Dominated by herbaceous wetland vegetation.
W7a	PEM	A1, A3, B9, C9, D4	RT, DT	A3, F3, F8	Depressional drainage basin associated with stream S7.
W9a/W10a	PEM	A1, A2, A3, C3, C4, B10, D2, D4	RT, DT	A3, F3	Seep and drainage basin wetland adjacent to the toe of slope along Cascadilla Creek. Part of a very large wetland complex off-site.
W11a	PEM	A1, A2, A3, C3, C4, B10, D2, D4	RT, DT	A3, F3	Seep and drainage basin wetland adjacent to the toe of slope along Cascadilla Creek. Part of a very large wetland complex off-site.
	PSS	A3, B1, C4, B10, B16, D1, D2, D4	RT, DT	A3, F3	
W12a	PEM	A1, A2, A3, B1, C1, C4, B10, D2, D4	RT, DT, PI	A3, A4, A5, F3	Seep and drainage basin wetland adjacent to the toe of slope along Cascadilla Creek. Part of a very large off-site wetland complex.
	PSS	A3, B1, C3, C4, B10, B16, D2, D4	RT, DT	A3, F3	
	PFO	A3, B9, B10, B16, D1, D2, D4	RT, DT, PI	F3, F8	
W13a	PEM	A1, A2, A3, C4, B10, B16, D2, D4	RT, DT	F3, F8	Seep and drainage wetland adjacent to the active agricultural field south of the survey boundaries. Most likely the result of drainage from streams S12 and S11 in addition to hillside seeps.
	PSS	A1, A2, A3, C4, B10, B16, D2, D4	RT, DT	A3, A5, F3	
W14a	PEM	A1, A2, A3, B1, C4, B10, B16, D2, D4	RT, DT	A3, F3	Hillside drainage wetland that likely occurs due to drainage from stream S16.
W2b	PEM	A1, A3, B4, B8, C1, B6, C9	RT	F3	Isolated drainage basin, most likely the result of a seep, within active pasture.
W3b	PEM	A1, A2, A3, B1	RT, DT	A3, F3	Depressional swale within old field.
W4b	PEM	A1, A3, B4, C1	RT, DT	A3, F3	Small depressional wetland within old field.
W5b	PEM	A1, A3	RT, DT	A3, F3	Depressional drainage swale associated with larger wetland complex offsite to the south.
W6b	PFO	A2, A3, B9, B16	RT, DT	A3, F3	Basin wetland area as water flow is bound by streams S8 and S9 and topographical ridges.

<sup>1</sup>Field classification based on Cowardin et al. 1979.

<sup>2</sup>Indicator codes from Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (V 2.0).

<sup>3</sup>DT = Dominance Test, PI = Prevalence Index.

The wetland areas are dominated by cottonwood (*Populus deltoides*), green ash (*Fraxinus pennsylvanica*), and black willow (*Salix nigra*) in the tree stratum. Redosier dogwood (*Cornus sericea*), grey-stemmed dogwood (*Cornus racemosa*) various willows (*Salix* spp.), honeysuckle (*Lonicera* spp.), boxelder (*Acer*

*negundo*) and hawthorne (*Crataegus* spp.) were found in the shrub layers across the Site, and broadleaf cattail (*Typha latifolia*), reed canarygrass (*Phalaris arundinacea*), and sensitive fern (*Onclea sensibilis*) were the dominant species in the herb stratum. Other species present in the Site include nannyberry (*Viburnum lentago*), red maple (*Acer rubrum*), skunk cabbage (*Symplocarpus foetidus*), woolgrass (*Scirpus cyperinus*), and soft rush (*Juncus effusus*).

Fourteen (14) streams were identified during the survey, all unnamed tributaries (UNT) to Cascadilla Creek immediately north of the Site. Table 3 below summarizes the streams identified on-site. Geometry and alignments of these streams are provided in Attachment A, Figure 2, and photos of these streams can be found in Attachment B.

**Table 3. Delineated Streams on the Ellis Tracts Wetland Delineation**

Stream ID	USGS Name	Flow Regime	Bank Width (feet)	Water Width (feet)	Water Depth (inches)	NYS Water Quality Classification	Flow Direction
S5a	UNT to Cascadilla Creek	Ephemeral	1	1	3	Drains to C	SW
S6	UNT to Cascadilla Creek	Ephemeral	10	4	2	Drains to A	W
S7	UNT to Cascadilla Creek	Intermittent	3	1	3	Drains to A	W
S8	UNT to Cascadilla Creek	Ephemeral	2	6	4	C	N
S9	UNT to Cascadilla Creek	Ephemeral	3	1	2	Drains to C	NE
S10	UNT to Cascadilla Creek	Perennial	12	1	2	Drains to C	N
S11	UNT to Cascadilla Creek	Intermittent	2	1.5	2	Drains to C	N
S12	UNT to Cascadilla Creek	Ephemeral	3	1	2	Drains to C	E
S13	UNT to Cascadilla Creek	Perennial	12	4	8	C	N
S14	UNT to Cascadilla Creek	Intermittent	2	1	3	Drains to C	N
S15	UNT to Cascadilla Creek	Ephemeral	10	4	3	Drains to C	NW
S16	UNT to Fall Creek	Ephemeral	3	0.5	3	Drains to C	NE
S17	UNT to Fall Creek	Ephemeral	5	1	2	Drains to C	E
S18	UNT to Fall Creek	Intermittent	3	2	4	Drains to C	N

\*Note that widths and depths are averages based on the assessed limits of the features

Additionally, two (2) ponds were identified in the Site boundaries. Pond P4 is an intermittent pond generally retaining stormwater and groundwater seasonally. Pond P5 is an excavated pond that perennially holds water and is used for drainage.

#### **4.0 Summary**

Tetra Tech completed an aquatic resource survey on an approximately 170 acre area located adjacent to Stevenson Road, between Turkey Hill Road and Game Farm Road, in the Town of Dryden, Tompkins County, New York. Fourteen (14) wetlands, fourteen (14) streams, and two (2) ponds were identified in the Site. Section 3.2 summarizes the data for the delineated resources. Attachment A provides figures regarding the location and results of the survey, Attachment B provides photos of the feature and the site, and Attachment C provides the data forms from the survey.

#### **5.0 References**

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. FWS/OBS-79/31, Washington, D.C. 131 pp.

Environmental Laboratory. 1987. United States Army Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1, U.S. Army Engineers Waterways Experiment Station, Vicksburg, MS. 100 pp.



Munsell Color. 2009. Munsell Soil Color Chart. MacBeth Division of Kollmorgen Instruments Corporation. Baltimore, MD. 27 pp.

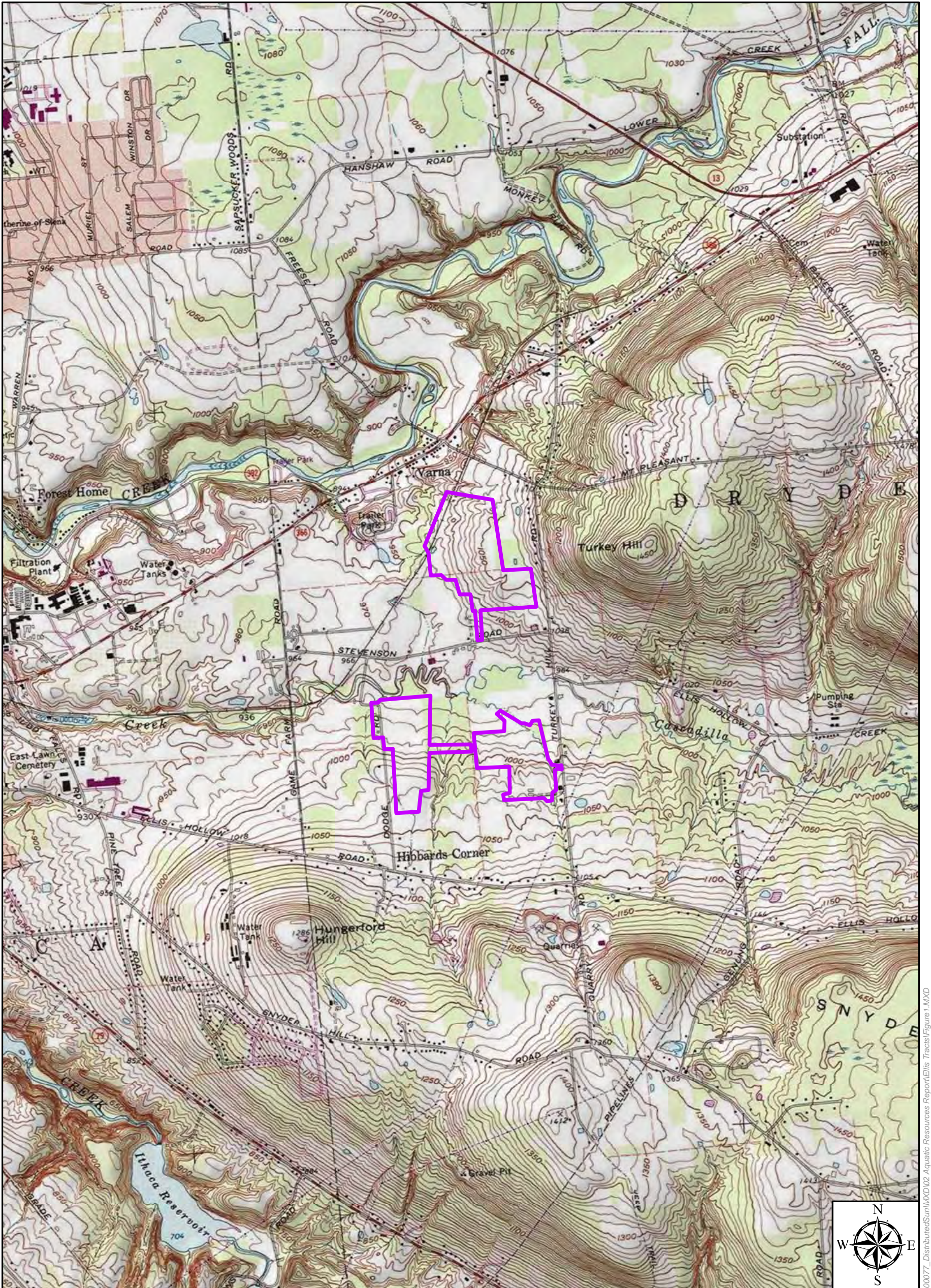
Lichvar, R.W., M. Butterwick, N.C. Melvin, and W.N. Kirchner. 2014. *The National Wetland Plant List*. 2014 Update of Wetland Ratings. *Phytoneuron* 2014-41: 1-42.

United States Army Corps of Engineers. 2012. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0). Vicksburg, MS. 176 pp.

United States Department of Agriculture, Natural Resources Conservation Service and University of California Davis. 2011. SoilWeb App. Available at <http://casoilresource.lawr.ucdavis.edu/soilweb-apps/>.

## **ATTACHMENT A**

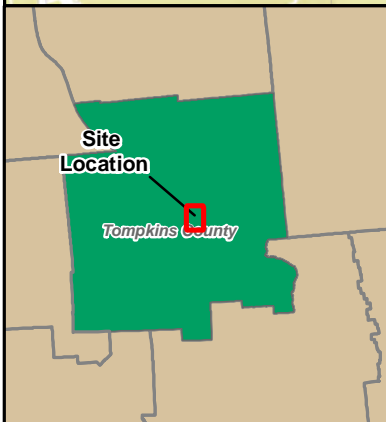
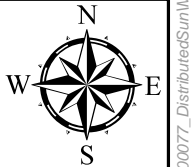
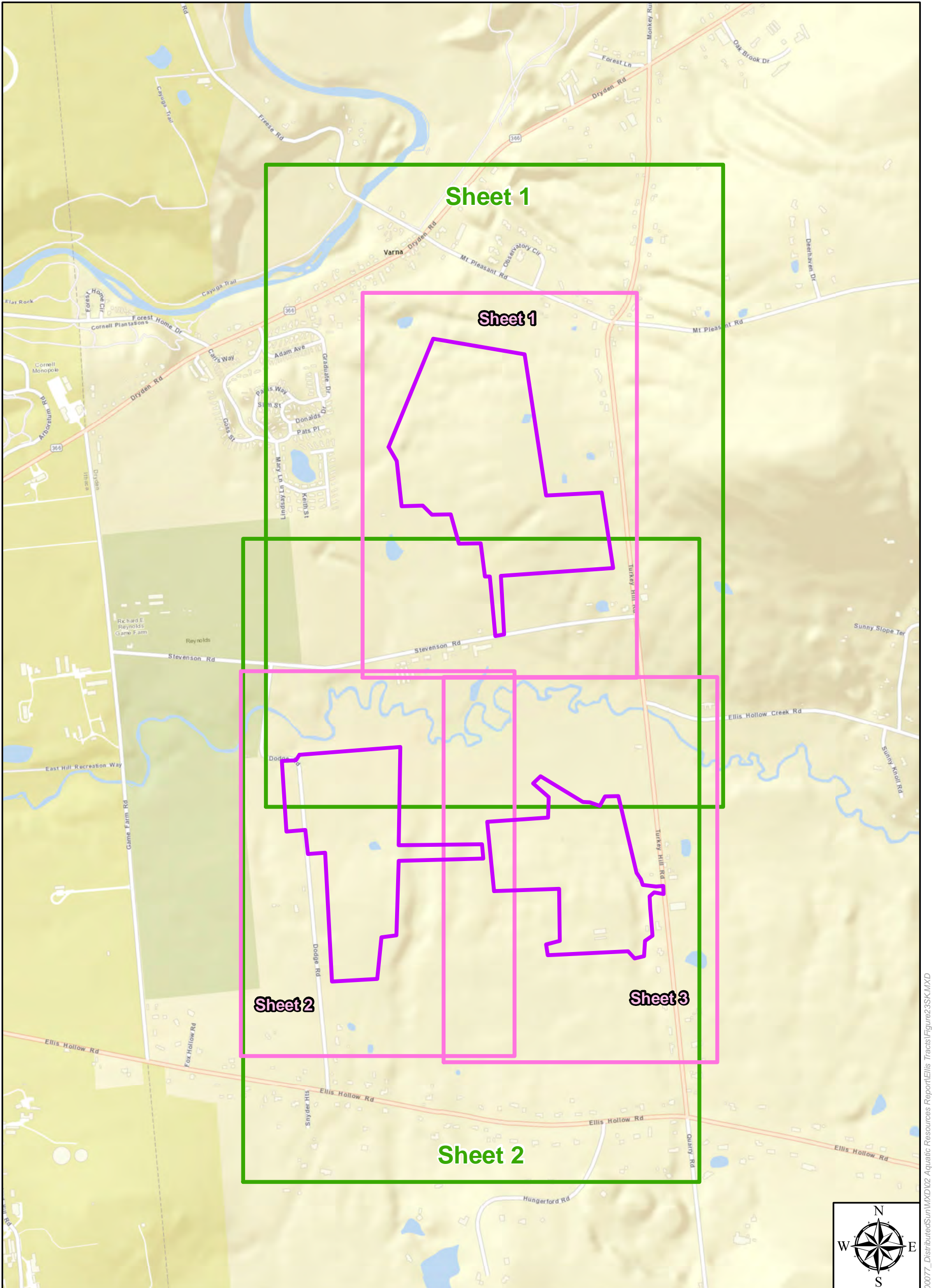
### **FIGURES**



**Figure 1. Site Location of the Ellis Tracts Project.**  
Town of Dryden, Tompkins County, NY.




<b>Legend</b>	Survey Boundary
<p>Scale = 1:24,000 <span style="float: right;">1 inch = 2,000 feet</span></p>	

Prepared For: <b>SUN8 PDC, LLC</b>	
Prepared By: TETRA TECH	
Date: <b>04/2017</b>	Sheet: <b>1 of 1</b>
Source: Topographic basemap from ArcGIS Online Services, available at: <a href="http://services.arcgisonline.com/arcgis/services">http://services.arcgisonline.com/arcgis/services</a> .	



**Sheet Key for Figures 2 and 3. USFWS NWI, Mapped Soils, and Delineated Resources on the Ellis Tracts Project. Town of Dryden, Tompkins County, NY.**

**Legend**

 Survey Boundary
  Figure 3
  Figure 2

0    500    1,000    2,000    3,000    4,000    Feet  
 Scale = 1:12,000 1 inch = 1,000 feet

Prepared For: <b>SUN8 PDC, LLC</b>	
Prepared By:  TETRA TECH	
Date: <b>04/2017</b>	Sheet: <b>1 of 1</b>
Source: World Street basemap from ArcGIS Online Services, available at: <a href="http://services.arcgisonline.com/arcgis/services">http://services.arcgisonline.com/arcgis/services</a> .	

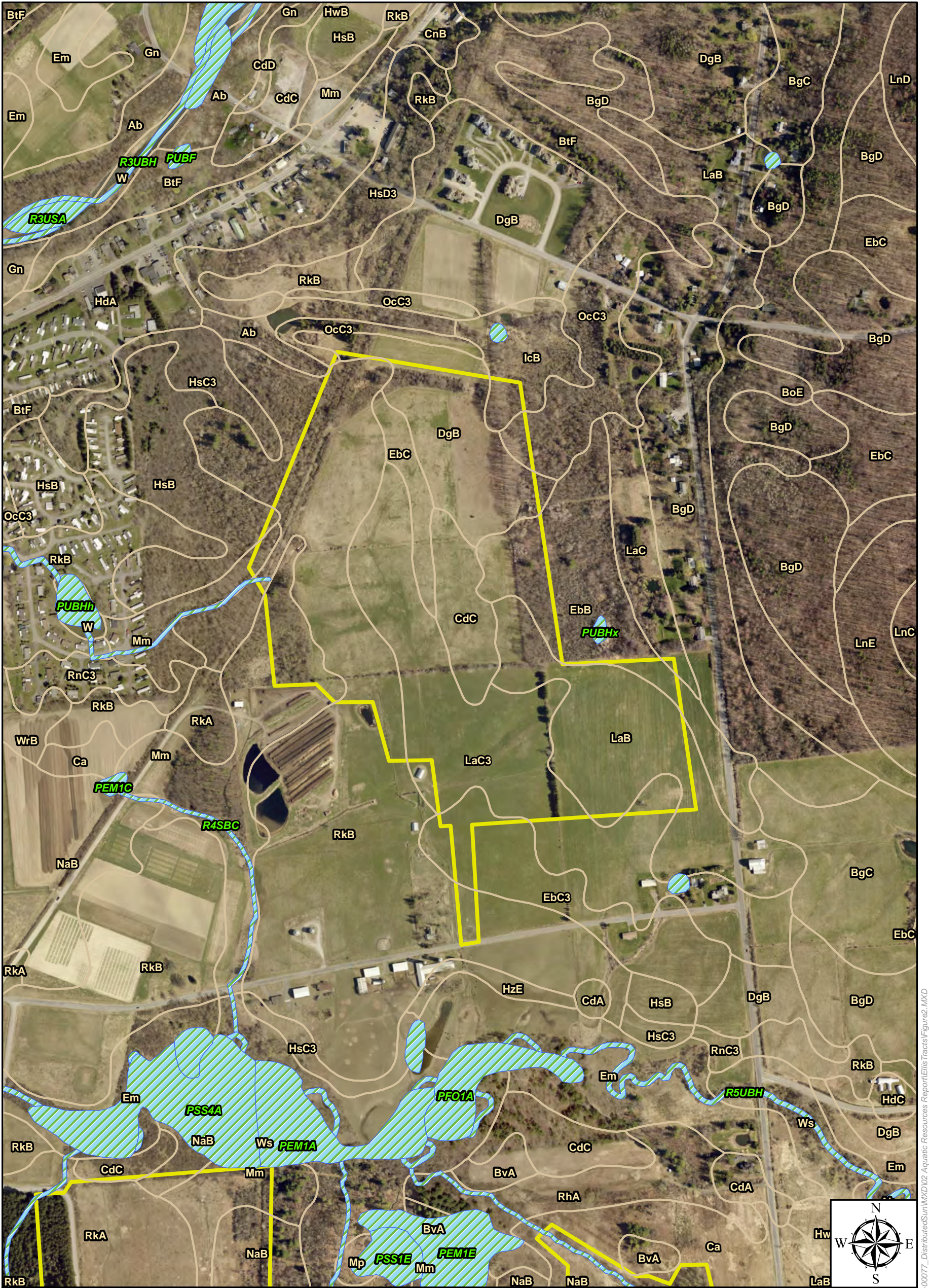


Figure 2. Mapped Soils and USFWS NWI Features at the Ellis Tracts Project Town of Dryden, Tompkins County, NY.

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**SUN8 PDC, LLC**

Prepared By:  
**TETRA TECH**

Date:  
**04/2017**

Sheet:  
**1 of 2**

Source:  
Orthoimagery basemap from ArcGIS Online Services, available at: <http://services.arcgisonline.com/arcgis/services>. Soils from USDA Web Soil Survey and USFWS NWI from USFWS; downloaded April 2017.



