Appendix E CORPS WETLAND DETERMINATION DATA FORMS

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/6/2020
Applicant/Owner: Hecate State: NY Sampling Point: 1_20200706_WL01_W1
Investigator(s): Andrew Sorci Section, Township, Range:
Landform (hillslope, terrace,etc.): Dip Local relief (concave, convex, none): Concave Slope (%) 1 - 3
Subregion (LRR or MLRA): LRR L Lat: 43.109889 Long: -78.257162 Datum: NAD83
Soil Map Unit Name: Ma NWI Classification: PEM
Are climatic / hyrologic conditions on the site typical for this time of year? Yes X No ____ (if no, explain in Remarks.)
Are Vegetation X , Soil X , 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 X	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL01
Wetland Hydrology Present?	Yes X No ____		

Remarks: (Explain alternative procedures here or in a separate report.)
edge of active corn field; vegetation problemmatic (planted crop)

HYDROLOGY

Wetland Hydrology Indicators:

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

	Surface Water (A1)		Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)
	Saturation (A3)		Marl Deposits (B15)		Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)	X	Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)	X	Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
					FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: 1_20200706_WL01_W1

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Zea mays	40	X	UPL
Abutilon theophrasti	8		FACU
Chenopodium album	5		FACU
Unknown species	2		UNK
	55	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 0% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	0	x 3	0	
FACU species	13	x 4	52	
UPL species	40	x 5	200	
Column Totals	53	(A)	252	(B)

Prevalence Index = B/A = 4.75

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
unknown sedge species; vegetation disturbed/problemmatic (planted corn)

SOIL Sampling Point: 1_20200706_WL01_W1

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-6	10YR 3/1	95	10YR 3/6	5	C	M	Sandy Loam	
6-15	7.5YR 6/2	85	7.5YR 5/8	15	C	M	Sand	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/6/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200706_WL01_W2

Investigator(s): Andrew Sorci Section, Township, Range:

Landform (hillslope, terrace,etc.): Dip Local relief (concave, convex, none): Concave Slope (%) 0 - 2

Subregion (LRR or MLRA): LRR L Lat: 43.109832 Long: -78.257415 Datum: NAD83

Soil Map Unit Name: Ma NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL01
Wetland Hydrology Present?	Yes X 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)		Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)
	Saturation (A3)		Marl Deposits (B15)	X	Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)	X	Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
				X	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X Depth (inches) ____	Wetland Hydrology Present?	Yes X No ____
Water Table Present?	Yes ____ No X Depth (inches) ____		
Saturation Present?	Yes ____ No X Depth (inches) ____		

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: 1_20200706_WL01_W2

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer saccharinum	50	X	FACW
Acer rubrum	50	X	FAC
	100	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lysimachia nummularia	5	X	FACW
	5	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	55	x 2	110	
FAC species	50	x 3	150	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	105	(A)	260	(B)

Prevalence Index = B/A = 2.48

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ____

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

SOIL Sampling Point: 1_20200706_WL01_W2

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-3	10YR 3/2	100					Loam	
3-8	10YR 2/1	95	10YR 6/2	5	C	M	Sandy Loam	
8-18	10YR 6/2	85	10YR 5/6	15	C	M	Loamy Sand	

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)
- X Sandy Redox (S5)
- ____ Stripped Matrix (S6)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennessee Sampling Date: 7/6/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200706_WL01_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): Convex Slope (%) 0 - 3

Subregion (LRR or MLRA): LRR L Lat: 43.109533 Long: -78.256921 Datum: NAD83

Soil Map Unit Name: Ma NWI Classification: UPL

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

Are Vegetation X , Soil X , or Hydrology X 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 X	**Is the Sampled Area within a Wetland?**	Yes _____ No X
Hydric Soil Present?	Yes _____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes _____ No X		