**Legend**

Survey Boundary    USFWS NWI    Soils

0    250    500    1,000    1,500    2,000    Feet

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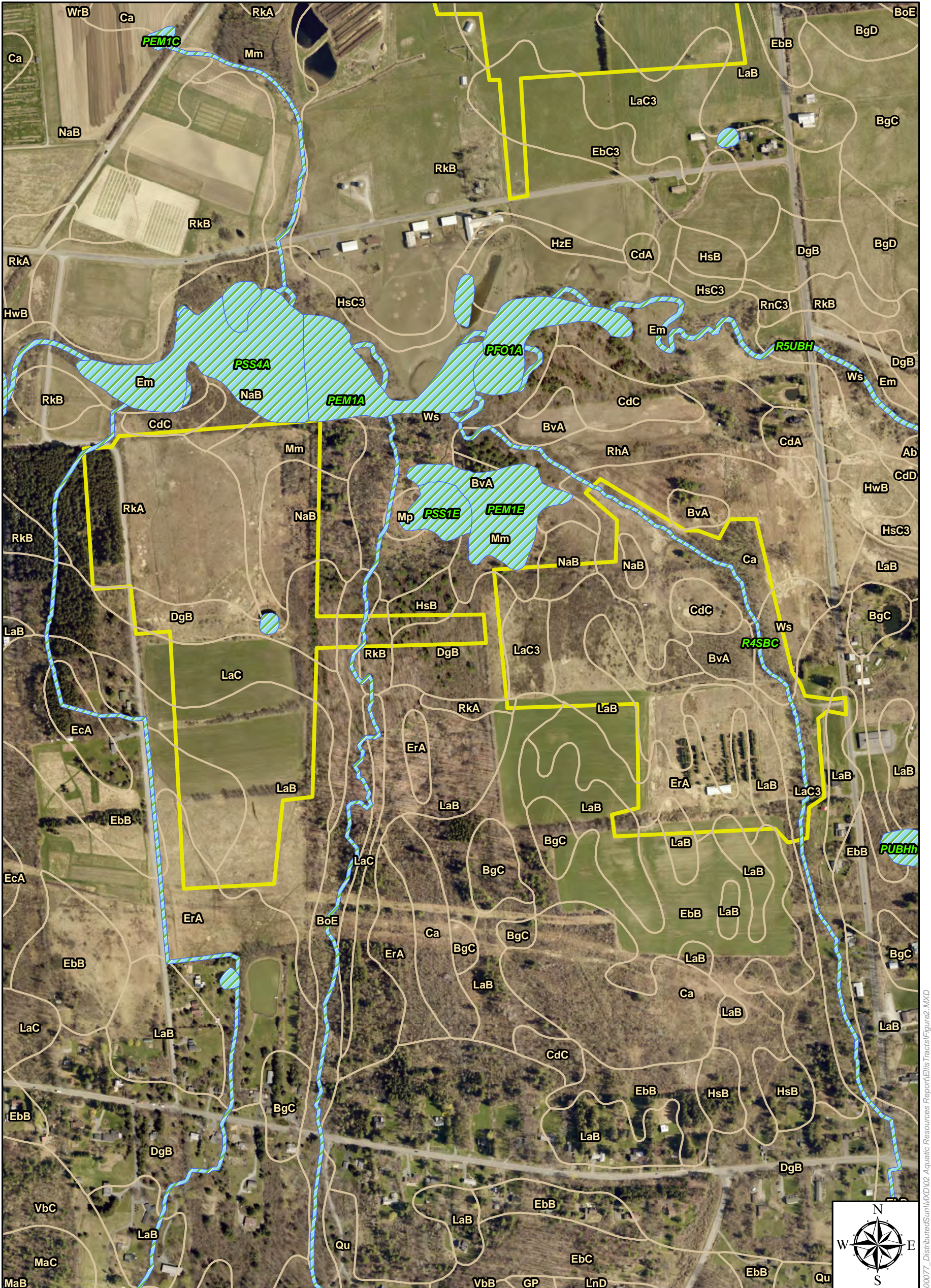


Figure 2. Mapped Soils and USFWS NWI Features at the Ellis Tracts Project Town of Dryden, Tompkins County, NY.

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**SUN8 PDC, LLC**

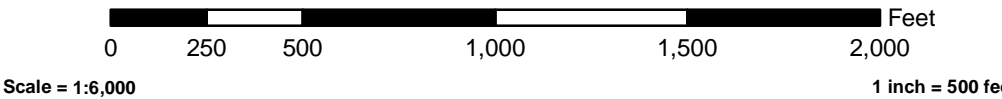
Prepared By:  
**TETRA TECH**

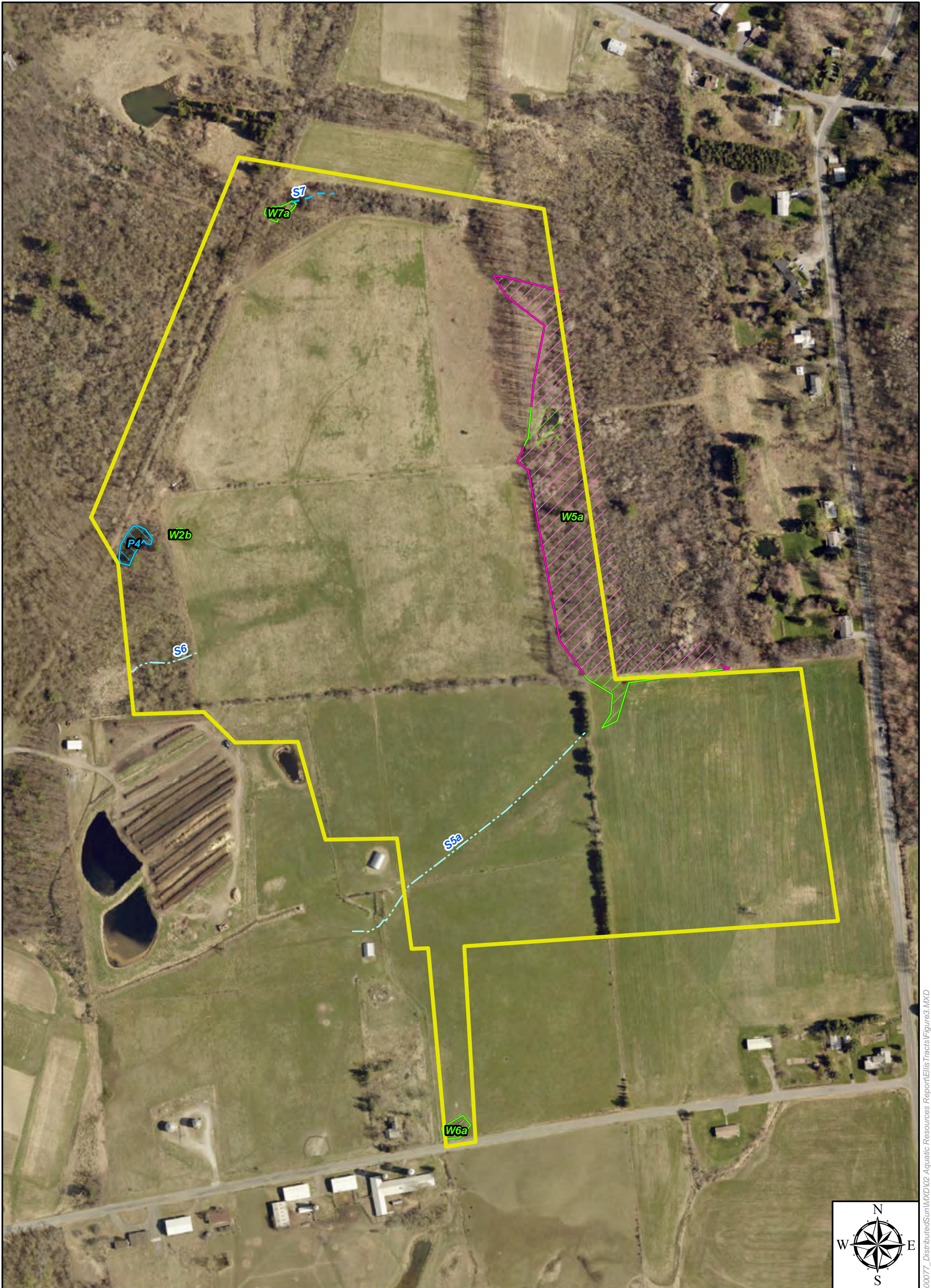
Date:  
**04/2017**

Sheet:  
**2 of 2**

Source:  
Orthoimagery basemap from ArcGIS Online Services, available at: <http://services.arcgisonline.com/arcgis/services>. Soils from USDA Web Soil Survey and USFWS NWI from USFWS; downloaded April 2017.

- Legend**
- Survey Boundary
  - USFWS NWI
  - Soils





**Figure 3. Delineated Aquatic Resources on the Ellis Tracts Project. Town of Dryden, Tompkins County, NY.**

Prepared For:

**SUN8 PDC, LLC**

Prepared By:



Date:

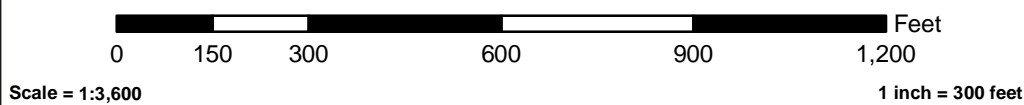
**04/2017**

Sheet:

**1 of 3**

**Legend**

- Survey Boundary
- PEM Wetland
- Ephemeral Stream
- Pond
- PFO Wetland
- Intermittent Stream
- PSS Wetland
- Perennial Stream



**Source:**

Orthoimagery basemap from ArcGIS Online Services, available at: <http://services.arcgisonline.com/arcgis/services>. Aquatic Resources, Tetra Tech; April 2017.



**Figure 3. Delineated Aquatic Resources on the Ellis Tracts Project. Town of Dryden, Tompkins County, NY.**

**Legend**

- |                 |                  |                     |
|-----------------|------------------|---------------------|
| Survey Boundary | PEM Wetland      | Ephemeral Stream    |
| Pond            | PFO Wetland      | Intermittent Stream |
| PSS Wetland     | Perennial Stream |                     |

Scale = 1:3,600

0 150 300 600 900 1,200 Feet

1 inch = 300 feet

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Prepared By: TETRA TECH	
Date: <b>04/2017</b>	Sheet: <b>2 of 3</b>
Source: Orthoimagery basemap from ArcGIS Online Services, available at: <a href="http://services.arcgisonline.com/arcgis/services">http://services.arcgisonline.com/arcgis/services</a> . Aquatic Resources, Tetra Tech; April 2017.	





**Figure 3. Delineated Aquatic Resources on the Ellis Tracts Project. Town of Dryden, Tompkins County, NY.**

Prepared For:

**SUN8 PDC, LLC**

Prepared By:



Date:

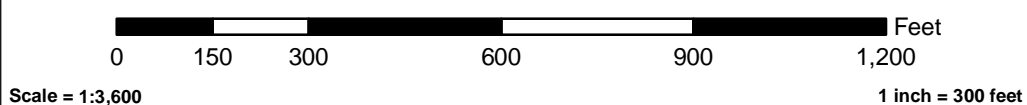
**04/2017**

Sheet:

**3 of 3**

**Legend**

- |                 |                  |                     |
|-----------------|------------------|---------------------|
| Survey Boundary | PEM Wetland      | Ephemeral Stream    |
| Pond            | PFO Wetland      | Intermittent Stream |
| PSS Wetland     | Perennial Stream |                     |



**Source:**

Orthoimagery basemap from ArcGIS Online Services, available at: <http://services.arcgisonline.com/arcgis/services/AquaticResources>, Tetra Tech; April 2017.

## **ATTACHMENT B**

### **PHOTOGRAPHIC LOG**

## AQUATIC RESOURCES SURVEY

---

**Company:** SUN8 PDC, LLC  
**Project:** Ellis Tracts Project  
Photolog



**Photographer:** M. Guinan  
**Date:** 04/05/2017  
**Photo No.:** 1  
**Direction:** SE

**Comments:** Wetland W5a PEM portion characterized by tussocks, drainage patterns and standing water.



**Photographer:** M. Guinan  
**Date:** 04/05/2017  
**Photo No.:** 2  
**Direction:** E

**Comments:** Wetland W5a PFO section characterized by living trees, redox depressions, moss trim lines, buttressing of individual features.

## AQUATIC RESOURCES SURVEY

---

**Company:** SUN8 PDC, LLC  
**Project:** Ellis Tracts Project  
Photolog



**Photographer:** M. Guinan  
**Date:** 04/05/2017  
**Photo No.:** 3  
**Direction:** S

**Comments:** Upland area adjacent to wetland W5a. No signs of hydrophyte growth or hydrology are present and soil indicators are lacking.



**Photographer:** M. Guinan  
**Date:** 04/05/2017  
**Photo No.:** 4  
**Direction:** NE

**Comments:** Wetland W6a PEM characterized by tussocks, drainage patterns, stressed vegetation growth and standing water

## AQUATIC RESOURCES SURVEY

---

**Company:** SUN8 PDC, LLC  
**Project:** Ellis Tracts Project  
Photolog



**Photographer:** M. Guinan  
**Date:** 04/10/2017  
**Photo No.:** 5  
**Direction:** N

**Comments:** Wetland W9a/W10a characterized by tussocks, drainage patterns and hydrophyte growth. Wetland is formed in an open meadow between swales and drains to a larger scrub/shrub wetland located outside of survey boundaries.



**Photographer:** M. Guinan  
**Date:** 04/10/2017  
**Photo No.:** 6  
**Direction:** E

**Comments:** Upland area adjacent to wetland W9a/W10a. No signs of hydrology are present and vegetation community changes are obvious.

## AQUATIC RESOURCES SURVEY

---

**Company:** SUN8 PDC, LLC  
**Project:** Ellis Tracts Project  
Photolog



**Photographer:** M. Guinan  
**Date:** 04/10/2017  
**Photo No.:** 7  
**Direction:** N

**Comments:** Wetland W9a/W10a PEM section characterized by tussocks, drainage patterns, and hydrophyte growth in between swales in an open meadow. Wetland is formed in an open meadow between swales and drains to a larger scrub/shrub wetland located outside of survey boundaries.



**Photographer:** M. Guinan  
**Date:** 04/10/2017  
**Photo No.:** 8  
**Direction:** N

**Comments:** Wetland W11a PEM section characterized by tussocks, standing water, drainage patterns and thick hydrophyte growth.

## AQUATIC RESOURCES SURVEY

---

**Company:** SUN8 PDC, LLC  
**Project:** Ellis Tracts Project  
Photolog



**Photographer:** M. Guinan  
**Date:** 04/10/2017  
**Photo No.:** 9  
**Direction:** E

**Comments:** Wetland W11a PSS section characterized by thick shrub vegetation, tussocks, moss trim lines, standing water, drainage patterns and redox depressions.



**Photographer:** M. Guinan  
**Date:** 04/10/2017  
**Photo No.:** 10  
**Direction:** NE

**Comments:** Upland area associated with Wetland W11a. No signs of hydrology are present and there is an identifiable topographic change.

## AQUATIC RESOURCES SURVEY

---

**Company:**  
**Project:**

SUN8 PDC, LLC  
Ellis Tracts Project  
Photolog



**Photographer:** M. Guinan  
**Date:** 04/10/2017  
**Photo No.:** 11  
**Direction:** W

**Comments:** Wetland W12a PEM section characterized by heavy hydrophyte growth, tussocks and standing water.



**Photographer:** M. Guinan  
**Date:** 04/10/2017  
**Photo No.:** 12  
**Direction:** SW

**Comments:** Wetland W12a PFO section characterized by living trees, drainage patterns, moss trim lines and stunted herbaceous vegetation growth. Wetland is located in the floodplain of stream S13.



## AQUATIC RESOURCES SURVEY

---

**Company:** SUN8 PDC, LLC  
**Project:** Ellis Tracts Project  
Photolog



**Photographer:** M. Guinan  
**Date:** 04/10/2017  
**Photo No.:** 13  
**Direction:** E

**Comments:** Wetland W13a PEM section characterized by thick hydrophyte growth, sparse willow growth, standing water and drainage patterns.



**Photographer:** M. Guinan  
**Date:** 04/10/2017  
**Photo No.:** 14  
**Direction:** SW

**Comments:** Wetland W13a PSS section characterized by thick shrub vegetation, standing/flowing water, moss rim lines and drainage patterns.

## AQUATIC RESOURCES SURVEY

---

**Company:** SUN8 PDC, LLC  
**Project:** Ellis Tracts Project  
Photolog



**Photographer:** M. Guinan  
**Date:** 04/10/2017  
**Photo No.:** 15  
**Direction:** N

**Comments:** Additional photograph of wetland W13a PEM portion with adjacent upland section pictured. Drainage depression that forms W13a PEM transitions to an upland swale.



**Photographer:** M. Guinan  
**Date:** 04/05/2017  
**Photo No.:** 16  
**Direction:** N

**Comments:** Wetland W14a PEM portion characterized by hydrophyte vegetation growth surrounding the floodplain of stream S16.

## AQUATIC RESOURCES SURVEY

---

**Company:** SUN8 PDC, LLC  
**Project:** Ellis Tracts Project  
Photolog



**Photographer:** M. Guinan

**Date:** 04/10/2017

**Photo No.:** 17

**Direction:** NW

**Comments:** Additional photograph of wetland W14a with adjacent upland section pictured. Photograph depicts the transition from hydrophyte growth to FACU shrub species.

## **ATTACHMENT C**

### **DATA FORMS**

# Tetra Tech Stream Data Sheet

Surveyors: N. Grosse / M. Guinan      Date: 4/5/17      Resource ID Number: S5a  
 Project: SUN8      State: NY      County: Thompson  
 Photo Number (s): 4339 ↑, 4340 ↓      Canopy Cover: 0%

Flow Direction: N      Bank Width: 1 feet      Water Width: 8" feet  
 High Water Depth: 6" feet      Water Depth: 3" feet      Turbidity: clear

Flow Regime:     Perennial     Intermittent     Ephemeral     Flowing Ditch     Dry/Stagnant Ditch

**Sinuosity:**  
 Low  
 Medium  
 High

**Features:**  
 Riffles     Sand/Mud Bar     Run/Glide  
 Pools     Gravel Bar     Braided  
 Rapids     Aquatic Vegetation     Other \_\_\_\_\_

**Substrate:**  
 Bedrock \_\_\_\_\_%  
 Boulder \_\_\_\_\_%  
 Cobble/Gravel 15%  
 Sand \_\_\_\_\_%  
 Silt/Clay 80%  
 Organic 5%

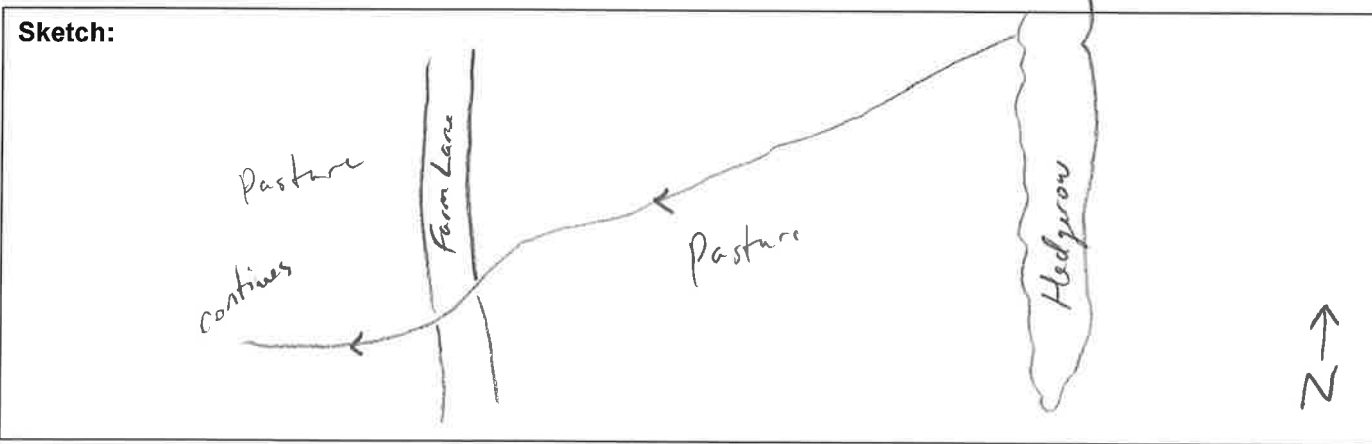
**Bank Substrate:**  
 Height: Left 6" Right 6"  
 Bedrock      
 Boulder      
 Gravel      
 Sand      
 Silt/Clay      
 Organic   

**Floodplain Width:**  

Left	Right
<input checked="" type="checkbox"/> <10 feet	<input checked="" type="checkbox"/>
<input type="checkbox"/> <25 feet	<input type="checkbox"/>
<input type="checkbox"/> <50 feet	<input type="checkbox"/>
<input type="checkbox"/> <100 feet	<input type="checkbox"/>
<input type="checkbox"/> >100 feet	<input type="checkbox"/>

**Dominant Vegetation:**  
 Forested  
     Species: \_\_\_\_\_  
 Shrub  
     Species: \_\_\_\_\_  
 Herbaceous  
     Species: Unknown grasses - active pasture.

Wildlife Observed/Notes:  
None



# Tetra Tech Stream Data Sheet

Surveyors: <u>N. Grasse / M. Gudrun</u>	Date: <u>4/5/17</u>	Resource ID Number: <u>56</u>
Project: <u>SUN8</u>	State: <u>NY</u>	County: <u>Thompson</u>
Photo Number (s): <u>43429, 4343 ↓</u>	Canopy Cover: <u>100</u> %	

**Flow Direction:** W      **Bank Width:** 10 feet      **Water Width:** 2-6 feet  
**High Water Depth:** 1 feet      **Water Depth:** 2" feet      **Turbidity:** Clear

**Flow Regime:** [ ] Perennial [ ] Intermittent  Ephemeral [ ] Flowing Ditch [ ] Dry/Stagnant Ditch

**Sinuosity:**  Low [ ] Medium [ ] High

**Features:** [ ] Riffles  Sand/Mud Bar  Run/Glide  
 [ ] Pools [ ] Gravel Bar [ ] Braided  
 [ ] Rapids [ ] Aquatic Vegetation [ ] Other \_\_\_\_\_

<b>Substrate:</b> <input type="checkbox"/> Bedrock ___% <input type="checkbox"/> Boulder ___% <input type="checkbox"/> Cobble/Gravel ___% <input type="checkbox"/> Sand ___% <input type="checkbox"/> Silt/Clay ___% <input checked="" type="checkbox"/> Organic <u>100</u> %	<b>Bank Substrate:</b> Height: Left <u>1</u> Right <u>1</u> <input type="checkbox"/> Bedrock [ ] <input type="checkbox"/> Boulder [ ] <input type="checkbox"/> Gravel [ ] <input type="checkbox"/> Sand [ ] <input checked="" type="checkbox"/> Silt/Clay <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Organic <input checked="" type="checkbox"/>	<b>Floodplain Width:</b> Left Right <input type="checkbox"/> <10 feet [ ] <input type="checkbox"/> <25 feet [ ] <input type="checkbox"/> <50 feet [ ] <input type="checkbox"/> <100 feet [ ] <input type="checkbox"/> >100 feet [ ]
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**Dominant Vegetation:**

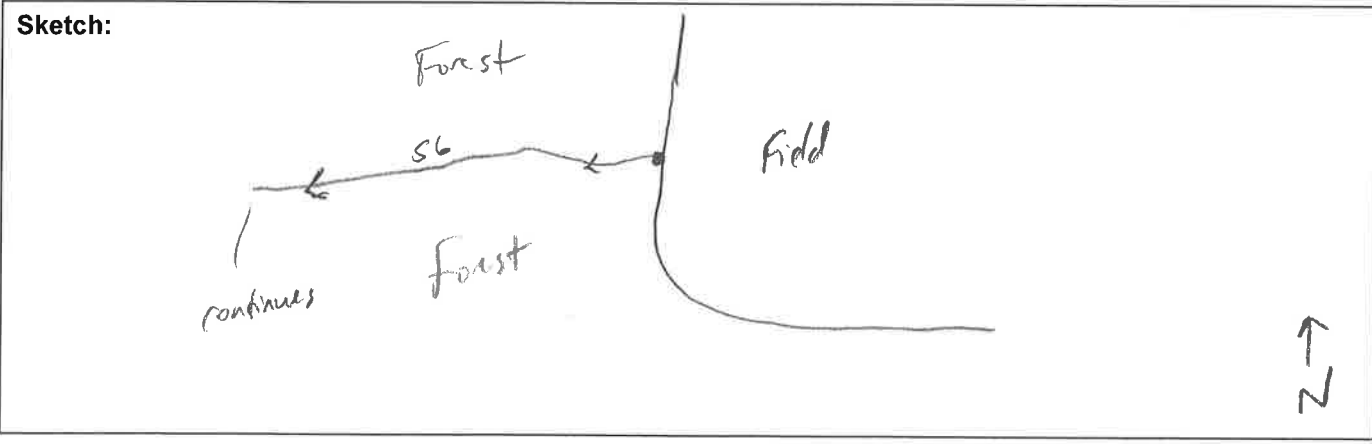
Forested Species: Prunus serotina, Carpinus caroliniana

Shrub Species: Lonicera Morrowii

[ ] Herbaceous Species: \_\_\_\_\_

**Wildlife Observed/Notes:**

None



# Tetra Tech Stream Data Sheet

Surveyors: N. Gross / M. Graham Date: 4/5/17 Resource ID Number: S7  
 Project: SUN 8 State: NY County: Thompson  
 Photo Number (s): 4346↑, 4347↓ Canopy Cover: 100%

Flow Direction: W Bank Width: 3 feet Water Width: 1 feet  
 High Water Depth: 6" ~~feet~~ Water Depth: 3" feet Turbidity: clear

Flow Regime:  Perennial  Intermittent  Ephemeral  Flowing Ditch  Dry/Stagnant Ditch

**Sinuosity:**  
 Low  
 Medium  
 High

**Features:**  
 Riffles  Sand/Mud Bar  Run/Glide  
 Pools  Gravel Bar  Braided  
 Rapids  Aquatic Vegetation  Other \_\_\_\_\_

**Substrate:**  
 Bedrock \_\_\_%  
 Boulder \_\_\_%  
 Cobble/Gravel 25%  
 Sand \_\_\_%  
 Silt/Clay 40%  
 Organic 35%

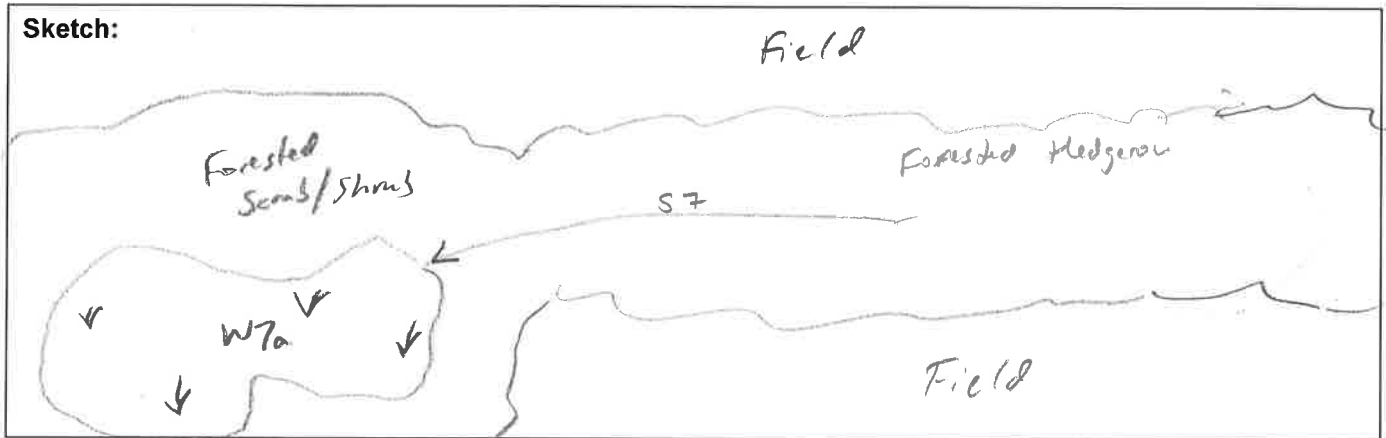
**Bank Substrate:**  
 Height: Left / Right /  
 Bedrock   
 Boulder   
 Gravel   
 Sand   
 Silt/Clay   
 Organic

**Floodplain Width:**  
 Left Right  
 <10 feet   
 <25 feet   
 <50 feet   
 <100 feet   
 >100 feet

**Dominant Vegetation:**  
 Forested  
 Species: Tilia americana, Prunus serotina  
 Shrub  
 Species: Lonicera spp.  
 Herbaceous  
 Species: \_\_\_\_\_

**Wildlife Observed/Notes:**

None



# Tetra Tech Stream Data Sheet

Surveyors: N. Grasse / M. Fralich Date: 4/10/17 Resource ID Number: S8  
 Project: SUN 8 State: NY County: Thompkins  
 Photo Number (s): 4358 ↑, 4359 ↓ Canopy Cover: 100%

Flow Direction: N Bank Width: 12 feet Water Width: 6 feet  
 High Water Depth: 3 feet Water Depth: 4" feet Turbidity: Clear

Flow Regime:  Perennial [ ] Intermittent [ ] Ephemeral [ ] Flowing Ditch [ ] Dry/Stagnant Ditch

**Sinuosity:** [ ] Low  Medium [ ] High  
**Features:**  Riffles [ ] Sand/Mud Bar  Run/Glide  
 Pools  Gravel Bar [ ] Braided  
 Rapids [ ] Aquatic Vegetation [ ] Other \_\_\_\_\_

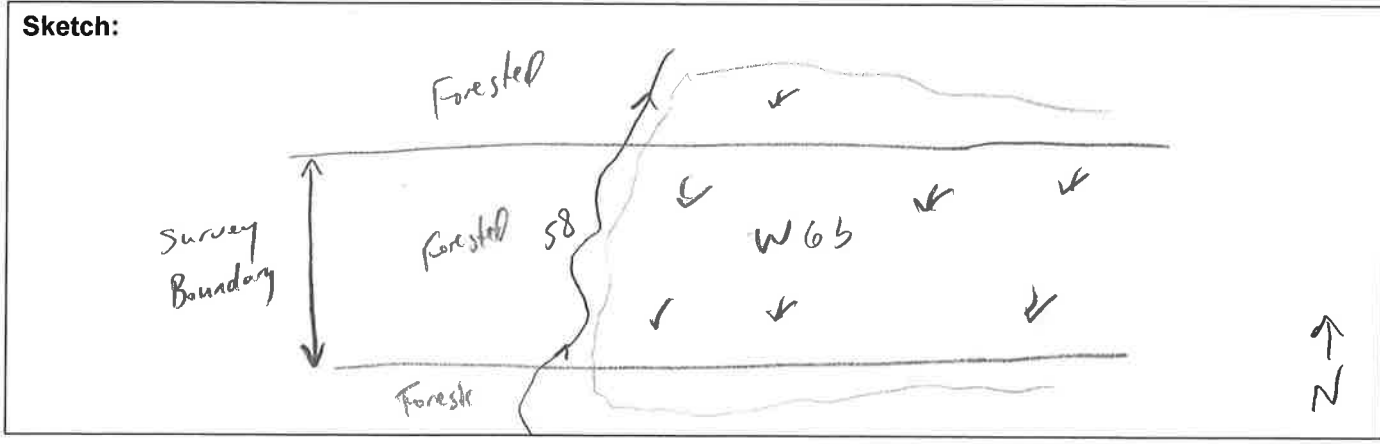
**Substrate:** [ ] Bedrock \_\_\_\_\_% [ ] Boulder \_\_\_\_\_%  
 Cobble/Gravel 85%  Sand 5%  
 Silt/Clay 5%  Organic 5%

**Bank Substrate:** Height: Left 3 Right 3  
 Bedrock [ ]  Boulder [ ]  
 Gravel   
 Sand   
 Silt/Clay [ ]  Organic [ ]

**Floodplain Width:** Left Right  
 <10 feet [ ]  <25 feet   
 <50 feet [ ]  <100 feet [ ]  
 >100 feet [ ]

**Dominant Vegetation:**  
 Forested Species: Acer saccharum  
 Shrub Species: Lonicera morrowii  
 Herbaceous Species: \_\_\_\_\_

Wildlife Observed/Notes:





# Tetra Tech Stream Data Sheet

Surveyors: N. Grosse / M. Guinan Date: 4/10/17 Resource ID Number: S9  
 Project: SUN8 State: NY County: Thompson  
 Photo Number (s): 4360 ↑, 4361 ↓ Canopy Cover: 100 %

Flow Direction: NE Bank Width: 3 feet Water Width: 1 feet  
 High Water Depth: 6" feet Water Depth: 2" feet Turbidity: med

Flow Regime:  Perennial  Intermittent  Ephemeral  Flowing Ditch  Dry/Stagnant Ditch

**Sinuosity:**

- Low
- Medium
- High

**Features:**

- Riffles
- Sand/Mud Bar
- Run/Glide
- Pools
- Gravel Bar
- Braided
- Rapids
- Aquatic Vegetation
- Other \_\_\_\_\_

**Substrate:**

- Bedrock \_\_\_%
- Boulder \_\_\_%
- Cobble/Gravel 40%
- Sand \_\_\_%
- Silt/Clay \_\_\_%
- Organic 60%

**Bank Substrate:**

- Height: Left 6" Right 6"
- Bedrock
  - Boulder
  - Gravel
  - Sand
  - Silt/Clay
  - Organic

**Floodplain Width:**

- |  |                                     |
|--|-------------------------------------|
| Left   | Right                               |
| <input checked="" type="checkbox"/> <10 feet | <input checked="" type="checkbox"/> |
| <input type="checkbox"/> <25 feet            | <input type="checkbox"/>            |
| <input type="checkbox"/> <50 feet            | <input type="checkbox"/>            |
| <input type="checkbox"/> <100 feet           | <input type="checkbox"/>            |
| <input type="checkbox"/> >100 feet           | <input type="checkbox"/>            |

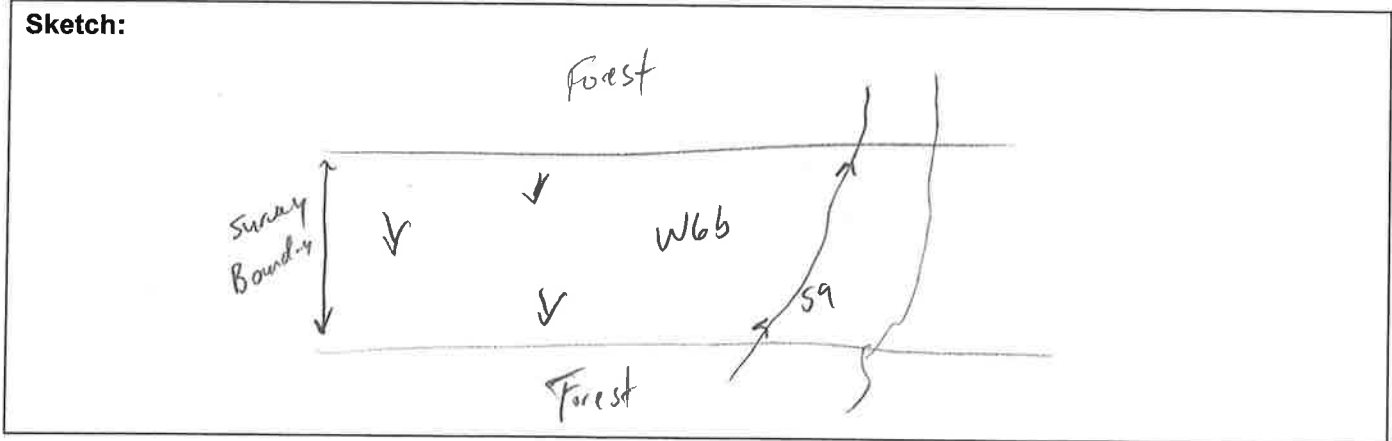
**Dominant Vegetation:**

- Forested  
Species: Fraxinus pennsylvanica, Acer saccharum
- Shrub  
Species: Lonicera morrowii
- Herbaceous  
Species: \_\_\_\_\_

**Wildlife Observed/Notes:**

None

**Sketch:**



# Tetra Tech Stream Data Sheet

Surveyors: N. Grass / M. Guinan Date: 4/16/17 Resource ID Number: S10  
 Project: SUN8 State: NY County: Thompson  
 Photo Number (s): 4362↑, 4363↓ Canopy Cover: 90 %

Flow Direction: N Bank Width: 2 feet Water Width: 8" ~~feet~~  
 High Water Depth: 1 feet Water Depth: 2" ~~feet~~ Turbidity: clear

Flow Regime:  Perennial  Intermittent  Ephemeral  Flowing Ditch  Dry/Stagnant Ditch

**Sinuosity:**  
 Low  
 Medium  
 High

**Features:**  
 Riffles  Sand/Mud Bar  Run/Glide  
 Pools  Gravel Bar  Braided  
 Rapids  Aquatic Vegetation  Other \_\_\_\_\_

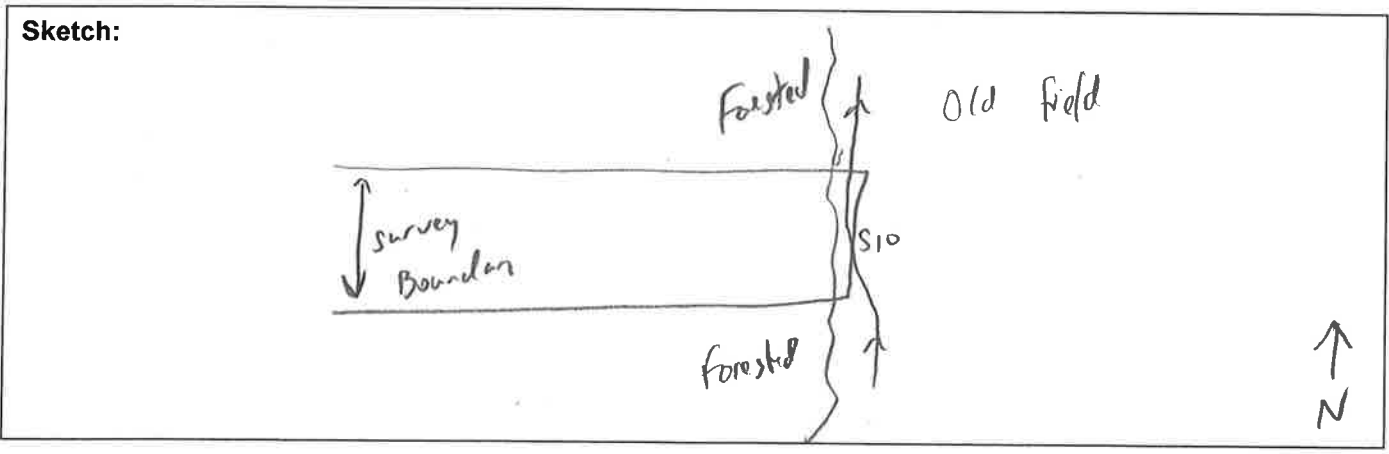
**Substrate:**  
 Bedrock \_\_\_%  
 Boulder \_\_\_%  
 Cobble/Gravel \_\_\_%  
 Sand \_\_\_%  
 Silt/Clay 75%  
 Organic 25%

**Bank Substrate:**  
 Height: Left 1 Right 1  
 Bedrock   
 Boulder   
 Gravel   
 Sand   
 Silt/Clay   
 Organic

**Floodplain Width:**  
 Left Right  
 <10 feet   
 <25 feet   
 <50 feet   
 <100 feet   
 >100 feet

**Dominant Vegetation:**  
 Forested  
 Species: Fraxinus pennsylvanica  
 Shrub  
 Species: Lonicera morrowii, Rosa multiflora  
 Herbaceous  
 Species: \_\_\_\_\_

**Wildlife Observed/Notes:**  
None



# Tetra Tech Stream Data Sheet

Surveyors: N. Grosse / M. Guhan Date: 4/10/17 Resource ID Number: S11  
 Project: SUN8 State: NY County: Thompson  
 Photo Number (s): 4374 ↑, 4375 ↓ Canopy Cover: 100 %

Flow Direction: NE Bank Width: 2 feet Water Width: 1.5 feet  
 High Water Depth: 4" ~~feet~~ Water Depth: 2" ~~feet~~ Turbidity: clear

Flow Regime: [ ] Perennial  Intermittent [ ] Ephemeral [ ] Flowing Ditch [ ] Dry/Stagnant Ditch

**Sinuosity:**  
 Low  
 Medium  
 High

**Features:**  
 Riffles  Sand/Mud Bar  Run/Glide  
 Pools  Gravel Bar  Braided  
 Rapids  Aquatic Vegetation  Other \_\_\_\_\_

**Substrate:**  
 Bedrock \_\_\_\_\_ %  
 Boulder \_\_\_\_\_ %  
 Cobble/Gravel 50 %  
 Sand 40 %  
 Silt/Clay \_\_\_\_\_ %  
 Organic 10 %

**Bank Substrate:**  
 Height: Left 6" Right 6"  
 Bedrock   
 Boulder   
 Gravel   
 Sand   
 Silt/Clay   
 Organic

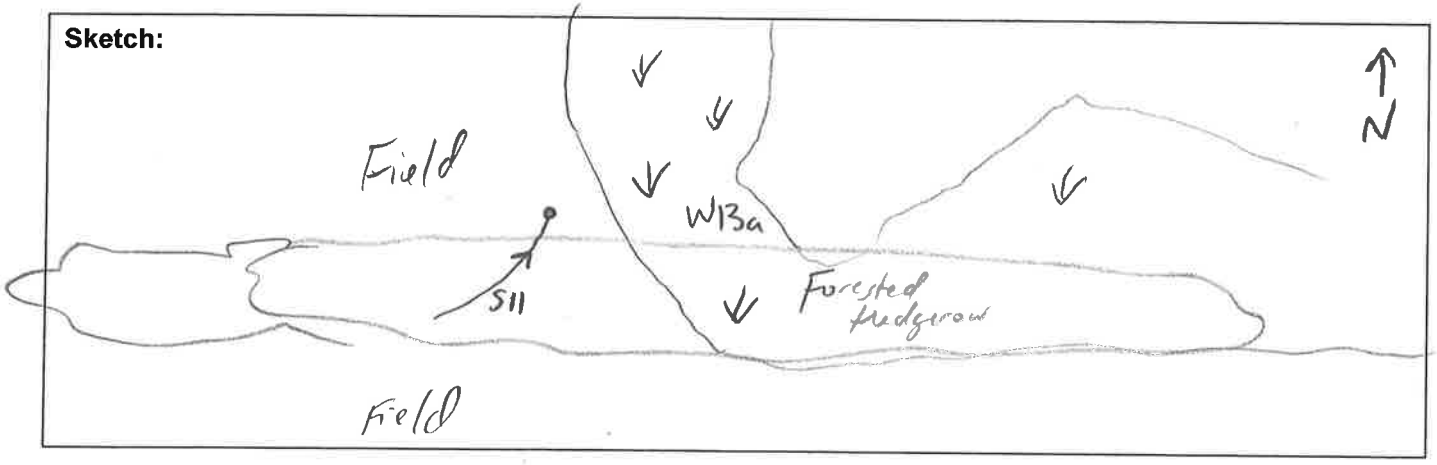
**Floodplain Width:**  

Left	Right
<input checked="" type="checkbox"/> <10 feet	<input checked="" type="checkbox"/>
<input type="checkbox"/> <25 feet	<input type="checkbox"/>
<input type="checkbox"/> <50 feet	<input type="checkbox"/>
<input type="checkbox"/> <100 feet	<input type="checkbox"/>
<input type="checkbox"/> >100 feet	<input type="checkbox"/>

**Dominant Vegetation:**  
 Forested  
 Species: Populus deltoides  
 Shrub  
 Species: Lonicera spp.  
 Herbaceous  
 Species: \_\_\_\_\_

**Wildlife Observed/Notes:**

None. Goes underground at end.