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

Planted corn field

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes _____ No X	Depth (inches) _____	Wetland Hydrology Present? Yes _____ No X
Water Table Present?	Yes _____ No X	Depth (inches) _____	
Saturation Present?	Yes _____ No X	Depth (inches) _____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200706_WL01_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Chenopodium album	5	X	FACU
Unknown species	3	X	UNK
Rumex crispus	1		FAC
	9 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

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

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

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

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	1	x 3	3	
FACU species	5	x 4	20	
UPL species	0	x 5	0	
Column Totals	6	(A)	23	(B)

Prevalence Index = B/A = 3.83

Hydrophytic Vegetation Indicators:

- 1- Rapid Test For Hydrophytic Vegetation
- 2- Dominance Test is > 50%
- 3- Prevalence Index is =< 3.0
- 4- Morphological Adaptations
- 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **1_20200706_WL01_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-20	10YR 2/2	99	10YR 3/6	1	C	M	Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/6/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200706_WL02_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Linear Slope (%) 0 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.110435 Long: -78.254124 Datum: NAD83

Soil Map Unit Name: RoA NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL02
Wetland Hydrology Present?	Yes X 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)
- ____ Sparsley 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)
- X Moss Trim Lines (B16)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: 1_20200706_WL02_W1

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Populus deltoides	45	X	FAC
Salix nigra	25	X	OBL
Acer saccharinum	10		FACW
	80 = Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	5	X	FACW
	5 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lysimachia nummularia	10	X	FACW
Phragmites australis	5	X	FACW
	15 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	15	X	FAC
	15 = Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

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

Prevalence Index Worksheet:

OBL species	25	x 1	25	
FACW species	30	x 2	60	
FAC species	60	x 3	180	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	115	(A)	265	(B)

Prevalence Index = B/A = 2.3

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: 1_20200706_WL02_W1

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-4	10YR 3/2	100					Sandy Loam	
4-12	10YR 6/2	85	10YR 5/6	15	C	M	Loamy Sand	

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)
- X Sandy Redox (S5)
- ____ Stripped Matrix (S6)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/6/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200706_WL02_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): Convex Slope (%) 0 - 3

Subregion (LRR or MLRA): LRR L Lat: 43.110425 Long: -78.254203 Datum: NAD83

Soil Map Unit Name: RoA NWI Classification: UPL

Are climatic / hyrologic 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 X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes X	No ____	if yes, optional Wetland Site ID: ____
Wetland Hydrology Present?	Yes ____	No X	

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____	No X	Depth (inches) ____
Water Table Present?	Yes ____	No X	Depth (inches) ____
Saturation Present?	Yes ____	No X	Depth (inches) ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200706_WL02_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	10	X	FACW
	10 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Solidago canadensis	60	X	FACU
Galium mollugo	5		FACU
Phragmites australis	5		FACW
Erigeron annuus	5		FACU
Toxicodendron radicans	5		FAC
Parthenocissus quinquefolia	5		FACU
Taraxacum officinale	3		FACU
	88 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	10	X	FAC
	10 = Total Cover		

Dominance Test Worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	15	x 2	30	
FAC species	15	x 3	45	
FACU species	78	x 4	312	
UPL species	0	x 5	0	
Column Totals	108	(A)	387	(B)

Prevalence Index = B/A = 3.58

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- ___ 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_20200706_WL02_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-6	10YR 3/2	100					Sandy Loam	
6-18	10YR 6/2	85	10YR 5/6	15	C	M	Loamy Sand	

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)
- X Sandy Redox (S5)
- ____ Stripped Matrix (S6)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/6/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200706_WL03_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Linear Slope (%) 0 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.110392 Long: -78.255206 Datum: NAD83

Soil Map Unit Name: RoA NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL03
Wetland Hydrology Present?	Yes X No ____		

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

drainage ditch situated between two agricultural fields

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Surface Water Present?	Yes ____	No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Water Table Present?	Yes ____	No X	Depth (inches) ____	
Saturation Present?	Yes ____	No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200706_WL03_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	40	X	FACW
Populus deltoides	40	X	FAC
	80	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Carex scoparia	3		FACW
	3	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	15	X	FAC
	15	= Total Cover	