# Tetra Tech Stream Data Sheet

Surveyors: N. Grosse / M. Guiron Date: 4/10/17 Resource ID Number: S12  
 Project: SUN8 State: NY County: Thompson's  
 Photo Number (s): 4376 ↑, 4377 ↓ Canopy Cover: 100 %

Flow Direction: E Bank Width: 3 feet Water Width: 1 feet  
 High Water Depth: 1 feet Water Depth: 2" ~~feet~~ Turbidity: Clear

Flow Regime: [ ] Perennial [ ] Intermittent  Ephemeral [ ] Flowing Ditch  Dry/Stagnant Ditch

**Sinuosity:**  
 Low  
 Medium  
 High

**Features:**  
 Riffles [ ] Sand/Mud Bar [ ] Run/Glide  
 Pools [ ] Gravel Bar [ ] Braided  
 Rapids  Aquatic Vegetation  Other minimal flow, mostly stagnant

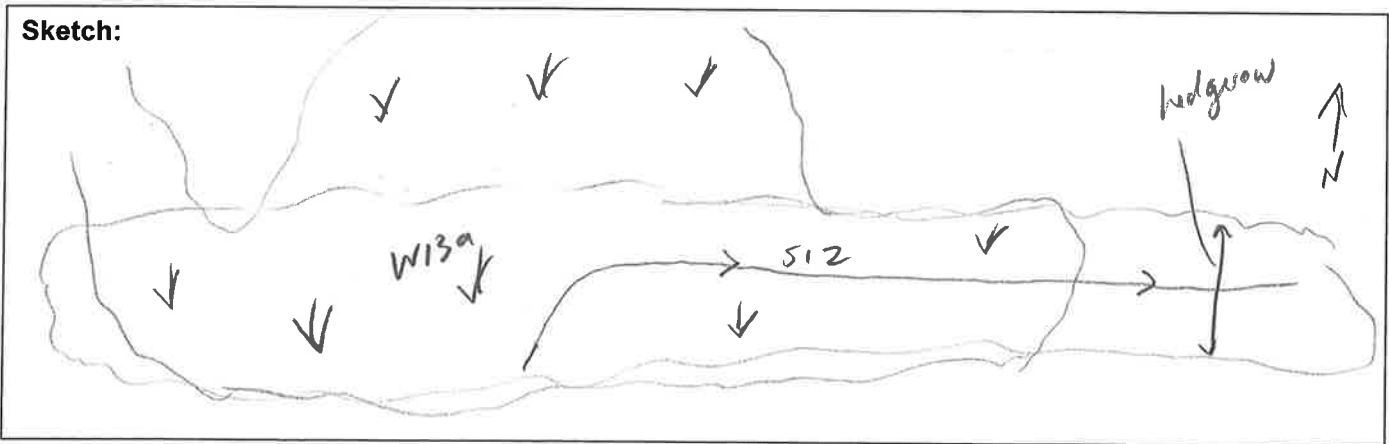
**Substrate:**  
 Bedrock \_\_\_ %  
 Boulder \_\_\_ %  
 Cobble/Gravel 60 %  
 Sand \_\_\_ %  
 Silt/Clay \_\_\_ %  
 Organic 40 %

**Bank Substrate:**  
 Height: Left 1 Right 1  
 Bedrock [ ]  
 Boulder [ ]  
 Gravel [ ]  
 Sand [ ]  
 Silt/Clay   
 Organic

**Floodplain Width:**  
 Left Right  
 <10 feet   
 <25 feet [ ]  
 <50 feet [ ]  
 <100 feet [ ]  
 >100 feet [ ]

**Dominant Vegetation:**  
 Forested  
 Species: Prunus serotina, Fraxinus pennsylvanica  
 Shrub  
 Species: Lonicera morrowii  
 Herbaceous  
 Species: \_\_\_\_\_

**Wildlife Observed/Notes:**  
None.



# Tetra Tech Stream Data Sheet

Surveyors: N. Grosse / M. Guhan Date: 4/10/17 Resource ID Number: S13  
 Project: SUN 8 State: NY County: Thompson  
 Photo Number (s): 4378↑, 4379↓ Canopy Cover: 100 %

Flow Direction: N Bank Width: 12 feet Water Width: 4 feet  
 High Water Depth: 2 feet Water Depth: 6"-10" feet Turbidity: clear

Flow Regime:  Perennial [ ] Intermittent [ ] Ephemeral [ ] Flowing Ditch [ ] Dry/Stagnant Ditch

**Sinuosity:**  
 Low  
 Medium  
 High

**Features:**  
 Riffles  Sand/Mud Bar  Run/Glide  
 Pools  Gravel Bar  Braided  
 Rapids  Aquatic Vegetation  Other \_\_\_\_\_

**Substrate:**  
 Bedrock \_\_\_ %  
 Boulder \_\_\_ %  
 Cobble/Gravel 80 %  
 Sand 10 %  
 Silt/Clay 10 %  
 Organic \_\_\_ %

**Bank Substrate:**  
 Height: Left 2-10 Right 1-10  
 Bedrock [ ]  
 Boulder [ ]  
 Gravel [ ]  
 Sand [ ]  
 Silt/Clay [ ]  
 Organic [ ]

**Floodplain Width:**  

Left	Right
<input type="checkbox"/> <10 feet	<input type="checkbox"/>
<input checked="" type="checkbox"/> <25 feet	<input checked="" type="checkbox"/>
<input type="checkbox"/> <50 feet	<input type="checkbox"/>
<input type="checkbox"/> <100 feet	<input type="checkbox"/>
<input type="checkbox"/> >100 feet	<input type="checkbox"/>

**Dominant Vegetation:**  
 Forested  
 Species: Juglans nigra, Salix nigra  
 Shrub  
 Species: Lonicera spp, Vitis spp.  
 Herbaceous  
 Species: Phalaris arundinacea

**Wildlife Observed/Notes:**  
None observed

**Sketch:**  
See GIS mapping - too large to sketch.

# Tetra Tech Stream Data Sheet

Surveyors: N. Fosse / M. Guinan Date: 4/10/17 Resource ID Number: 514  
 Project: SUN 8 State: NY County: Thompson  
 Photo Number (s): 4381 ↑, 4382 ↓ Canopy Cover: 75 %

Flow Direction: NW Bank Width: 1 feet Water Width: 10"  
 High Water Depth: 1 feet Water Depth: 3" Turbidity: clear

Flow Regime: [ ] Perennial  Intermittent [ ] Ephemeral [ ] Flowing Ditch [ ] Dry/Stagnant Ditch

**Sinuosity:**

- Low
- [ ] Medium
- [ ] High

**Features:**

- Riffles
- [ ] Pools
- [ ] Rapids
- Sand/Mud Bar
- Gravel Bar
- [ ] Aquatic Vegetation
- Run/Glide
- [ ] Braided
- [ ] Other \_\_\_\_\_

**Substrate:**

- [ ] Bedrock \_\_\_%
- [ ] Boulder \_\_\_%
- [ ] Cobble/Gravel \_\_\_%
- [ ] Sand \_\_\_%
- Silt/Clay 65 %
- Organic 30 %

**Bank Substrate:**

- |   |                                     |
|---|-------------------------------------|
| Height: Left <u>1</u>                         | Right <u>1</u>                      |
| [ ] Bedrock                                   | [ ]                                 |
| [ ] Boulder                                   | [ ]                                 |
| <input checked="" type="checkbox"/> Gravel    | <input checked="" type="checkbox"/> |
| [ ] Sand                                      | [ ]                                 |
| <input checked="" type="checkbox"/> Silt/Clay | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> Organic   | <input checked="" type="checkbox"/> |

**Floodplain Width:**

- |  |                                     |
|--|-------------------------------------|
| Left   | Right                               |
| <input checked="" type="checkbox"/> <10 feet | <input checked="" type="checkbox"/> |
| [ ] <25 feet                                 | [ ]                                 |
| [ ] <50 feet                                 | [ ]                                 |
| [ ] <100 feet                                | [ ]                                 |
| [ ] >100 feet                                | [ ]                                 |

**Dominant Vegetation:**

- Forested  
Species: Salix nigra
- Shrub  
Species: Lonicera morrowii
- [ ] Herbaceous  
Species: \_\_\_\_\_

**Wildlife Observed/Notes:**

*None observed*

**Sketch:**

*See GIS mapping for detail - all contained w/in W12a. Extends to west past survey boundary.*



# Tetra Tech Stream Data Sheet

Surveyors: N. Grosse / M. Gribben Date: 4/10/17 Resource ID Number: S15  
 Project: SUN8 State: NY County: Thompson  
 Photo Number (s): 4383 ↑, 4384 ↓ Canopy Cover: 65 %

Flow Direction: NE Bank Width: 10 feet Water Width: 4 feet  
 High Water Depth: 4 feet Water Depth: 3" Turbidity: clear

Flow Regime:  Perennial  Intermittent  Ephemeral  Flowing Ditch  Dry/Stagnant Ditch

**Sinuosity:**

- Low
- Medium
- High

**Features:**

- Riffles
- Pools
- Rapids
- Sand/Mud Bar
- Gravel Bar
- Aquatic Vegetation
- Run/Glide
- Braided
- Other \_\_\_\_\_

**Substrate:**

- Bedrock \_\_\_%
- Boulder \_\_\_%
- Cobble/Gravel 65%
- Sand \_\_\_%
- Silt/Clay \_\_\_%
- Organic 30%

**Bank Substrate:**

- |   |                                     |
|---|-------------------------------------|
| Height: Left <u>4</u>                         | Right <u>4</u>                      |
| <input type="checkbox"/> Bedrock              | <input type="checkbox"/>            |
| <input type="checkbox"/> Boulder              | <input type="checkbox"/>            |
| <input type="checkbox"/> Gravel               | <input type="checkbox"/>            |
| <input type="checkbox"/> Sand                 | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> Silt/Clay | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> Organic   | <input checked="" type="checkbox"/> |

**Floodplain Width:**

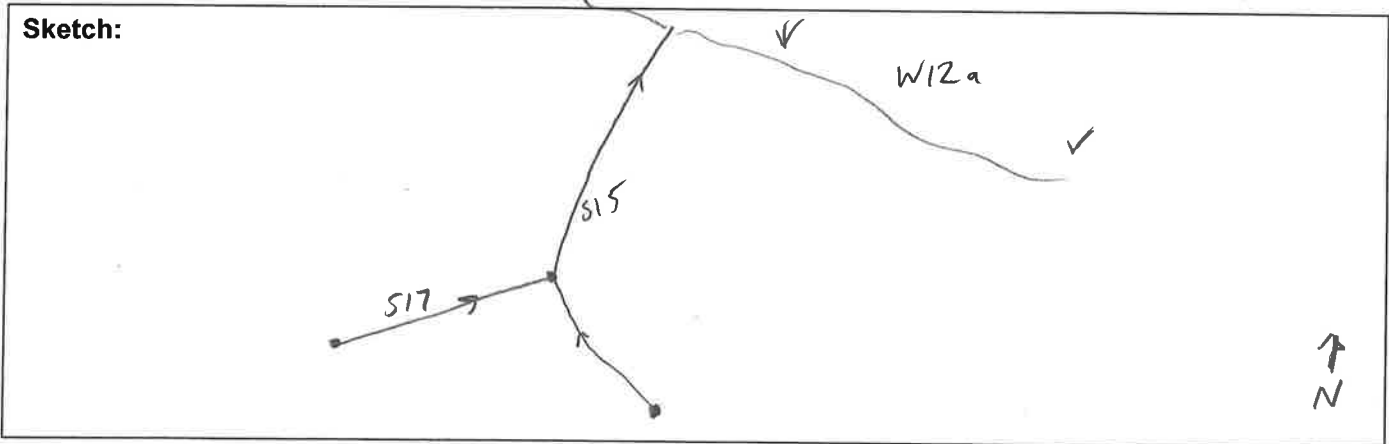
- |  |                                     |
|--|-------------------------------------|
| Left   | Right                               |
| <input checked="" type="checkbox"/> <10 feet | <input checked="" type="checkbox"/> |
| <input type="checkbox"/> <25 feet            | <input type="checkbox"/>            |
| <input type="checkbox"/> <50 feet            | <input type="checkbox"/>            |
| <input type="checkbox"/> <100 feet           | <input type="checkbox"/>            |
| <input type="checkbox"/> >100 feet           | <input type="checkbox"/>            |

**Dominant Vegetation:**

- Forested  
Species: \_\_\_\_\_
- Shrub  
Species: Lonicera narrowsii, Salix discolor
- Herbaceous  
Species: Typha, Juncus, Phalaris

**Wildlife Observed/Notes:**

Man made ditch.



# Tetra Tech Stream Data Sheet

Surveyors: N. Grosse / M. Guhan Date: 4/10/17 Resource ID Number: S16  
 Project: SUN8 State: NY County: Thompson  
 Photo Number (s): 4385↑, 4386↓ Canopy Cover: 85 %

Flow Direction: N Bank Width: 3 feet Water Width: 8" ~~feet~~  
 High Water Depth: 1 feet Water Depth: 3" ~~feet~~ Turbidity: clear

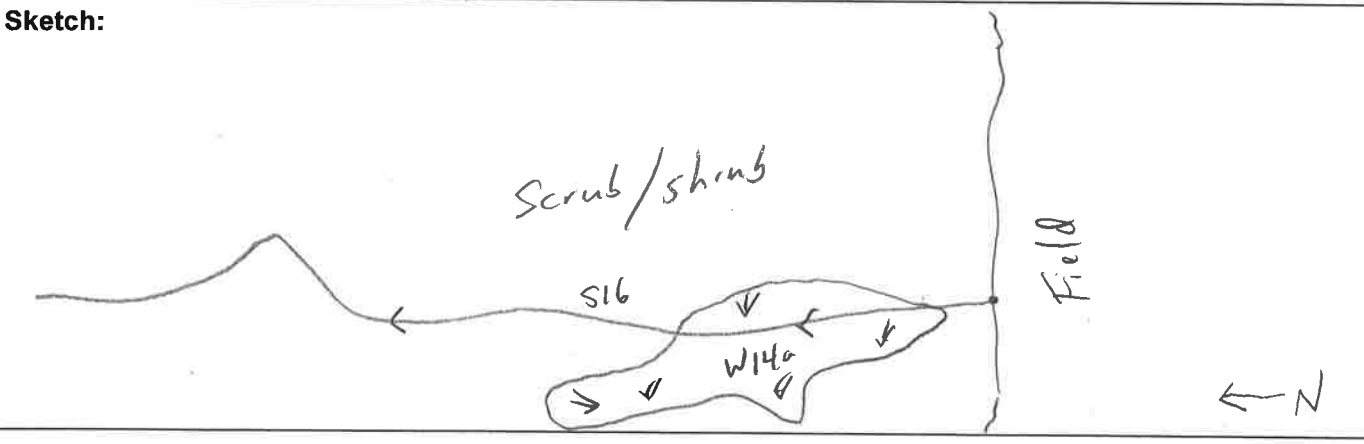
Flow Regime:  Perennial  Intermittent  Ephemeral  Flowing Ditch  Dry/Stagnant Ditch

**Sinuosity:**  Low  Medium  High  
**Features:**  Riffles  Pools  Rapids  Sand/Mud Bar  Gravel Bar  Aquatic Vegetation  Run/Glide  Braided  Other \_\_\_\_\_

**Substrate:**  Bedrock \_\_\_\_\_%  Boulder \_\_\_\_\_%  Cobble/Gravel 75 %  Sand 20 %  Silt/Clay \_\_\_\_\_%  Organic 5 %  
**Bank Substrate:** Height: Left 1 Right 1  
 Bedrock  Boulder  Gravel  Sand  Silt/Clay  Organic  
**Floodplain Width:** Left Right  
 <10 feet   
 <25 feet   
 <50 feet   
 <100 feet   
 >100 feet

**Dominant Vegetation:**  Forested Species: Fraxinus pennsylvanica  
 Shrub Species: Lonicera morrowii, Cornus racemosa  
 Herbaceous Species: \_\_\_\_\_

**Wildlife Observed/Notes:**  
 Associated w/ W14a. Headwater is more ditch like, lower reach is naturally channelized.





# Tetra Tech Stream Data Sheet

Surveyors: N. Grossi / M. Guinan Date: 4/10/17 Resource ID Number: S17  
 Project: SUN 8 State: NY County: Thompson  
 Photo Number (s): 4387↑, 4388↓ Canopy Cover: 100%

Flow Direction: E Bank Width: 6 feet Water Width: 1 feet  
 High Water Depth: 4 feet Water Depth: 2" ~~1.5"~~ Turbidity: clear

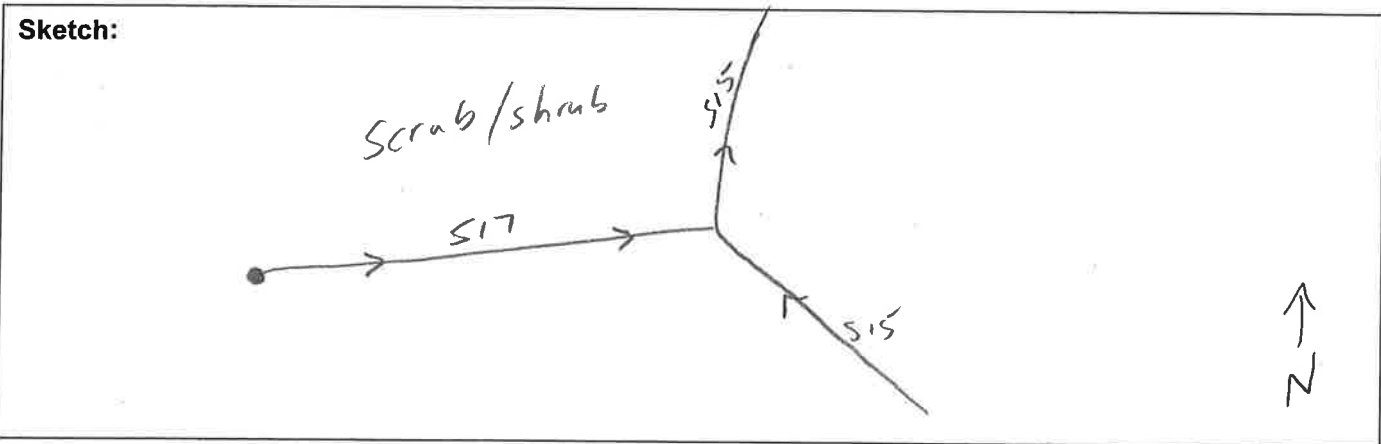
Flow Regime:  Perennial  Intermittent  Ephemeral  Flowing Ditch  Dry/Stagnant Ditch

**Sinuosity:**  Low  Medium  High  
**Features:**  Riffles  Sand/Mud Bar  Run/Glide  
 Pools  Gravel Bar  Braided  
 Rapids  Aquatic Vegetation  Other \_\_\_\_\_

**Substrate:**  Bedrock \_\_\_%  Boulder \_\_\_%  Cobble/Gravel 60%  
 Sand \_\_\_%  Silt/Clay 10%  Organic 30%  
**Bank Substrate:** Height: Left 4 Right 4  
 Bedrock  Boulder  Gravel  Sand  Silt/Clay  Organic   
**Floodplain Width:** Left Right  
 <10 feet   
 <25 feet   
 <50 feet   
 <100 feet   
 >100 feet

**Dominant Vegetation:**  Forested Species: Populus tremuloides  
 Shrub Species: Lonicera morrowii  
 Herbaceous Species: \_\_\_\_\_

**Wildlife Observed/Notes:**  
 - Intersects w/ S15. Flushed ruffed grouse.  
 - Man made



# Tetra Tech Stream Data Sheet

Surveyors: N. Grosse / M. Gushen Date: 4/10/17 Resource ID Number: S18  
 Project: SUN8 State: NY County: Thompson  
 Photo Number (s): 4389 ↑, 4390 ↓ Canopy Cover: 40 %

Flow Direction: N Bank Width: 3 feet Water Width: 2 feet  
 High Water Depth: 1 feet Water Depth: 4" ~~feet~~ Turbidity: Clear

Flow Regime:  Perennial  Intermittent  Ephemeral  Flowing Ditch  Dry/Stagnant Ditch

**Sinuosity:**

- Low
- Medium
- High

**Features:**

- Riffles  Sand/Mud Bar  Run/Glide
- Pools  Gravel Bar  Braided
- Rapids  Aquatic Vegetation  Other \_\_\_\_\_

**Substrate:**

- Bedrock \_\_\_%
- Boulder \_\_\_%
- Cobble/Gravel 25%
- Sand \_\_\_%
- Silt/Clay 40%
- Organic 35%

**Bank Substrate:**

- |   |   |                                     |   |
|---|---|-------------------------------------|---|
| Height: Left                                  | / | Right                               | / |
| <input type="checkbox"/> Bedrock              |   | <input type="checkbox"/>            |   |
| <input type="checkbox"/> Boulder              |   | <input type="checkbox"/>            |   |
| <input checked="" type="checkbox"/> Gravel    |   | <input checked="" type="checkbox"/> |   |
| <input type="checkbox"/> Sand                 |   | <input type="checkbox"/>            |   |
| <input checked="" type="checkbox"/> Silt/Clay |   | <input checked="" type="checkbox"/> |   |
| <input checked="" type="checkbox"/> Organic   |   | <input checked="" type="checkbox"/> |   |

**Floodplain Width:**

- |  |  |                                     |
|--|--|-------------------------------------|
| Left   |  | Right                               |
| <input type="checkbox"/> <10 feet            |  | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> <25 feet |  | <input checked="" type="checkbox"/> |
| <input type="checkbox"/> <50 feet            |  | <input type="checkbox"/>            |
| <input type="checkbox"/> <100 feet           |  | <input type="checkbox"/>            |
| <input type="checkbox"/> >100 feet           |  | <input type="checkbox"/>            |

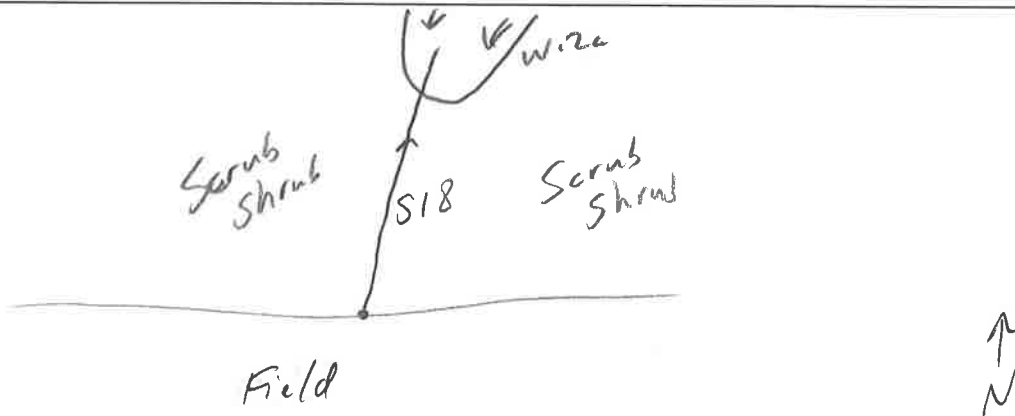
**Dominant Vegetation:**

- Forested  
Species: Fraxinus pennsylvanica
- Shrub  
Species: Lonicera morrowii
- Herbaceous  
Species: Phalaris arundinacea, Cirsium vulgare.

**Wildlife Observed/Notes:**

Starts at tile line outflow, washes out into W12a.