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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	43	x 2	86	
FAC species	55	x 3	165	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	98	(A)	251	(B)

Prevalence Index = B/A = 2.56

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ____

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

SOIL Sampling Point: **1_20200706_WL03_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-4	10YR 3/2	100					Loam	
4-12	10YR 6/2	85	10YR 5/6	15	C	M	Loamy Sand	

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)
- X Sandy Redox (S5)
- ____ Stripped Matrix (S6)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/6/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200706_WL03_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): Convex Slope (%) 1 - 2

Subregion (LRR or MLRA): LRR L Lat: 43.110431 Long: -78.255254 Datum: NAD83

Soil Map Unit Name: _____ NWI Classification: UPL

Are climatic / hyrologic 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 X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	if yes, optional Wetland Site ID: _____
Wetland Hydrology Present?	Yes ____	No X	

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

Edge of agricultural field

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____	No X	Depth (inches) ____
Water Table Present?	Yes ____	No X	Depth (inches) ____
Saturation Present?	Yes ____	No X	Depth (inches) ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200706_WL03_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Apocynum cannabinum	30	X	FAC
Fraxinus pennsylvanica	15	X	FACW
	45	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Solidago canadensis	40	X	FACU
Clematis virginiana	10		FAC
Asclepias syriaca	5		UPL
Erigeron annuus	5		FACU
Geum canadense	3		FAC
Phalaris arundinacea	3		FACW
	66	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	18	x 2	36	
FAC species	43	x 3	129	
FACU species	45	x 4	180	
UPL species	5	x 5	25	
Column Totals	111	(A)	370	(B)

Prevalence Index = B/A = 3.33

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- ___ 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_20200706_WL03_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 3/2	100					Sandy Loam	
12-18	10YR 3/1	90	10YR 4/6	10	C	M	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/7/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200707_WL4_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Dip Local relief (concave, convex, none): Concave Slope (%) 1 - 3

Subregion (LRR or MLRA): LRR L Lat: 43.106864 Long: -78.256132 Datum: NAD83

Soil Map Unit Name: RoA NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL04
Wetland Hydrology Present?	Yes X 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)		Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)
	Saturation (A3)		Marl Deposits (B15)		Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)	X	Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)	X	Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)	X	Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
				X	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X Depth (inches) ____	Wetland Hydrology Present?	Yes X No ____
Water Table Present?	Yes ____ No X Depth (inches) ____		
Saturation Present?	Yes ____ No X Depth (inches) ____		

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200707_WL4_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phalaris arundinacea	50	X	FACW
Poa compressa	15		FACU
Cyperus strigosus	15		FACW
Unknown species	15		UNK
	95	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

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

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

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

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	65	x 2	130	
FAC species	0	x 3	0	
FACU species	15	x 4	60	
UPL species	0	x 5	0	
Column Totals	80	(A)	190	(B)

Prevalence Index = B/A = 2.38

Hydrophytic Vegetation Indicators:

X 1- Rapid Test For Hydrophytic Vegetation

X 2- Dominance Test is > 50%

X 3- Prevalence Index is =< 3.0

4- Morphological Adaptations

5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)
unknown grass species (recently mowed)

SOIL Sampling Point: **1_20200707_WL4_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 4/1	90	10YR 4/6	10	C	M	Loam	
12-16	10YR 3/1	95	10YR 4/6	5	C	M	Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennesee Sampling Date: 7/24/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200724_WL4_W2

Investigator(s): Andrew Sorci Section, Township, Range:

Landform (hillslope, terrace,etc.): Dip Local relief (concave, convex, none): None Slope (%) 0 - 2