**Sketch:**



# Tetra Tech Waterbody Data Sheet

Surveyors: N. Grosse / M. Guinan Date: 4/5/17 Resource ID Number: POND 4  
Project: SUN 8 State: NY County: Thompson's  
Photo Number (s): 4345-NE Canopy Cover: 100%

## LAKE/BAY/OCEAN

Name: \_\_\_\_\_

Associated Stream ID: \_\_\_\_\_

## POOL/POND

Associated Stream ID: \_\_\_\_\_ Water Width: 50 feet Water Depth: 3 feet Turbidity: clear

Type:

Agricultural  Landscape  Topographic  Stormwater

Observed Use:

Drinking  Irrigation  Fishing  Boating  Drainage

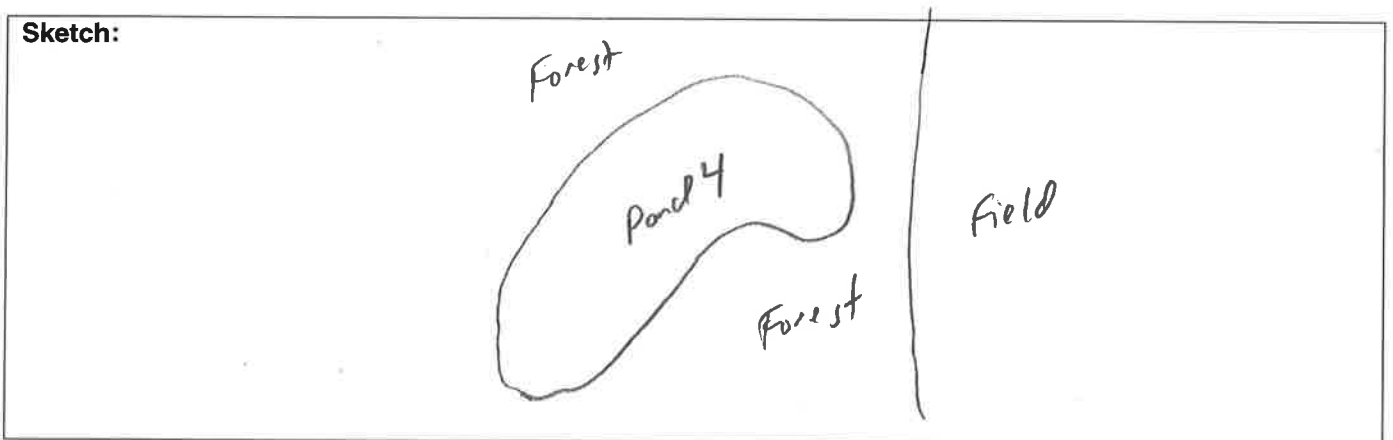
Dominant Vegetation:

- Forested Species: Tilia americana, Fraxinus pennsylvanica  
 Shrub Species: Lonicera morrowii  
 Herbaceous Species: \_\_\_\_\_  
 Barren Beach Type: \_\_\_\_\_

Wildlife Observed/Notes:

Spring peepers

Sketch:



# Tetra Tech Waterbody Data Sheet

Surveyors: N. Grosse / M. Guinness Date: 4/10/17 Resource ID Number: POND 5  
Project: SUN8 State: NY County: Thompkins  
Photo Number (s): 4356-W Canopy Cover: 5 %

## LAKE/BAY/OCEAN

Name: \_\_\_\_\_  
Associated Stream ID: \_\_\_\_\_

## POOL/POND

Associated Stream ID: W11a Water Width: 75 feet Water Depth: 6 feet Turbidity: clear

### Type:

- Agricultural     Landscape     Topographic     Stormwater

### Observed Use:

- Drinking     Irrigation     Fishing     Boating     Drainage

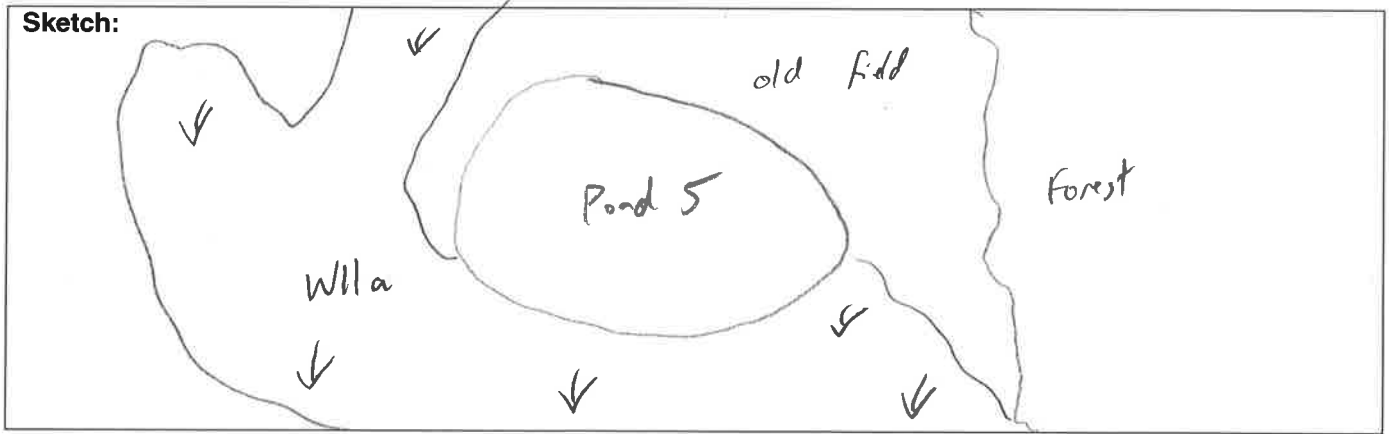
### Dominant Vegetation:

- Forested  
Species: \_\_\_\_\_  
 Shrub  
Species: Lonicera spp  
 Herbaceous  
Species: Phalaris arundinacea, juncus spp, Carex spp.  
 Barren  
Beach Type: \_\_\_\_\_

### Wildlife Observed/Notes:

Unknown anurans.

### Sketch:



### WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: ELLIS TOWNS City/County: TOMPSONS CO Sampling Date: 4/10/2017  
 Applicant/Owner: SUNB SOLAR State: NT Sampling Point: W5a - WET 1  
 Investigator(s): MZIK GUZMAN Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): open field Local relief (concave, convex, none): CONCAVE Slope (%): 0-5  
 Subregion (LRR or MLRA): LRR R Lat: 42.4434 Long: -76.4322 Datum: WGS 84  
 Soil Map Unit Name: LaB - Langford channery silt loam, 2-B % slopes NWI classification: PEM  
 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 <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

**HYDROLOGY**

<p><b>Wetland Hydrology Indicators:</b></p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <input checked="" type="checkbox"/> Surface Water (A1)      _____ Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2)      _____ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3)      _____ Marl Deposits (B15) _____ Water Marks (B1)      _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2)      _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) <input checked="" type="checkbox"/> Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4)      _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5)      _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7)      _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<p><u>Secondary Indicators (minimum of two required)</u></p> _____ Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) _____ Shallow Aquitard (D3) <input checked="" type="checkbox"/> Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
<p><b>Field Observations:</b></p> Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>5"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>-4"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>6"</u> (includes capillary fringe)	<p><b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____</p>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

**VEGETATION – Use scientific names of plants.**

Sampling Point: W1c - WET 1

	Absolute % Cover	Dominant Species?	Indicator Status	
<b>Tree Stratum</b> (Plot size: _____ )				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>2</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>10</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
_____ = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
<b>Sapling/Shrub Stratum</b> (Plot size: _____ )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				
<b>Herb Stratum</b> (Plot size: <u>9'</u> )				<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Juncus effusus</u>	<u>20</u>	<u>X</u>	<u>OBL</u>	
2. <u>Phalaris arundinacea</u>	<u>15</u>	<u>X</u>	<u>FACW</u>	
3. <u>Carex spp.</u>	<u>10</u>	—	—	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>45</u> = Total Cover				
<b>Woody Vine Stratum</b> (Plot size: _____ )				<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No				
Remarks: (Include photo numbers here or on a separate sheet.)				

**SOIL**

Sampling Point: W5 - Wet 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (Inches)	Matrix		Redox Features			Loc <sup>2</sup>	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			
0-5	10 YR 3/2	100						
5-10	10 YR 2/2	95	5 YR 4/6	5	RM	M	S, IL	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

- |   |  |  |
|---|--|--|
| <b>Hydric Soil Indicators:</b>                                |  | <b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>          |
| <input type="checkbox"/> Histosol (A1)                        | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) | <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)       |
| <input type="checkbox"/> Histic Epipedon (A2)                 | <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)       | <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)     |
| <input checked="" type="checkbox"/> Black Histic (A3)         | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)             | <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)  |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                | <input type="checkbox"/> Loamy Gleyed Matrix (F2)                        | <input type="checkbox"/> Dark Surface (S7) (LRR K, L, M)             |
| <input type="checkbox"/> Stratified Layers (A5)               | <input checked="" type="checkbox"/> Depleted Matrix (F3)                 | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)     |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)    | <input type="checkbox"/> Redox Dark Surface (F6)                         | <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)           |
| <input type="checkbox"/> Thick Dark Surface (A12)             | <input type="checkbox"/> Depleted Dark Surface (F7)                      | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)   |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)             | <input type="checkbox"/> Redox Depressions (F8)                          | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)             |  | <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)   |
| <input type="checkbox"/> Sandy Redox (S5)                     |  | <input type="checkbox"/> Red Parent Material (F21)                   |
| <input type="checkbox"/> Stripped Matrix (S6)                 |  | <input type="checkbox"/> Very Shallow Dark Surface (TF12)            |
| <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B) |  | <input type="checkbox"/> Other (Explain in Remarks)                  |

<sup>3</sup>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:

**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: ELIAS TRAILS City/County: Tompkins Co Sampling Date: 4/10/2017  
 Applicant/Owner: SUN & SOLAR State: NY Sampling Point: W5a - WET 2  
 Investigator(s): MIKE GUINAN Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): Forest Local relief (concave, convex, none): concave Slope (%): 0-8  
 Subregion (LRR or MLRA): LRR-12 Lat: 42.4510 Long: -76.4322 Datum: NAD 83  
 Soil Map Unit Name: DgB - Darion gravelly silt loam, 2-8% slopes NWI classification: PFO  
 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 <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) ___ High Water Table (A2)    ___ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3)            ___ Marl Deposits (B15) <input checked="" type="checkbox"/> Water Marks (B1)          ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2)    ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) <input checked="" type="checkbox"/> Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4)     ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5)         ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7)    ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input checked="" type="checkbox"/> Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) ___ Shallow Aquitard (D3) <input checked="" type="checkbox"/> Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
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<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>-5"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:



**VEGETATION – Use scientific names of plants.**

Sampling Point: W52 - WET 2

	Absolute % Cover	Dominant Species?	Indicator Status		
<b>Tree Stratum</b> (Plot size: <u>30'</u> )					
1. <u>Populus deltoides</u>	<u>30%</u>	<u>X</u>	<u>FAC</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A)  Total Number of Dominant Species Across All Strata: <u>5</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)	
2. <u>Fraxinus pennsylvanica</u>	<u>10</u>	<u>X</u>	<u>FACW</u>		
3. <u>Quercus rubra</u>	<u>5</u>		<u>FACU</u>		
4. _____					
5. _____					
6. _____					
7. _____					
	<u>45</u>	= Total Cover		<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____	
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15'</u> )					
1. <u>Viburnum lentago</u>	<u>15</u>	<u>X</u>	<u>FAC</u>		
2. <u>Lonicera spa</u>	<u>15</u>				
3. _____					
4. _____					
5. _____					
	<u>30</u>	= Total Cover			
<b>Herb Stratum</b> (Plot size: <u>9'</u> )					
1. <u>Oxalis sensibilis</u>	<u>25</u>	<u>X</u>	<u>FACW</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  <b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.	
2. <u>Glyceria striata</u>	<u>8</u>	<u>X</u>	<u>OBL</u>		
3. <u>Sphagnum spp.</u>	<u>5</u>				
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
12. _____					
	<u>38</u>	= Total Cover			
<b>Woody Vine Stratum</b> (Plot size: _____)					
1. _____				<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No	
2. _____					
3. _____					
4. _____					
		= Total Cover			

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

**SOIL**

Sampling Point: W5a-WF2

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

Depth (inches)	Matrix		Redox Features		Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-10"	10 YR 3/2	100					S,Lo	
10-16"	5Y 4/1	70	2.5Y 5/6	30	RM	int	S,Cl	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

- |   |  |  |
|---|--|--|
| <p><b>Hydric Soil Indicators:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Histosol (A1)</li> <li><input type="checkbox"/> Histic Epipedon (A2)</li> <li><input checked="" type="checkbox"/> Black Histic (A3)</li> <li><input type="checkbox"/> Hydrogen Sulfide (A4)</li> <li><input type="checkbox"/> Stratified Layers (A5)</li> <li><input type="checkbox"/> Depleted Below Dark Surface (A11)</li> <li><input type="checkbox"/> Thick Dark Surface (A12)</li> <li><input type="checkbox"/> Sandy Mucky Mineral (S1)</li> <li><input type="checkbox"/> Sandy Gleyed Matrix (S4)</li> <li><input type="checkbox"/> Sandy Redox (S5)</li> <li><input type="checkbox"/> Stripped Matrix (S6)</li> <li><input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)</li> </ul> | <ul style="list-style-type: none"> <li><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)</li> <li><input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)</li> <li><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)</li> <li><input type="checkbox"/> Loamy Gleyed Matrix (F2)</li> <li><input checked="" type="checkbox"/> Depleted Matrix (F3)</li> <li><input type="checkbox"/> Redox Dark Surface (F6)</li> <li><input type="checkbox"/> Depleted Dark Surface (F7)</li> <li><input checked="" type="checkbox"/> Redox Depressions (F8)</li> </ul> | <p><b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)</li> <li><input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)</li> <li><input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)</li> <li><input type="checkbox"/> Dark Surface (S7) (LRR K, L, M)</li> <li><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)</li> <li><input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)</li> <li><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)</li> <li><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)</li> <li><input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)</li> <li><input type="checkbox"/> Red Parent Material (F21)</li> <li><input type="checkbox"/> Very Shallow Dark Surface (TF12)</li> <li><input type="checkbox"/> Other (Explain in Remarks)</li> </ul> |
|---|--|--|

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____
Depth (inches): _____	

Remarks:

**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: GLIERS TRACTS City/County: TOMPSONS CO Sampling Date: 9/10/2017  
 Applicant/Owner: JOHN B SOLAK State: NY Sampling Point: W5a-WP  
 Investigator(s): MIKE GUENAW Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): SWALE Local relief (concave, convex, none): CONVEX Slope (%): 0-5  
 Subregion (LRR or MLRA): LRR 12 Lat: 42 45 13 Long: -76.4273 Datum: WGS 84  
 Soil Map Unit Name: DgB-Darin gravelly silt loam, 2-8% slope NWI classification: N/A  
 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 <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one is required; check all that apply)	<b>Secondary Indicators (minimum of two required)</b>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <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"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

**VEGETATION – Use scientific names of plants.**

Sampling Point: W5a - W8

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Quercus rubra</u>	<u>15</u>	<u>X</u>	<u>FACU</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>4</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.25</u> (A/B)
2. <u>Prunus serotina</u>	<u>5</u>	<u>X</u>	<u>FACU</u>	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
<u>20</u> = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
<b>Sapling/Shrub Stratum (Plot size: <u>15'</u>)</b>				
1. <u>Prunus serotina</u>	<u>5</u>	<u>X</u>	<u>FACU</u>	
2. <u>Acer rubrum</u>	<u>5</u>	<u>X</u>	<u>FAC</u>	
3. _____				
4. _____				
5. _____				
<u>10</u> = Total Cover				
<b>Herb Stratum (Plot size: <u>9'</u>)</b>				
1. <u>Glyceria spp</u>	<u>40</u>			
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
<u>40</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____				
2. _____				
3. _____				
4. _____				
_____ = Total Cover				
<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No				
				<b>Definitions of Vegetation Strata:</b> <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>  _____ _____ _____				

**SOIL**

Sampling Point: W5a-WP

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

Depth (inches)	Matrix		Redox Features		Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-8	10YR 3/4	100					Loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

- |  |  |  |
|--|--|--|
| <p><b>Hydric Soil Indicators:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Histosol (A1)</li> <li><input type="checkbox"/> Histic Epipedon (A2)</li> <li><input type="checkbox"/> Black Histic (A3)</li> <li><input type="checkbox"/> Hydrogen Sulfide (A4)</li> <li><input type="checkbox"/> Stratified Layers (A5)</li> <li><input type="checkbox"/> Depleted Below Dark Surface (A11)</li> <li><input type="checkbox"/> Thick Dark Surface (A12)</li> <li><input type="checkbox"/> Sandy Mucky Mineral (S1)</li> <li><input type="checkbox"/> Sandy Gleyed Matrix (S4)</li> <li><input type="checkbox"/> Sandy Redox (S5)</li> <li><input type="checkbox"/> Stripped Matrix (S6)</li> <li><input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)</li> </ul> | <ul style="list-style-type: none"> <li><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)</li> <li><input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)</li> <li><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)</li> <li><input type="checkbox"/> Loamy Gleyed Matrix (F2)</li> <li><input type="checkbox"/> Depleted Matrix (F3)</li> <li><input type="checkbox"/> Redox Dark Surface (F6)</li> <li><input type="checkbox"/> Depleted Dark Surface (F7)</li> <li><input type="checkbox"/> Redox Depressions (F8)</li> </ul> | <p><b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)</li> <li><input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)</li> <li><input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)</li> <li><input type="checkbox"/> Dark Surface (S7) (LRR K, L, M)</li> <li><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)</li> <li><input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)</li> <li><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)</li> <li><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)</li> <li><input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)</li> <li><input type="checkbox"/> Red Parent Material (F21)</li> <li><input type="checkbox"/> Very Shallow Dark Surface (TF12)</li> <li><input type="checkbox"/> Other (Explain in Remarks)</li> </ul> |
|--|--|--|

<sup>3</sup>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 X

Remarks:

**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: EUTS 40113 City/County: TOMPKINS CO Sampling Date: 4/10/2017  
 Applicant/Owner: SUN B SOLAR State: NY Sampling Point: W609-WET  
 Investigator(s): MIKE GIZMAN Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): ROADSIDE DEPRESSION Local relief (concave, convex, none): CONCAVE Slope (%): 5  
 Subregion (LRR or MLRA): LRR 12 Lat: 42.4442 Long: -76.4243 Datum: WGS 84  
 Soil Map Unit Name: R1K3 - Rhinbeck silt loam, 2-6% slopes NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)   	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input checked="" type="checkbox"/> Surface Water (A1)      _____ Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2)      _____ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3)      _____ Marl Deposits (B15) _____ Water Marks (B1)      _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2)      _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3)      _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4)      _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5)      _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7)      _____ Other (Explain in Remarks) <input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	_____ Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)

<b>Field Observations:</b> Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>4"</u> Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>0"</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**VEGETATION – Use scientific names of plants.**

Sampling Point: W02a - WET

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>2</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>1.00</u> (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				
<b>Sapling/Shrub Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				
<b>Herb Stratum (Plot size: <u>9'</u>)</b>				
1. <u>Phalaris grandiflora</u>	<u>20</u>	<u>X</u>	<u>FACW</u>	
2. <u>Juncus effusus</u>	<u>10</u>	<u>X</u>	<u>OBL</u>	
3. <u>Unknown sp.</u>	<u>20</u>	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>50</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No				
				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
<b>Definitions of Vegetation Strata:</b> <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.				
Remarks: (Include photo numbers here or on a separate sheet.) <u>Mowed/maintained, plants were disturbed</u>				

**SOIL**

Sampling Point: W6 - WET

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

Depth (inches)	Matrix		Redox Features			Loc <sup>2</sup>	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			
0-8	10 YR 4/1	100					S, lo	
8-12	10 YR 3/2	90	7.5 YR 5/4	10	RM	M	S, lo	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

- Hydric Soil Indicators:**
- Histosol (A1)
  - Histic Epipedon (A2)
  - Black Histic (A3)
  - Hydrogen Sulfide (A4)
  - Stratified Layers (A5)
  - Depleted Below Dark Surface (A11)
  - Thick Dark Surface (A12)
  - Sandy Mucky Mineral (S1)
  - Sandy Gleyed Matrix (S4)
  - Sandy Redox (S5)
  - Stripped Matrix (S6)
  - Dark Surface (S7) (LRR R, MLRA 149B)
  - Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
  - Thin Dark Surface (S9) (LRR R, MLRA 149B)
  - Loamy Mucky Mineral (F1) (LRR K, L)
  - Loamy Gleyed Matrix (F2)
  - Depleted Matrix (F3)
  - Redox Dark Surface (F6)
  - Depleted Dark Surface (F7)
  - Redox Depressions (F8)
- Indicators for Problematic Hydric Soils<sup>3</sup>:**
- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
  - Coast Prairie Redox (A16) (LRR K, L, R)
  - 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
  - Dark Surface (S7) (LRR K, L, M)
  - Polyvalue Below Surface (S8) (LRR K, L)
  - Thin Dark Surface (S9) (LRR K, L)
  - Iron-Manganese Masses (F12) (LRR K, L, R)
  - Piedmont Floodplain Soils (F19) (MLRA 149B)
  - Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
  - Red Parent Material (F21)
  - Very Shallow Dark Surface (TF12)
  - Other (Explain in Remarks)

<sup>3</sup>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:



**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: ELIAS TRACTS City/County: Tompkins Co Sampling Date: 4/10/2017  
 Applicant/Owner: Snow & Solar State: NY Sampling Point: W10a - WP  
 Investigator(s): MIKE GUZMAN Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): Field Local relief (concave, convex, none): none Slope (%): 5  
 Subregion (LRR or MLRA): LRR 12 Lat: 42.4449 Long: -76.4743 Datum: NAD 83  
 Soil Map Unit Name: R1KB - Rhinbeck silt loam, 2-B 92 NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1)      ___ Water-Stained Leaves (B9) ___ High Water Table (A2)      ___ Aquatic Fauna (B13) ___ Saturation (A3)      ___ Marl Deposits (B15) ___ Water Marks (B1)      ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2)      ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3)      ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4)      ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5)      ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7)      ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes _____ No <u>X</u> Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

**VEGETATION – Use scientific names of plants.**

Sampling Point: W6a - WP

	Absolute % Cover	Dominant Species?	Indicator Status	
<b>Tree Stratum</b> (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	_____ = Total Cover			
<b>Sapling/Shrub Stratum</b> (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	_____ = Total Cover			
<b>Herb Stratum</b> (Plot size: <u>9'</u> )				
1. <u>Trifolium pratense</u>	<u>15</u>	<u>X</u>	<u>FACW</u>	
2. <u>Taraxacum officinale</u>	<u>2</u>		<u>FACW</u>	
3. <u>Unknown spp</u>	<u>10</u>			
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
	<u>27</u> = Total Cover			
<b>Woody Vine Stratum</b> (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
	_____ = 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: 1 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC:      (A/B)

**Prevalence Index worksheet:**  
 Total % Cover of: \_\_\_\_\_ Multiply by:  
 OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_  
 FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_  
 FAC species \_\_\_\_\_ x 3 = \_\_\_\_\_  
 FACU species \_\_\_\_\_ x 4 = \_\_\_\_\_  
 UPL species \_\_\_\_\_ x 5 = \_\_\_\_\_  
 Column Totals: \_\_\_\_\_ (A) \_\_\_\_\_ (B)  
 Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**  
 1 - Rapid Test for Hydrophytic Vegetation  
 2 - Dominance Test is >50%  
 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Vegetation Strata:**  
**Tree** – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  
**Sapling/shrub** – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  
**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  
**Woody vines** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes \_\_\_\_\_ No X

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

Mowed maintained pasture



**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: Ellis - North City/County: Thompson Sampling Date: 4/5/17  
 Applicant/Owner: SUN 8 State: NY Sampling Point: W7a-wet1  
 Investigator(s): N. Grose / M. Guinga Section, Township, Range: Ithaca  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-5  
 Subregion (LRR or MLRA): LRR - R Lat: 42.4525 Long: -76.4356 Datum: V4504  
 Soil Map Unit Name: Rk3 - Rhinbeck silt loam, 2-6% slopes NWI classification: PEM

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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>W7a</u>
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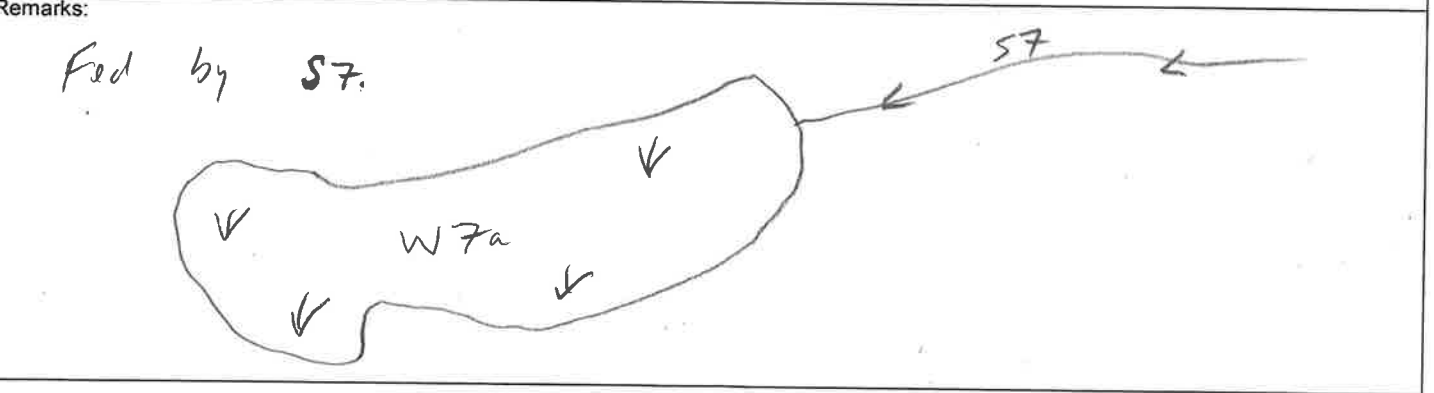
Remarks: (Explain alternative procedures here or in a separate report.)

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" 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"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>1"</u> Water Table Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>1"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:



**VEGETATION** – Use scientific names of plants.

Sampling Point: W7a-wet1

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			

**Dominance Test worksheet:**

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

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			

**Prevalence Index worksheet:**

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

Prevalence Index = B/A = \_\_\_\_\_

Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Phalaris arundinacea</u>	<u>85</u>	<u>Y</u>	<u>FACW</u>
2. <u>Carex spp</u>	<u>10</u>		<u>FAC</u>
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
12. _____			

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0<sup>1</sup>

4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			

**Definitions of Vegetation Strata:**

**Tree** – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/shrub** – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes  No

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

**SOIL**

Sampling Point: W7a-wf1

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 <sup>1</sup>	Loc <sup>2</sup>		
0-10	10YR 3/2	100					S.L.	
10-16	5Y 4/1	70	2.5Y 5/6	30	RM	M	S.L.	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

<sup>3</sup>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:

**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: Ellis - North City/County: Thompson Sampling Date: 4/5/17  
 Applicant/Owner: SUN 8 State: NY Sampling Point: W7a-up  
 Investigator(s): N. Gross / M. Furman Section, Township, Range: Ithaca  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 0-5  
 Subregion (LRR or MLRA): LR2-2 Lat: 42 4524 Long: -76.4355 Datum: WGS84  
 Soil Map Unit Name: RkB - Rhinbeck silt loam, 2-6% slopes 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 <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)  <div style="font-size: 1.2em; font-family: cursive;">Upland sample point</div>	

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <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"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**VEGETATION** – Use scientific names of plants.

Sampling Point: W7a-up

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			

**Dominance Test worksheet:**

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

Total Number of Dominant Species Across All Strata: 1 (B)

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

\_\_\_\_\_ = Total Cover

Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Lonicera Morrowii</u>	<u>100</u>	<u>Y</u>	<u>FACU</u>
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			

**Prevalence Index worksheet:**

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

Prevalence Index = B/A = \_\_\_\_\_

\_\_\_\_\_ = Total Cover

Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
12. _____			

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0<sup>1</sup>

4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

\_\_\_\_\_ = Total Cover

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			

**Definitions of Vegetation Strata:**

**Tree** – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/shrub** – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes \_\_\_\_\_ No X

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



**SOIL**

Sampling Point: W7a-UP

**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 <sup>1</sup>	Loc <sup>2</sup>		
0-10	10YR 3/4	100					S.L.	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

<sup>3</sup>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 X

Remarks:

**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: ELKS TRAILS City/County: Tompkins Co Sampling Date: 4/10/2017  
 Applicant/Owner: SUN & SOLAR State: NY Sampling Point: W9a - WFT  
 Investigator(s): MIKE CUNANAN Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): Meadow/field Local relief (concave, convex, none): concave Slope (%): 0-5  
 Subregion (LRR or MLRA): LRR - R Lat: 42.4400 Long: -76.4418 Datum: WGS84  
 Soil Map Unit Name: RKA - Rhinbeck silt loam, 0-2% slopes NWI classification: PEM  
 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 <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) _____ <input checked="" type="checkbox"/> High Water Table (A2) _____ <input checked="" type="checkbox"/> 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) _____ _____ Marl Deposits (B15) _____ _____ Hydrogen Sulfide Odor (C1) _____ _____ Oxidized Rhizospheres on Living Roots (C3) _____ <input checked="" type="checkbox"/> Presence of Reduced Iron (C4) _____ _____ Recent Iron Reduction in Tilled Soils (C6) _____ _____ Thin Muck Surface (C7) _____ _____ Other (Explain in Remarks) _____	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ <input checked="" type="checkbox"/> Drainage Patterns (B10) _____ _____ Moss Trim Lines (B16) _____ _____ Dry-Season Water Table (C2) _____ _____ Crayfish Burrows (C8) _____ _____ Saturation Visible on Aerial Imagery (C9) _____ _____ Stunted or Stressed Plants (D1) _____ <input checked="" type="checkbox"/> Geomorphic Position (D2) _____ _____ Shallow Aquitard (D3) _____ <input checked="" type="checkbox"/> Microtopographic Relief (D4) _____ _____ FAC-Neutral Test (D5) _____
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>2"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>-2"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0"</u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

**VEGETATION – Use scientific names of plants.**

Sampling Point: W9c - WET

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>3</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>1.0</u> (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				
<b>Sapling/Shrub Stratum (Plot size: <u>15'</u>)</b>				
1. <u>Cornus sericea</u>	<u>5</u>	<u>X</u>	<u>FACW</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>5</u> = Total Cover				
<b>Herb Stratum (Plot size: <u>9'</u>)</b>				
1. <u>Juncus effusus</u>	<u>20</u>	<u>X</u>	<u>OBL</u>	
2. <u>Phalaris arundinacea</u>	<u>15</u>	<u>X</u>	<u>FACW</u>	
3. <u>Carex vulpinoidea</u>	<u>10</u>	_____	<u>OBL</u>	
4. <u>Oenothera sensibilis</u>	<u>10</u>	_____	<u>FACW</u>	
5. <u>Scirpus cyperinus</u>	<u>5</u>	_____	<u>DBL</u>	
6. <u>Carex spp.</u>	<u>20</u>	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>90</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No				
				Remarks: (Include photo numbers here or on a separate sheet.)



## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Fines Tanks City/County: Tompkins Co Sampling Date: 4/10/2017  
 Applicant/Owner: SAN SOLAR State: NY Sampling Point: W9a-WF  
 Investigator(s): MIKE GUNAV Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): Meadow Local relief (concave, convex, none): None Slope (%): 0-3  
 Subregion (LRR or MLRA): LRR R Lat: 42.4407 Long: -76.4416 Datum: WGS84  
 Soil Map Unit Name: RkA - Rhinbeck silt loam, 0-2% slopes NWI classification: N/A  
 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 <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

### HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>	<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <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"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**VEGETATION – Use scientific names of plants.**

Sampling Point: W9a - W9

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A)  Total Number of Dominant Species Across All Strata: <u>2</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
_____ = Total Cover				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: <u>9'</u> )				<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is $\leq 3.0^1$ <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Dipsacus fullonum</u>	<u>30</u>	<u>x</u>	<u>FACU</u>	
2. <u>Solidago altissima</u>	<u>45</u>	<u>x</u>	<u>FACU</u>	
3. <u>Cirsium vulgare</u>	<u>5</u>		<u>FACU</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
<u>30</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
<b>Hydrophytic Vegetation Present?</b> Yes _____ No <input checked="" type="checkbox"/>				
Remarks: (Include photo numbers here or on a separate sheet.)				

**SOIL**

Sampling Point: W9a-UB

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

Depth (inches)	Matrix		Redox Features		Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-12	10YR 2/3	100					S:Lo	
12-18	2.5Y 5/2	100					S:Cl	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

- |   |  |  |
|---|--|--|
| <b>Hydric Soil Indicators:</b>                                |  | <b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>          |
| <input type="checkbox"/> Histosol (A1)                        | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) | <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)       |
| <input type="checkbox"/> Histic Epipedon (A2)                 | <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)       | <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)     |
| <input type="checkbox"/> Black Histic (A3)                    | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)             | <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)  |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                | <input type="checkbox"/> Loamy Gleyed Matrix (F2)                        | <input type="checkbox"/> Dark Surface (S7) (LRR K, L, M)             |
| <input type="checkbox"/> Stratified Layers (A5)               | <input type="checkbox"/> Depleted Matrix (F3)                            | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)     |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)    | <input type="checkbox"/> Redox Dark Surface (F6)                         | <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)           |
| <input type="checkbox"/> Thick Dark Surface (A12)             | <input type="checkbox"/> Depleted Dark Surface (F7)                      | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)   |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)             | <input type="checkbox"/> Redox Depressions (F8)                          | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)             |  | <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)   |
| <input type="checkbox"/> Sandy Redox (S5)                     |  | <input type="checkbox"/> Red Parent Material (F21)                   |
| <input type="checkbox"/> Stripped Matrix (S6)                 |  | <input type="checkbox"/> Very Shallow Dark Surface (TF12)            |
| <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B) |  | <input type="checkbox"/> Other (Explain in Remarks)                  |

<sup>3</sup>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 X

Remarks:

**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: ELI-23 TANKS City/County: Tompkins Co Sampling Date: 4/10/2017  
 Applicant/Owner: Sup 8 Court State: NY Sampling Point: W106-W127  
 Investigator(s): MZRE GUZMAN Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): FLUXIA Local relief (concave, convex, none): CONVEX Slope (%): 0  
 Subregion (LRR or MLRA): LRR R Lat: 42.4411 Long: -76.4417 Datum: WGS84  
 Soil Map Unit Name: PKA - Rhinbeck silt loam, 0-2% slopes NWI classification: PEM  
 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 <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)    	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) _____ <input checked="" type="checkbox"/> High Water Table (A2) _____ <input checked="" type="checkbox"/> 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) _____ _____ Marl Deposits (B15) _____ _____ Hydrogen Sulfide Odor (C1) _____ <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) _____ <input checked="" type="checkbox"/> Presence of Reduced Iron (C4) _____ _____ Recent Iron Reduction in Tilled Soils (C6) _____ _____ Thin Muck Surface (C7) _____ _____ Other (Explain in Remarks) _____	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ <input checked="" type="checkbox"/> Drainage Patterns (B10) _____ _____ Moss Trim Lines (B16) _____ _____ Dry-Season Water Table (C2) _____ _____ Crayfish Burrows (C8) _____ _____ Saturation Visible on Aerial Imagery (C9) _____ _____ Stunted or Stressed Plants (D1) _____ <input checked="" type="checkbox"/> Geomorphic Position (D2) _____ _____ Shallow Aquitard (D3) _____ <input checked="" type="checkbox"/> Microtopographic Relief (D4) _____ _____ FAC-Neutral Test (D5) _____
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<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>1"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>-2"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  
 \_\_\_\_\_  
 \_\_\_\_\_

Remarks:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



**VEGETATION – Use scientific names of plants.**

Sampling Point: W102 - WET

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>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>1.0</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: <u>15'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Cornus sericea</u>	<u>5</u>	<u>x</u>	<u>FACW</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Herb Stratum (Plot size: <u>9'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Carex vulpinoidea</u>	<u>20</u>	<u>x</u>	<u>OBL</u>	
2. <u>Euthamia graminifolia</u>	<u>15</u>	<u>x</u>	<u>FAC</u>	
3. <u>Juncus effusus</u>	<u>10</u>	_____	<u>OBL</u>	
4. <u>Onclea sensibilis</u>	<u>5</u>	_____	<u>FACW</u>	
5. <u>Carex spp.</u>	<u>20</u>	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
_____ = Total Cover				<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				



**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: ELLIS TRACTS City/County: Tompkins Co Sampling Date: 4/10/2017  
 Applicant/Owner: SWAN B SWAN State: NY Sampling Point: W11a - WET1  
 Investigator(s): MIKE GUZMAN Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 0  
 Subregion (LRR or MLRA): LRR 2 Lat: 42 44 14 Long: -76 43 58 Datum: NAD 83  
 Soil Map Unit Name: Mm - Niagara silt loam, 2-6% slopes NWI classification: PEM  
 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 <input checked="" type="checkbox"/> No _____ Hydric Soil Present?                    Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present?        Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland?    Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)      	

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b> <input checked="" type="checkbox"/> Surface Water (A1)                    _____ <input checked="" type="checkbox"/> High Water Table (A2)                _____ <input checked="" type="checkbox"/> 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)    _____	_____ Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) _____ Shallow Aquitard (D3) <input checked="" type="checkbox"/> Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present?    Yes <input checked="" type="checkbox"/> No _____    Depth (inches): <u>1"</u> Water Table Present?        Yes <input checked="" type="checkbox"/> No _____    Depth (inches): <u>0"</u> Saturation Present?        Yes <input checked="" type="checkbox"/> No _____    Depth (inches): <u>0"</u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:   	
Remarks:     	

**VEGETATION – Use scientific names of plants.**

Sampling Point: W11a - WET 1

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>4</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>4</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>1.0</u> (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				
<b>Sapling/Shrub Stratum (Plot size: <u>15'</u>)</b>				
1. <u>Cornus racemosa</u>	<u>15</u>	<u>x</u>	<u>FAC</u>	
2. <u>Cornus sericea</u>	<u>5</u>	<u>x</u>	<u>FACW</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>20</u> = Total Cover				
<b>Herb Stratum (Plot size: <u>9'</u>)</b>				
1. <u>Onoclea sensibilis</u>	<u>20</u>	<u>x</u>	<u>FACW</u>	
2. <u>Carex vulpinoidea</u>	<u>20</u>	<u>x</u>	<u>OBL</u>	
3. <u>Juncus effusus</u>	<u>15</u>	_____	<u>OBL</u>	
4. <u>Scirpus cyperinus</u>	<u>10</u>	_____	<u>OBL</u>	
5. <u>Lythrum salicaria</u>	<u>10</u>	_____	<u>OBL</u>	
6. <u>Typha latifolia</u>	<u>5</u>	_____	<u>OBL</u>	
7. <u>Sphagnum spp.</u>	<u>10</u>	<u>—</u>	<u>—</u>	
8. <u>Carex spp.</u>	<u>20</u>	<u>—</u>	<u>—</u>	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>110</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No				
Remarks: (Include photo numbers here or on a separate sheet.)				



**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: FLATS TRACTS City/County: Tompkins Co Sampling Date: 4/10/2017  
 Applicant/Owner: SUN & SOLAR State: NY Sampling Point: W112 - WET 2  
 Investigator(s): MIKE GUZMAN Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): scrub-shrub/slope Local relief (concave, convex, none): concave Slope (%): 6-5  
 Subregion (LRR or MLRA): LRR-2 Lat: 42.4411 Long: -76.4388 Datum: NAD83  
 Soil Map Unit Name: Mn-Niagara silt loam, 2-6% slopes NWI classification: PSS  
 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 <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)   	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1)      ___ Water-Stained Leaves (B9) ___ High Water Table (A2)      ___ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3)      ___ Marl Deposits (B15) <input checked="" type="checkbox"/> Water Marks (B1)      ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2)      ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) <input checked="" type="checkbox"/> Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4)      ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5)      ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7)      ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input checked="" type="checkbox"/> Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input checked="" type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0''</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  	
Remarks:	

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>2</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>1.0</u> (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				
<b>Sapling/Shrub Stratum (Plot size: <u>15'</u>)</b>				
1. <u>Cornus racemosa</u>	<u>15</u>	<u>X</u>	<u>FAC</u>	
2. <u>Cornus sericea</u>	<u>10</u>	_____	<u>FACW</u>	
3. <u>Crataegus spp.</u>	<u>40</u>	_____	_____	
4. <u>Fraxinus pennsylvanica</u>	<u>5</u>	_____	<u>FACW</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>70</u> = Total Cover				
<b>Herb Stratum (Plot size: <u>9'</u>)</b>				
1. <u>Onoclea sensibilis</u>	<u>20</u>	<u>X</u>	<u>FACW</u>	
2. <u>Scirpus cyperinus</u>	<u>10</u>	_____	<u>OBL</u>	
3. <u>Glyceria spp.</u>	<u>10</u>	_____	_____	
4. <u>Sphagnum spp.</u>	<u>20</u>	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>60</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.				
<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No				
Remarks: (Include photo numbers here or on a separate sheet.)				

**SOIL**

Sampling Point: W11a - WET2

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

Depth (inches)	Matrix		Redox Features		Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-3	10 YR 3/1	100					S:Lo	
3-14	10 YR 3/2	80	5 YR 4/6	20	RM	M	S:Lo/LL	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)
- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L, M)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

<sup>3</sup>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:



**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: ELIZ TRACTS City/County: TOWNSHIP CO Sampling Date: 4/10/2017  
 Applicant/Owner: SUN O SILA State: NY Sampling Point: W12a - WET 1  
 Investigator(s): MZKE GUNAP Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): Wet meadow Local relief (concave, convex, none): CONCAVE Slope (%): 0  
 Subregion (LRR or MLRA): LRR-2 Lat: 42.4392 Long: -76.4320 Datum: UGS84  
 Soil Map Unit Name: Car Canandaigua & Lamson soils NWI classification: PEM  
 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 <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	If yes, optional Wetland Site ID: _____
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	

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

**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)
- \_\_\_\_ Marl Deposits (B15)
- 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)
- \_\_\_\_ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- \_\_\_\_ Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- \_\_\_\_ Moss Trim Lines (B16)
- \_\_\_\_ Dry-Season Water Table (C2)
- \_\_\_\_ Crayfish Burrows (C8)
- \_\_\_\_ Saturation Visible on Aerial Imagery (C9)
- \_\_\_\_ Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- \_\_\_\_ Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- \_\_\_\_ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes  No \_\_\_\_\_ Depth (inches): 1"  
 Water Table Present? Yes  No \_\_\_\_\_ Depth (inches): 0"  
 Saturation Present? Yes  No \_\_\_\_\_ Depth (inches): 0"  
 (includes capillary fringe)

**Wetland Hydrology Present? Yes  No \_\_\_\_\_**

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

Remarks:

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>2</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>1.0</u>	(A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b>	
5. _____	_____	_____	_____	Total % Cover of:	Multiply by:
6. _____	_____	_____	_____	OBL species <u>2</u>	x 1 = <u>2</u>
7. _____	_____	_____	_____	FACW species <u>3</u>	x 2 = <u>6</u>
			_____ = Total Cover	FAC species <u>1</u>	x 3 = <u>3</u>
<b>Sapling/Shrub Stratum (Plot size: _____)</b>				FACU species _____	x 4 = _____
1. _____	_____	_____	_____	UPL species _____	x 5 = _____
2. _____	_____	_____	_____	Column Totals: <u>6</u>	(A) <u>9</u> (B)
3. _____	_____	_____	_____	Prevalence Index = B/A = <u>1.5</u>	
4. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b>	
5. _____	_____	_____	_____	<input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation	
6. _____	_____	_____	_____	<input checked="" type="checkbox"/> 2 - Dominance Test is >50%	
7. _____	_____	_____	_____	<input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup>	
			_____ = Total Cover	<input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
<b>Herb Stratum (Plot size: <u>9'</u>)</b>				<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
1. <u>Lythrum salicaria</u>	<u>30</u>	<u>x</u>	<u>OBL</u>	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
2. <u>Onoclea sensibilis</u>	<u>30</u>	<u>x</u>	<u>FACW</u>		
3. <u>Phalaris arundinacea</u>	<u>20</u>		<u>FACW</u>		
4. <u>Verberna hastata</u>	<u>10</u>		<u>FACW</u>		
5. <u>Filipendula ulmaria</u>	<u>5</u>		<u>FAC</u>		
6. <u>Leersia oryzoides</u>	<u>5</u>		<u>OBL</u>		
7. <u>Carex spp</u>	<u>10</u>	<u>—</u>	<u>—</u>		
8. _____	_____	_____	_____	<b>Definitions of Vegetation Strata:</b>	
9. _____	_____	_____	_____	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
10. _____	_____	_____	_____	<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.	
11. _____	_____	_____	_____	<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
12. _____	_____	_____	_____	<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.	
			<u>110</u> = Total Cover	<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No	
<b>Woody Vine Stratum (Plot size: _____)</b>					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____	<b>Remarks:</b> (Include photo numbers here or on a separate sheet.)	
			_____ = Total Cover		



**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: ELVES TRACTS City/County: Tompkins Co Sampling Date: 4/10/2017  
 Applicant/Owner: SUNB Solar State: NY Sampling Point: W12a - WET 2  
 Investigator(s): MZKE GUZMAN Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): None Slope (%): 2-8  
 Subregion (LRR or MLRA): LRR - R Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: NAD83  
 Soil Map Unit Name: WS - Wayland soils complex 0-3 Flooded NWI classification: PFO  
 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 <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
___ Surface Water (A1) ___ High Water Table (A2) <input checked="" type="checkbox"/> 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)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9) ___ Aquatic Fauna (B13) ___ Marl Deposits (B15) ___ 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) ___ Other (Explain in Remarks)	___ Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input checked="" type="checkbox"/> Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) ___ Shallow Aquitard (D3) <input checked="" type="checkbox"/> Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)	
<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): _____ (includes capillary fringe)		<b>Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____</b>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

**VEGETATION – Use scientific names of plants.**

Sampling Point: W12a - WET2

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Salix nigra</u>	<u>20</u>	<u>X</u>	<u>FACW</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.67</u> (A/B)
2. <u>Populus deltoides</u>	<u>10</u>	<u>X</u>	<u>FAC</u>	
3. <u>Juglans nigra</u>	<u>10</u>	<u>X</u>	<u>FACU</u>	
4. <u>Fraxinus pennsylvanica</u>	<u>2</u>		<u>FACW</u>	
5. _____				
6. _____				
7. _____				
<u>      </u> = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>4</u> x 2 = <u>8</u> FAC species <u>2</u> x 3 = <u>6</u> FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: <u>6</u> (A) <u>14</u> (B) Prevalence Index = B/A = <u>2.3</u>
<b>Sapling/Shrub Stratum (Plot size: <u>15'</u>)</b>				
1. <u>Lonicera spp</u>	<u>20</u>	<u>-</u>	<u>-</u>	
2. <u>Fraxinus nigra</u>	<u>5</u>		<u>FACW</u>	
3. <u>Salix nigra</u>	<u>5</u>		<u>FACW</u>	
4. <u>Acer negundo</u>	<u>3</u>		<u>FAC</u>	
5. _____				
6. _____				
7. _____				
<u>33</u> = Total Cover				
<b>Herb Stratum (Plot size: <u>9'</u>)</b>				
1. <u>Sphagnum spp</u>	<u>20</u>	<u>-</u>	<u>-</u>	
2. <u>Unknown spp.</u>	<u>10</u>	<u>-</u>	<u>-</u>	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
<u>30</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____				
2. _____				
3. _____				
4. _____				
<u>      </u> = Total Cover				
<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is $\leq 3.0^1$ <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)				
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
<b>Definitions of Vegetation Strata:</b> <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.				
<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No				
Remarks: (Include photo numbers here or on a separate sheet.) <u>herb stratum was matted from recent flooding</u>				

**SOIL**

Sampling Point: W12a - W12b

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

Depth (inches)	Matrix		Redox Features		Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-10	10 YR 3/2	100					S/L0	Alluvial
10-15	10 YR 2/2	95	7.5 YR 4/6	5	RM	M	S/L0	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)
- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L, M)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

<sup>3</sup>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:

**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: ELVES TRACTS City/County: TOMPKINS Sampling Date: 4/10/2017  
 Applicant/Owner: GUNB SILAN State: NY Sampling Point: W120 - WETS  
 Investigator(s): MIKE GUZMAN Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 2-6  
 Subregion (LRR or MLRA): LRTB - R Lat: 42.4392 Long: -76.4320 Datum: WGS84  
 Soil Map Unit Name: Canandaigua + Lamson soils NWI classification: RSS

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 <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)   	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required: check all that apply)</u> _____ Surface Water (A1)      _____ Water-Stained Leaves (B9) _____ High Water Table (A2)      _____ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3)      _____ Marl Deposits (B15) <input checked="" type="checkbox"/> Water Marks (B1)      _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) <input checked="" type="checkbox"/> Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4)      _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5)      _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7)      _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input checked="" type="checkbox"/> Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) _____ Shallow Aquitard (D3) <input checked="" type="checkbox"/> Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
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<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W2a - WET 3

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>6</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>6</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>1.0</u> (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				
<b>Sapling/Shrub Stratum (Plot size: <u>15'</u>)</b>				
1. <u>Cornus racemosa</u>	<u>30</u>	<u>X</u>	<u>FAC</u>	
2. <u>Cornus amomum</u>	<u>15</u>	<u>X</u>	<u>FACW</u>	
3. <u>Cornus sericea</u>	<u>10</u>	<u>X</u>	<u>FACW</u>	
4. <u>Vaccinium corymbosum</u>	<u>2</u>	<u>X</u>	<u>FACW</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>57</u> = Total Cover				
<b>Herb Stratum (Plot size: <u>9'</u>)</b>				
1. <u>Phalaris arundinacea</u>	<u>20</u>	<u>X</u>	<u>FACW</u>	
2. <u>Lythrum salicaria</u>	<u>10</u>	<u>X</u>	<u>OBL</u>	
3. <u>Filipendula ulmaria</u>	<u>10</u>	<u>X</u>	<u>FAC</u>	
4. <u>Scirpus cyperinus</u>	<u>10</u>	<u>X</u>	<u>OBL</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>50</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No				
				Remarks: (Include photo numbers here or on a separate sheet.)





**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: ELIZ TANKS City/County: TOMPSONS CO Sampling Date: 4/10/2017  
 Applicant/Owner: SAV 8 SOLAR State: PY Sampling Point: W12a-WP  
 Investigator(s): MZEE GUNAP Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): Hillside Local relief (concave, convex, none): None Slope (%): \_\_\_\_\_  
 Subregion (LRR or MLRA): LRR-2 Lat: 42.4380 Long: -76.4305 Datum: NAD83  
 Soil Map Unit Name: Colo-Cherango gravelly loam, 5-15% slope NWI classification: N/A  
 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 <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1)      ___ Water-Stained Leaves (B9) ___ High Water Table (A2)      ___ Aquatic Fauna (B13) ___ Saturation (A3)      ___ Marl Deposits (B15) ___ Water Marks (B1)      ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2)      ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3)      ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4)      ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5)      ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7)      ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

**VEGETATION – Use scientific names of plants.**

Sampling Point: W12a-W

<u>Tree Stratum</u> (Plot size: _____ )	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
				_____ = Total Cover
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15'</u> )				
1. <u>Lonicera spp</u>	<u>15</u>	<u>—</u>	<u>—</u>	
2. <u>Rosa multiflora</u>	<u>10</u>	<u>X</u>	<u>FACW</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
				<u>25</u> = Total Cover
<u>Herb Stratum</u> (Plot size: <u>9'</u> )				
1. <u>Solidago altissima</u>	<u>30</u>	<u>X</u>	<u>FACW</u>	
2. <u>Dipsacus fullonum</u>	<u>15</u>	<u>X</u>	<u>FACU</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
				<u>45</u> = Total Cover
<u>Woody Vine Stratum</u> (Plot size: _____ )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
				_____ = 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: 3 (B)

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

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**Prevalence Index worksheet:**

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

Prevalence Index = B/A = \_\_\_\_\_

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**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0<sup>1</sup>

4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

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**Definitions of Vegetation Strata:**

**Tree** – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/shrub** – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** – All woody vines greater than 3.28 ft in height.

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**Hydrophytic Vegetation Present?**      Yes \_\_\_\_\_      No

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



**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: GLASS TRAILS City/County: TOMIKENS Sampling Date: 4/10/2017  
 Applicant/Owner: SWB SOLAR State: NY Sampling Point: W13a-WET1  
 Investigator(s): MIKE GUZMAN Section, Township, Range: Ithaca  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 1%  
 Subregion (LRR or MLRA): LRR-R Lat: 42.435976 Long: -76.481572 Datum: WGS84  
 Soil Map Unit Name: Era - Erie-Chippewa cherty silt loam, 0-3% slope NWI classification: PEM  
 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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input checked="" type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <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"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input checked="" type="checkbox"/> Moss Trim Lines (B16) <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 checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>1"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>-2"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

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>4</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>4</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>1.0</u> (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species <u>3</u> x 1 = <u>3</u> FACW species <u>5</u> x 2 = <u>10</u> FAC species <u>1</u> x 3 = <u>3</u> FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: <u>9</u> (A) <u>16</u> (B)  Prevalence Index = B/A = <u>0.56</u>
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				
<b>Sapling/Shrub Stratum (Plot size: <u>15'</u>)</b>				
1. <u>Salix nigra</u>	<u>10</u>	<u>X</u>	<u>FACW</u>	
2. <u>Salix sericea</u>	<u>5</u>	<u>X</u>	<u>FACW</u>	
3. <u>Salix discolor</u>	<u>5</u>	<u>X</u>	<u>FACW</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>20</u> = Total Cover				
<b>Herb Stratum (Plot size: <u>9'</u>)</b>				
1. <u>Phalaris arundinacea</u>	<u>40</u>	<u>X</u>	<u>FACW</u>	
2. <u>Luthrum salicaria</u>	<u>15</u>	_____	<u>OBL</u>	
3. <u>Typha latifolia</u>	<u>10</u>	_____	<u>DBL</u>	
4. <u>Verbena hastata</u>	<u>5</u>	_____	<u>FACW</u>	
5. <u>Rumex crispus</u>	<u>2</u>	_____	<u>FAC</u>	
6. <u>Leersia oryzoides</u>	<u>8</u>	_____	<u>DBL</u>	
7. <u>Carex spp</u>	<u>25</u>	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>100</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No				
Remarks: (Include photo numbers here or on a separate sheet.)				



**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: FLUIS TRACTS City/County: TOMPKINS CO Sampling Date: 4/10/2017  
 Applicant/Owner: SUNB SOLAR State: NY Sampling Point: W13a - WET2  
 Investigator(s): MIKE GUZMAN Section, Township, Range: Ithaca  
 Landform (hillslope, terrace, etc.): Ditch Local relief (concave, convex, none): Concave Slope (%): 3  
 Subregion (LRR or MLRA): LRR-R Lat: 42.435786 Long: -76.431779 Datum: NAD83  
 Soil Map Unit Name: LaB - Langford channery silt loam, 2-8% slope NWI classification: PSS  
 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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)  _____ _____	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input checked="" type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input checked="" type="checkbox"/> Moss Trim Lines (B16) <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 checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>2"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>-6"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  
 \_\_\_\_\_  
 \_\_\_\_\_

Remarks:  
 \_\_\_\_\_  
 \_\_\_\_\_



**VEGETATION – Use scientific names of plants.**

Sampling Point: W13a - WET2

<u>Tree Stratum</u> (Plot size: _____)	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>	<b>Dominance Test worksheet:</b>	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>4</u> (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>1.0</u> (A/B)	
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b>	
5. _____	_____	_____	_____		Total % Cover of: _____ Multiply by: _____
6. _____	_____	_____	_____		OBL species _____ x 1 = _____
7. _____	_____	_____	_____		FACW species _____ x 2 = _____
_____ = Total Cover					FAC species _____ x 3 = _____
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15'</u> )					FACU species _____ x 4 = _____
1. <u>Salix nigra</u>	<u>40</u>	<u>X</u>	<u>FACW</u>		UPL species _____ x 5 = _____
2. <u>Salix discolor</u>	<u>10</u>	<u>X</u>	<u>FACW</u>	Column Totals: _____ (A) _____ (B)	
3. _____	_____	_____	_____	Prevalence Index = B/A = _____	
4. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b>	
5. _____	_____	_____	_____		<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation
6. _____	_____	_____	_____		<input type="checkbox"/> 2 - Dominance Test is >50%
7. _____	_____	_____	_____		<input type="checkbox"/> 3 - Prevalence Index is $\leq 3.0^1$
<u>50</u> = Total Cover					<input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
<u>Herb Stratum</u> (Plot size: <u>9'</u> )					<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
1. <u>Oxyclea sensibilis</u>	<u>15</u>	<u>X</u>	<u>FACW</u>		<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Juncus effusus</u>	<u>5</u>	<u>X</u>	<u>OBL</u>	<b>Definitions of Vegetation Strata:</b>	
3. _____	_____	_____	_____		<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
4. _____	_____	_____	_____		<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
5. _____	_____	_____	_____		<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
6. _____	_____	_____	_____		<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
7. _____	_____	_____	_____		<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
<u>20</u> = Total Cover					
<u>Woody Vine Stratum</u> (Plot size: _____)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
_____ = Total Cover					
Remarks: (Include photo numbers here or on a separate sheet.)					



**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: ELIZAS TRACTS City/County: TOMPKINS Co Sampling Date: 4/10/2017  
 Applicant/Owner: Sam & Susan State: NY Sampling Point: W13a-WP  
 Investigator(s): MIKE GUNNAP Section, Township, Range: Ithaca  
 Landform (hillslope, terrace, etc.): Terrace/Hillslope Local relief (concave, convex, none): none Slope (%): 2  
 Subregion (LRR or MLRA): LRR-R Lat: 42.436079 Long: -76.431811 Datum: WGS84  
 Soil Map Unit Name: EA- Erie-Chippewa channery silt loam, 0-3% slopes NWI classification: N/A  
 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 <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)   	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> 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? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  	
Remarks:   	

**VEGETATION – Use scientific names of plants.**

Sampling Point: W13c - U1P

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: <u>9'</u> )				
1. <u>Dipsacus Fullonum</u>	<u>15</u>	<u>X</u>	<u>FACU</u>	
2. <u>Dactylis glomerata</u>	<u>15</u>	<u>X</u>	<u>FACU</u>	
3. <u>Poa pratensis</u>	<u>10</u>		<u>FACU</u>	
4. <u>Unknown spp</u>	<u>20</u>	<u>—</u>	<u>—</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>60</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = 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)

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**Prevalence Index worksheet:**

Total % Cover of: \_\_\_\_\_ Multiply by:

OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_

FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_

FAC species \_\_\_\_\_ x 3 = \_\_\_\_\_

FACU species \_\_\_\_\_ x 4 = \_\_\_\_\_

UPL species \_\_\_\_\_ x 5 = \_\_\_\_\_

Column Totals: \_\_\_\_\_ (A) \_\_\_\_\_ (B)

Prevalence Index = B/A = \_\_\_\_\_

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**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0<sup>1</sup>

4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

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**Definitions of Vegetation Strata:**

**Tree** – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/shrub** – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** – All woody vines greater than 3.28 ft in height.

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**Hydrophytic Vegetation Present?** Yes \_\_\_\_\_ No

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



**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: ELLYS TRAILS City/County: Township CO Sampling Date: 4/10/2017  
 Applicant/Owner: SHAR SOLAR State: NY Sampling Point: W14C-WET  
 Investigator(s): MIKE GUZMAN Section, Township, Range: Ithaca  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 10  
 Subregion (LRR or MLRA): LRR-R Lat: 42.437884 Long: -76.434469 Datum: NAD83  
 Soil Map Unit Name: LAC3 - Longford channery silt loam, 8-18% NWI classification: PEM

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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>W14a</u>
Remarks: (Explain alternative procedures here or in a separate report.)   	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input checked="" type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input checked="" type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <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"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input checked="" type="checkbox"/> Moss Trim Lines (B16) <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 checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>2"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
Stream flood plain

**VEGETATION** – Use scientific names of plants.

Sampling Point: W14a-WET

<u>Tree Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____
				_____ = Total Cover
<u>Sapling/Shrub Stratum</u> (Plot size: _____)				
1. _____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____
				_____ = Total Cover
<u>Herb Stratum</u> (Plot size: <u>9'</u> )				
1. <u>Typha latifolia</u>	<u>40</u>	<u>X</u>	<u>OBL</u>	
2. <u>Phalaris arundinacea</u>	<u>20</u>	<u>X</u>	<u>FACW</u>	
3. <u>Onoclea sensibilis</u>	<u>15</u>		<u>FACW</u>	
4. <u>Leersia oryzoides</u>	<u>5</u>		<u>OBL</u>	
5. <u>Carex spp.</u>	<u>10</u>	<u>—</u>	<u>—</u>	
6. _____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____
9. _____	_____	_____	_____	_____
10. _____	_____	_____	_____	_____
11. _____	_____	_____	_____	_____
12. _____	_____	_____	_____	_____
				<u>90</u> = Total Cover
<u>Woody Vine Stratum</u> (Plot size: _____)				
1. _____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____
				_____ = 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: 2 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 10 (A/B)

**Prevalence Index worksheet:**  
 Total % Cover of: \_\_\_\_\_ Multiply by:  
 OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_  
 FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_  
 FAC species \_\_\_\_\_ x 3 = \_\_\_\_\_  
 FACU species \_\_\_\_\_ x 4 = \_\_\_\_\_  
 UPL species \_\_\_\_\_ x 5 = \_\_\_\_\_  
 Column Totals: \_\_\_\_\_ (A) \_\_\_\_\_ (B)  
 Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**  
 1 - Rapid Test for Hydrophytic Vegetation  
 2 - Dominance Test is >50%  
 3 - Prevalence Index is  $\leq 3.0^1$   
 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Vegetation Strata:**  
**Tree** – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  
**Sapling/shrub** – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  
**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  
**Woody vines** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes  No

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

**SOIL**

Sampling Point: W14c-WET

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

Depth (inches)	Matrix		Redox Features			Loc <sup>2</sup>	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			
0-8	10YR 3/2						S/L	
8-12	10YR 2/2	90	5YR 5/6	10	RM	H	S/L	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

- |   |   |  |
|---|---|--|
| <p><b>Hydric Soil Indicators:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Histosol (A1)</li> <li><input type="checkbox"/> Histic Epipedon (A2)</li> <li><input checked="" type="checkbox"/> Black Histic (A3)</li> <li><input type="checkbox"/> Hydrogen Sulfide (A4)</li> <li><input type="checkbox"/> Stratified Layers (A5)</li> <li><input type="checkbox"/> Depleted Below Dark Surface (A11)</li> <li><input type="checkbox"/> Thick Dark Surface (A12)</li> <li><input type="checkbox"/> Sandy Mucky Mineral (S1)</li> <li><input type="checkbox"/> Sandy Gleyed Matrix (S4)</li> <li><input type="checkbox"/> Sandy Redox (S5)</li> <li><input type="checkbox"/> Stripped Matrix (S6)</li> <li><input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)</li> </ul> | <ul style="list-style-type: none"> <li><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)</li> <li><input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)</li> <li><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)</li> <li><input type="checkbox"/> Loamy Gleyed Matrix (F2)</li> <li><input checked="" type="checkbox"/> Depleted Matrix (F3)</li> <li><input type="checkbox"/> Redox Dark Surface (F6)</li> <li><input type="checkbox"/> Depleted Dark Surface (F7)</li> <li><input type="checkbox"/> Redox Depressions (F8)</li> </ul> | <p><b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)</li> <li><input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)</li> <li><input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)</li> <li><input type="checkbox"/> Dark Surface (S7) (LRR K, L, M)</li> <li><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)</li> <li><input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)</li> <li><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)</li> <li><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)</li> <li><input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)</li> <li><input type="checkbox"/> Red Parent Material (F21)</li> <li><input type="checkbox"/> Very Shallow Dark Surface (TF12)</li> <li><input type="checkbox"/> Other (Explain in Remarks)</li> </ul> |
|---|---|--|

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p><b>Restrictive Layer (if observed):</b></p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present?    Yes <input checked="" type="checkbox"/>    No <input type="checkbox"/></p>
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Remarks:



**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: EWS TRAILS City/County: TOMPSON CO Sampling Date: 4/10/2017  
 Applicant/Owner: SAN B SILVA State: NY Sampling Point: W14a-WP  
 Investigator(s): MARK GUZMAN Section, Township, Range: Tithonia  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): none Slope (%): 10  
 Subregion (LRR or MLRA): LRR-R Lat: 42.438010 Long: -76.434519 Datum: NAD83  
 Soil Map Unit Name: LaC3 - Longford channely silt loam, 8-15% NWI classification: N/A  
 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 <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)   	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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<b>Field Observations:</b> 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 checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>6"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**VEGETATION – Use scientific names of plants.**

Sampling Point: W4c - W8

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: _____ (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species <u>2</u> x 3 = <u>6</u> FACU species <u>1</u> x 4 = <u>4</u> UPL species <u>1</u> x 5 = <u>5</u> Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = <u>3.75</u>
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				
<b>Sapling/Shrub Stratum (Plot size: <u>15'</u>)</b>				
1. <u>Lonicera sp</u>	<u>20</u>	_____	_____	
2. <u>Cornus racemosa</u>	<u>15</u>	<u>X</u>	<u>FAC</u>	
3. <u>Rhamnus cathartica</u>	<u>5</u>	_____	<u>FAC</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>40</u> = Total Cover				
<b>Herb Stratum (Plot size: <u>9'</u>)</b>				
1. <u>Solidago albissima</u>	<u>35</u>	<u>X</u>	<u>FACU</u>	
2. <u>Fragaria vesca</u>	<u>10</u>	_____	<u>UPL</u>	
3. <u>Unknown</u>	<u>10</u>	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>65</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>				
				<b>Definitions of Vegetation Strata:</b> <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>  _____ _____ _____				



**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: Ellis - North City/County: Thompkins Sampling Date: 4/5/17  
 Applicant/Owner: SUN 8 State: NY Sampling Point: W2b-wet1  
 Investigator(s): NOTE LOOSE Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): Concave Slope (%): 5  
 Subregion (LRR or MLRA): L2R-2 Lat: 42.4498 Long: -76.4370 Datum: NAD83  
 Soil Map Unit Name: RkB-Rhinbeck silt loam, 2-6% slopes NWI classification: PEM

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 <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: <u>W2b</u>
Remarks: (Explain alternative procedures here or in a separate report.)	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) <input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) <input checked="" type="checkbox"/> Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) <input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input checked="" type="checkbox"/> Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
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<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>6"</u> Water Table Present? Yes _____ No _____ Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>1"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
Ponded wetland area within active pasture. Appears to be fed by seep.

**VEGETATION – Use scientific names of plants.**

Sampling Point: W2b-wet1

Tree Stratum (Plot size: \_\_\_\_\_ )

	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

\_\_\_\_\_ = Total Cover

Sapling/Shrub Stratum (Plot size: \_\_\_\_\_ )

1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

\_\_\_\_\_ = Total Cover

Herb Stratum (Plot size: \_\_\_\_\_ )

1. <u>Algae</u>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

\_\_\_\_\_ = Total Cover

Woody Vine Stratum (Plot size: \_\_\_\_\_ )

1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____

\_\_\_\_\_ = Total Cover

**Dominance Test worksheet:**

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

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

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

**Prevalence Index worksheet:**

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

Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0<sup>1</sup>

4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Vegetation Strata:**

**Tree** – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/shrub** – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes  No \_\_\_\_\_

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

4351 in  
4352 out

Area is underwater, floating algae is only live herbaceous stratum within.

**SOIL**

Sampling Point: W2b-wet1

**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 <sup>1</sup>	Loc <sup>2</sup>		
0-8	10YR 4/1	100					S:Lo	
8-14	10YR 3/2	90	7.5YR 5/4	10	RM	M	S:Lo	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

<sup>3</sup>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:

**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: Ellis - North City/County: Thompkins Sampling Date: 4/5/17  
 Applicant/Owner: SUNB State: NY Sampling Point: W2b-up  
 Investigator(s): N. Grosse Section, Township, Range: Ithaca  
 Landform (hillslope, terrace, etc.): toe of slope Local relief (concave, convex, none): none Slope (%): 0-5  
 Subregion (LRR or MLRA): LEE R Lat: 42.4498 Long: -76.4269 Datum: WGS84  
 Soil Map Unit Name: Rk B - Rhinbeck silt loam, 2-6% slopes 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 <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <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"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b> 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): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
Active pasture - mowed/maintained

**VEGETATION – Use scientific names of plants.**

Sampling Point: W2b-up

Tree Stratum (Plot size: _____ )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			

**Dominance Test worksheet:**  
 Number of Dominant Species That Are OBL, FACW, or FAC: \_\_\_\_\_ (A)  
 Total Number of Dominant Species Across All Strata: \_\_\_\_\_ (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: \_\_\_\_\_ (A/B)

**Prevalence Index worksheet:**  
 Total % Cover of: \_\_\_\_\_ Multiply by: \_\_\_\_\_  
 OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_  
 FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_  
 FAC species \_\_\_\_\_ x 3 = \_\_\_\_\_  
 FACU species \_\_\_\_\_ x 4 = \_\_\_\_\_  
 UPL species \_\_\_\_\_ x 5 = \_\_\_\_\_  
 Column Totals: \_\_\_\_\_ (A) \_\_\_\_\_ (B)  
 Prevalence Index = B/A = \_\_\_\_\_

Sapling/Shrub Stratum (Plot size: _____ )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			

**Hydrophytic Vegetation Indicators:**  
 \_\_\_ 1 - Rapid Test for Hydrophytic Vegetation  
 \_\_\_ 2 - Dominance Test is >50%  
 \_\_\_ 3 - Prevalence Index is  $\leq 3.0^1$   
 \_\_\_ 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 \_\_\_ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Vegetation Strata:**  
**Tree** – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  
**Sapling/shrub** – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  
**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  
**Woody vines** – All woody vines greater than 3.28 ft in height.

Herb Stratum (Plot size: _____ )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>See remarks</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
12. _____			

**Hydrophytic Vegetation Present?** Yes \_\_\_\_\_ No X

Woody Vine Stratum (Plot size: _____ )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			

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

4352 Mowed/maintained lawn - unk grass spp



**SOIL**

Sampling Point: W26-up

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 <sup>1</sup>	Loc <sup>2</sup>		
0-8	7.5 YR 4/3	100					SILo	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

<sup>3</sup>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 X

Remarks:

**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: Ellis - South 1 City/County: Thompson Sampling Date: 4/16/17  
 Applicant/Owner: SUN 8 State: NY Sampling Point: W36-wet1  
 Investigator(s): N. Grosse / M. Guinan Section, Township, Range: Ithaca  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 12-5  
 Subregion (LRR or MLRA): LRR 2 Lat: 42.4961 Long: -76.4399 Datum: NAD 83  
 Soil Map Unit Name: LaB. Langford channery silt loam, 2-8% slopes NWI classification: P2M

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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>W36</u>
Remarks: (Explain alternative procedures here or in a separate report.)    	

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input checked="" type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <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"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" 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"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>4"</u> Water Table Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

*Hedgecove*

W36  
 ↓  
 ↓

old field

**VEGETATION** – Use scientific names of plants.

Sampling Point: W36-wet1

<u>Tree Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

\_\_\_\_\_ = Total Cover

<u>Sapling/Shrub Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

\_\_\_\_\_ = Total Cover

<u>Herb Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Juncus effusus</u>	<u>75</u>	<u>Y</u>	<u>OBL</u>
2. <u>Phalaris arundinacea</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

105 = Total Cover

<u>Woody Vine Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____

\_\_\_\_\_ = 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: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 2/2 (A/B)

**Prevalence Index worksheet:**

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

Prevalence Index = B/A = \_\_\_\_\_

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
  - 2 - Dominance Test is >50%
  - 3 - Prevalence Index is ≤3.0<sup>1</sup>
  - 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
  - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)
- <sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Vegetation Strata:**

**Tree** – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/shrub** – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes  No \_\_\_\_\_

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

4367

**SOIL**

Sampling Point: W3b-wet1

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 <sup>1</sup>	Loc <sup>2</sup>		
0-6	10YR 3/2	90	7.5YR 4/6	10	RM	M	S.Lo	
6-12	10YR 3/1	85	5YR 5/8	15	RM	M	S.Lo	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

- Hydric Soil Indicators:**
- Histosol (A1)
  - Histic Epipedon (A2)
  - Black Histic (A3)
  - Hydrogen Sulfide (A4)
  - Stratified Layers (A5)
  - Depleted Below Dark Surface (A11)
  - Thick Dark Surface (A12)
  - Sandy Mucky Mineral (S1)
  - Sandy Gleyed Matrix (S4)
  - Sandy Redox (S5)
  - Stripped Matrix (S6)
  - Dark Surface (S7) (LRR R, MLRA 149B)
  - Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
  - Thin Dark Surface (S9) (LRR R, MLRA 149B)
  - Loamy Mucky Mineral (F1) (LRR K, L)
  - Loamy Gleyed Matrix (F2)
  - Depleted Matrix (F3)
  - Redox Dark Surface (F6)
  - Depleted Dark Surface (F7)
  - Redox Depressions (F8)
- Indicators for Problematic Hydric Soils<sup>3</sup>:**
- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
  - Coast Prairie Redox (A16) (LRR K, L, R)
  - 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
  - Dark Surface (S7) (LRR K, L)
  - Polyvalue Below Surface (S8) (LRR K, L)
  - Thin Dark Surface (S9) (LRR K, L)
  - Iron-Manganese Masses (F12) (LRR K, L, R)
  - Piedmont Floodplain Soils (F19) (MLRA 149B)
  - Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
  - Red Parent Material (F21)
  - Very Shallow Dark Surface (TF12)
  - Other (Explain in Remarks)

<sup>3</sup>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:

**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: Ellis - South 1 City/County: Thompson Sampling Date: 4/10/17  
 Applicant/Owner: SUN 8 State: NY Sampling Point: W36-up1  
 Investigator(s): N. Grosse / M. Guinan Section, Township, Range: Dhara  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-5  
 Subregion (LRR or MLRA): LRR R Lat: 42.43661 Long: -76.4397 Datum: WGS84  
 Soil Map Unit Name: LaB - Langford channery silt loam, 2-8% slopes 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 <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)  <div style="font-size: 2em; text-align: center; padding: 20px;">Upland sample point</div>	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1)      ___ Water-Stained Leaves (B9) ___ High Water Table (A2)      ___ Aquatic Fauna (B13) ___ Saturation (A3)      ___ Marl Deposits (B15) ___ Water Marks (B1)      ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2)      ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3)      ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4)      ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5)      ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7)      ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
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<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**VEGETATION** – Use scientific names of plants.

Sampling Point: W3b-up1

Tree Stratum (Plot size: _____ )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

**Dominance Test worksheet:**

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

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0/1 (A/B)

\_\_\_\_\_ = Total Cover

Sapling/Shrub Stratum (Plot size: _____ )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

**Prevalence Index worksheet:**

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

Prevalence Index = B/A = \_\_\_\_\_

\_\_\_\_\_ = Total Cover

Herb Stratum (Plot size: _____ )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Dactylis glomerata</u>	<u>65</u>	<u>Y</u>	<u>FACU</u>
2. <u>Phleum pratense</u>	<u>20</u>	_____	<u>FACU</u>
3. <u>Solidago spp</u>	<u>20</u>	_____	<u>FAC</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

\_\_\_\_\_ = Total Cover

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
  - 2 - Dominance Test is >50%
  - 3 - Prevalence Index is ≤3.0<sup>1</sup>
  - 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
  - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)
- <sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

\_\_\_\_\_ = Total Cover

Woody Vine Stratum (Plot size: _____ )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____

\_\_\_\_\_ = Total Cover

**Definitions of Vegetation Strata:**

**Tree** – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/shrub** – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes \_\_\_\_\_ No X

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

**SOIL**

Sampling Point: W3b-vp1

**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 <sup>1</sup>	Loc <sup>2</sup>		
0-9	10YR 3/3	100					S <sub>1</sub> L <sub>0</sub>	
9-15	2.5YR 5/2	100					S <sub>1</sub> L <sub>0</sub>	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)
- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

<sup>3</sup>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 X

**Remarks:**

**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: Ellis-South 1 City/County: Thompson Sampling Date: 4/10/17  
 Applicant/Owner: SUN 8 State: NY Sampling Point: W4b-wat 1  
 Investigator(s): N. Grose / M. Guinan Section, Township, Range: Dthaca  
 Landform (hillslope, terrace, etc.): hilltop terrace Local relief (concave, convex, none): Concave Slope (%): 0-5%  
 Subregion (LRR or MLRA): LRR 2 Lat: 42.4353 Long: -76.4403 Datum: WGS84  
 Soil Map Unit Name: La B - Longford channery silt loam, 2-8% slopes NWI classification: PEM  
 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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)   	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
<b>Primary Indicators (minimum of one is required; check all that apply)</b> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input checked="" type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>2"</u> Water Table Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>1"</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:



**VEGETATION** – Use scientific names of plants.

Sampling Point: W4b-Wet1

<u>Tree Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

**Dominance Test worksheet:**  
 Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)  
 Total Number of Dominant Species Across All Strata: 2 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 2/2 (A/B)

<u>Sapling/Shrub Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

**Prevalence Index worksheet:**  
 Total % Cover of: \_\_\_\_\_ Multiply by: \_\_\_\_\_  
 OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_  
 FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_  
 FACU species \_\_\_\_\_ x 3 = \_\_\_\_\_  
 UPL species \_\_\_\_\_ x 5 = \_\_\_\_\_  
 Column Totals: \_\_\_\_\_ (A) \_\_\_\_\_ (B)  
 Prevalence Index = B/A = \_\_\_\_\_

<u>Herb Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Phalaris arundinacea</u>	<u>65</u>	<u>Y</u>	<u>FACW</u>
2. <u>Juncus effusus</u>	<u>20</u>	<u>Y</u>	<u>OBL</u>
3. <u>Lythrum salicaria</u>	<u>5</u>	_____	<u>OBL</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

**Hydrophytic Vegetation Indicators:**  
 1 - Rapid Test for Hydrophytic Vegetation  
 2 - Dominance Test is >50%  
 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

<u>Woody Vine Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____

**Definitions of Vegetation Strata:**  
**Tree** – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  
**Sapling/shrub** – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  
**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  
**Woody vines** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes  No

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

4369



**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: Ellis - South 1 City/County: Thompkins Sampling Date: 4/10/17  
 Applicant/Owner: SUNR State: NY Sampling Point: W4B-up  
 Investigator(s): N. Grasse / M. Gushen Section, Township, Range: Ithaca  
 Landform (hillslope, terrace, etc.): hillslope terrace Local relief (concave, convex, none): none Slope (%): 12-5  
 Subregion (LRR or MLRA): LRR 12 Lat: 42.4854 Long: -76.4401 Datum: WGS84  
 Soil Map Unit Name: LaB - Langford channel silt loam, 2-8% slopes 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 <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)  <div style="font-size: 2em; text-align: center; padding: 20px;">Upland sample point</div>	

**HYDROLOGY**

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <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"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)	

<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**VEGETATION** – Use scientific names of plants.

Sampling Point: W46-up1

<u>Tree Stratum</u> (Plot size: _____ )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

**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: 1/3 (A/B)

\_\_\_\_\_ = Total Cover

<u>Sapling/Shrub Stratum</u> (Plot size: _____ )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

**Prevalence Index worksheet:**

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

Prevalence Index = B/A = \_\_\_\_\_

\_\_\_\_\_ = Total Cover

<u>Herb Stratum</u> (Plot size: _____ )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Solidago spp</u>	<u>25</u>	<u>Y</u>	<u>FAC</u>
2. <u>Phleum pratense</u>	<u>40</u>	<u>Y</u>	<u>FACU</u>
3. <u>Dactylic glomerata</u>	<u>35</u>	<u>Y</u>	<u>FACU</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

**Hydrophytic Vegetation Indicators:**

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0<sup>1</sup>
- 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

\_\_\_\_\_ = Total Cover

<u>Woody Vine Stratum</u> (Plot size: _____ )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____

**Definitions of Vegetation Strata:**

**Tree** – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/shrub** – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes \_\_\_\_\_ No X

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

4370



**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: Ellis - South 1 City/County: Thompson Sampling Date: 4/10/17  
 Applicant/Owner: SUN8 State: NY Sampling Point: W5b-wet1  
 Investigator(s): N. Grosse / M. Guinan Section, Township, Range: Ithaca  
 Landform (hillslope, terrace, etc.): hillslope terrace Local relief (concave, convex, none): concave Slope (%): 0-5%  
 Subregion (LRR or MLRA): LRR R Lat: 42.4357 Long: -76.4410 Datum: NAD 83  
 Soil Map Unit Name: EA - Eric-Chaparral cherry silt loams, 0-32 NWI classification: PEM  
 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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>W5b</u>
Remarks: (Explain alternative procedures here or in a separate report.)   	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required: check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>3-4"</u> Water Table Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>1"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
Long linear seasonal wetland - drainage pattern.

**VEGETATION** – Use scientific names of plants.

Sampling Point: WS6-wet1

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 3/3 (A/B)

\_\_\_\_\_ = Total Cover

Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			

**Prevalence Index worksheet:**

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

Prevalence Index = B/A = \_\_\_\_\_

\_\_\_\_\_ = Total Cover

Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Juncus effusus</u>	<u>35</u>	<u>Y</u>	<u>OBL</u>
2. <u>Phalaris arundinacea</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>
3. <u>Carex spp</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>
4. <u>Caltha palustris</u>	<u>10</u>		<u>OBL</u>
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
12. _____			

\_\_\_\_\_ = Total Cover

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
  - 2 - Dominance Test is >50%
  - 3 - Prevalence Index is ≤3.0<sup>1</sup>
  - 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
  - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)
- <sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

\_\_\_\_\_ = Total Cover

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			

\_\_\_\_\_ = Total Cover

**Definitions of Vegetation Strata:**

**Tree** – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/shrub** – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes  No

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

**SOIL**

Sampling Point: W56-wet 1

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 <sup>1</sup>	Loc <sup>2</sup>		
0-6	10YR 3/2	100					SiLo	
6-12	10YR 3/1	35	5YR 5/8	15	RM	M	SiLo	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

<sup>3</sup>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:**



**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: Ellis - South 1 City/County: Thompson Sampling Date: 4/10/17  
 Applicant/Owner: SUN 8 State: NY Sampling Point: W56-vp1  
 Investigator(s): N. Grosse / M. Guhan Section, Township, Range: Ft. Maca  
 Landform (hillslope, terrace, etc.): hilltop Local relief (concave, convex, none): none Slope (%): 2  
 Subregion (LRR or MLRA): LRR 2 Lat: 42.4355 Long: -76.4411 Datum: WGS84  
 Soil Map Unit Name: EA - Erie - Chippewa channel silt loam, 0.3% slope 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 <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)  <div style="font-size: 2em; text-align: center; margin-top: 20px;">Upland sample point</div>	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
<b>Primary Indicators (minimum of one is required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> 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): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

**VEGETATION** – Use scientific names of plants.

Sampling Point: W5b-vp1

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			

**Dominance Test worksheet:**

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 1/2 (A/B)

\_\_\_\_\_ = Total Cover

Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>5</u>	x 2 = <u>10</u>
FAC species <u>40</u>	x 3 = <u>120</u>
FACU species <u>35</u>	x 4 = <u>140</u>
UPL species <u>15</u>	x 5 = <u>75</u>
Column Totals: <u>95</u> (A)	<u>345</u> (B)

Prevalence Index = B/A = 3.63

\_\_\_\_\_ = Total Cover

Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Solidago spp</u>	<u>40</u>	<u>Y</u>	<u>FAC</u>
2. <u>Dactylis glomerata</u>	<u>35</u>	<u>Y</u>	<u>FACU</u>
3. <u>Phleum pratense</u>	<u>15</u>		<u>FACU</u>
4. <u>Phlaris arundinacea</u>	<u>5</u>		<u>FACW</u>
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
12. _____			

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
  - 2 - Dominance Test is >50%
  - 3 - Prevalence Index is ≤3.0<sup>1</sup>
  - 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)
- <sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

\_\_\_\_\_ = Total Cover

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			

**Definitions of Vegetation Strata:**

**Tree** – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/shrub** – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes \_\_\_\_\_ No X

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

4372

**SOIL**

Sampling Point: W5b-up1

**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 <sup>1</sup>	Loc <sup>2</sup>		
0-10	10 YR 3/3	100					S, L <sub>o</sub>	
10-14	2.5 YR 5/2	100					S, L <sub>o</sub>	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

- Hydric Soil Indicators:**
- Histosol (A1)
  - Histic Epipedon (A2)
  - Black Histic (A3)
  - Hydrogen Sulfide (A4)
  - Stratified Layers (A5)
  - Depleted Below Dark Surface (A11)
  - Thick Dark Surface (A12)
  - Sandy Mucky Mineral (S1)
  - Sandy Gleyed Matrix (S4)
  - Sandy Redox (S5)
  - Stripped Matrix (S6)
  - Dark Surface (S7) (LRR R, MLRA 149B)
  - Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
  - Thin Dark Surface (S9) (LRR R, MLRA 149B)
  - Loamy Mucky Mineral (F1) (LRR K, L)
  - Loamy Gleyed Matrix (F2)
  - Depleted Matrix (F3)
  - Redox Dark Surface (F6)
  - Depleted Dark Surface (F7)
  - Redox Depressions (F8)
- Indicators for Problematic Hydric Soils<sup>3</sup>:**
- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
  - Coast Prairie Redox (A16) (LRR K, L, R)
  - 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
  - Dark Surface (S7) (LRR K, L)
  - Polyvalue Below Surface (S8) (LRR K, L)
  - Thin Dark Surface (S9) (LRR K, L)
  - Iron-Manganese Masses (F12) (LRR K, L, R)
  - Piedmont Floodplain Soils (F19) (MLRA 149B)
  - Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
  - Red Parent Material (F21)
  - Very Shallow Dark Surface (TF12)
  - Other (Explain in Remarks)

<sup>3</sup>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 X

Remarks:

**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: Ellic - South 1 City/County: Thompson Sampling Date: 4/10/17  
 Applicant/Owner: SUN8 State: NY Sampling Point: W66-wet1  
 Investigator(s): N. Grosse / M. Guinan Section, Township, Range: Ithaca  
 Landform (hillslope, terrace, etc.): Toe of slope Local relief (concave, convex, none): Concave Slope (%): 5  
 Subregion (LRR or MLRA): LRR-12 Lat: 42.4386 Long: -76.4374 Datum: WGS84  
 Soil Map Unit Name: Rk8 - Rhinoceros silt loam, 2 to 6% slopes NWI classification: Pf0  
 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 <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)   	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
<b>Primary Indicators (minimum of one is required: check all that apply)</b> _____ Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> 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)	<b>Secondary Indicators (minimum of two required)</b> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) <input checked="" type="checkbox"/> Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No _____ Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>3"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>1"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  	
Remarks:   	

**VEGETATION** – Use scientific names of plants.

Sampling Point: W6b-wet1

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Acer rubrum</u>	<u>55</u>	<u>Y</u>	<u>FAC</u>
2. <u>Fraxinus pennsylvanica</u>	<u>40</u>	<u>Y</u>	<u>FACW</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

95 = Total Cover

Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Lonicera spp</u>	<u>75</u>	<u>Y</u>	<u>FAC</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

75 = Total Cover

Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Phalaris arundinacea</u>	<u>50</u>	<u>Y</u>	<u>FACW</u>
2. <u>Juncus effusus</u>	<u>40</u>	<u>Y</u>	<u>OBL</u>
3. <u>Ranunculus spp</u>	<u>5</u>	_____	<u>FAC</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

95 = Total Cover

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____

\_\_\_\_\_ = Total Cover

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 5/5 (A/B)

**Prevalence Index worksheet:**

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

Prevalence Index = B/A = \_\_\_\_\_

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
  - 2 - Dominance Test is >50%
  - 3 - Prevalence Index is ≤3.0<sup>1</sup>
  - 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
  - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)
- <sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Vegetation Strata:**

**Tree** – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/shrub** – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes  No \_\_\_\_\_

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

**SOIL**

Sampling Point: W66-well

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 <sup>1</sup>	Loc <sup>2</sup>		
D-6	10YR 3/2	100					SiLo	
6-11	10YR 2/2	95	5YR 4/6	5	RM	M	SiLo	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

<sup>3</sup>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:

**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: Ellis - South 1 City/County: Thompson Sampling Date: 4/10/17  
 Applicant/Owner: SUN 8 State: NY Sampling Point: W66-up1  
 Investigator(s): N. Grosse / M. Guhan Section, Township, Range: Ithaca  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 15-25  
 Subregion (LRR or MLRA): L12-R Lat: 42.4386 Long: -76.4379 Datum: WGS84  
 Soil Map Unit Name: BoE - Bath and Valois soils, 25-35% slopes 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 <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)  <div style="font-size: 2em; text-align: center; padding: 20px;">                     Upland sample point                 </div>	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
<b>Primary Indicators (minimum of one is required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**VEGETATION – Use scientific names of plants.**

Sampling Point: W66-up1

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Acer saccharum</u>	<u>75</u>	<u>Y</u>	<u>FACU</u>
2. <u>Pinus strobus</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			

95 = Total Cover

Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Lonicera morrowii</u>	<u>65</u>	<u>Y</u>	<u>FACU</u>
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			

65 = Total Cover

Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
12. _____			

\_\_\_\_\_ = Total Cover

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			

\_\_\_\_\_ = 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: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0/3 (A/B)

**Prevalence Index worksheet:**

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

Prevalence Index = B/A = \_\_\_\_\_

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
  - 2 - Dominance Test is >50%
  - 3 - Prevalence Index is ≤3.0<sup>1</sup>
  - 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
  - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)
- <sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Vegetation Strata:**

**Tree** – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/shrub** – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes \_\_\_\_\_ No X

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



**SOIL**

Sampling Point: W6b-up1

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 <sup>1</sup>	Loc <sup>2</sup>		
0-10	10 YR 3/4	100					SIL	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

<sup>3</sup>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 X

**Remarks:**