Subregion (LRR or MLRA): LRR L Lat: 43.106799 Long: -78.256826 Datum: NAD83

Soil Map Unit Name: RoA NWI Classification: PSS

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL04
Wetland Hydrology Present?	Yes X 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)		Water-Stained Leaves (B9)		Drainage Patterns (B10)
	High Water Table (A2)		Aquatic Fauna (B13)		Moss Trim Lines (B16)
	Saturation (A3)		Marl Deposits (B15)		Dry-Season Water Table (C2)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)	X	Saturation Visible in Aerial Imagery (C9)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Stunted or Stressed Plants (D1)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Geomorphic Position (D2)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Shallow Aquitard (D3)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Microtopographic Relief (D4)
	Sparsley Vegetated Concave Surface (B8)			X	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200724_WL4_W2**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	75	X	FACW
Rosa multiflora	5		FACU
	80 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phalaris arundinacea	80	X	FACW
Solidago gigantea	20		FACW
Lysimachia nummularia	15		FACW
Symphyotrichum lanceolatum	10		FACW
	125 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	200	x 2	400	
FAC species	0	x 3	0	
FACU species	5	x 4	20	
UPL species	0	x 5	0	
Column Totals	205	(A)	420	(B)

Prevalence Index = B/A = 2.05

Hydrophytic Vegetation Indicators:

X 1- Rapid Test For Hydrophytic Vegetation

X 2- Dominance Test is > 50%

X 3- Prevalence Index is =< 3.0

4- Morphological Adaptations

5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

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

SOIL Sampling Point: **1_20200724_WL4_W2**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	7.5YR 2.5/1	100					Sandy Clay Loam	
12-20	2.5Y 5/1	85	10YR 4/6	15	C	M	Sandy Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennesee Sampling Date: 7/24/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200724_WL4_W3

Investigator(s): Andrew Sorci Section, Township, Range:

Landform (hillslope, terrace,etc.): Dip Local relief (concave, convex, none): Concave Slope (%) 1 - 3

Subregion (LRR or MLRA): LRR L Lat: 43.107260 Long: -78.257019 Datum: NAD83

Soil Map Unit Name: RoA NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL04
Wetland Hydrology Present?	Yes X 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)		Water-Stained Leaves (B9)		Drainage Patterns (B10)
	High Water Table (A2)		Aquatic Fauna (B13)	X	Moss Trim Lines (B16)
	Saturation (A3)		Marl Deposits (B15)		Dry-Season Water Table (C2)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Saturation Visible in Aerial Imagery (C9)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Stunted or Stressed Plants (D1)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)	X	Geomorphic Position (D2)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Shallow Aquitard (D3)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Microtopographic Relief (D4)
	Sparsley Vegetated Concave Surface (B8)			X	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200724_WL4_W3**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	75	X	FACW
	75	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Glyceria striata	15	X	OBL
Lysimachia nummularia	15	X	FACW
	30	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	5	X	FAC
	5	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

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

Prevalence Index Worksheet:

OBL species	15	x 1	15	
FACW species	90	x 2	180	
FAC species	5	x 3	15	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	110	(A)	210	(B)

Prevalence Index = B/A = 1.91

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ____

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

SOIL Sampling Point: **1_20200724_WL4_W3**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-4	7.5YR 2.5/1	100					Sandy Loam	
4-14	10YR 3/1	90	5YR 3/4	10	C	M	Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/7/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200707_WL4_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): None Slope (%) 2 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.106803 Long: -78.255878 Datum: NAD83

Soil Map Unit Name: _____ NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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

hay field, recently mowed.

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200707_WL4_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Poa pratensis	20	X	FACU
Lolium perenne	20	X	FACU
Unknown species	20	X	UNK
Trifolium repens	15		FACU
Plantago major	10		FACU
Trifolium pratense	5		FACU
Solidago canadensis	5		FACU
	95	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	0	x 3	0	
FACU species	75	x 4	300	
UPL species	0	x 5	0	
Column Totals	75	(A)	300	(B)

Prevalence Index = B/A = 4

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
unknown grass (mowed recently)

SOIL Sampling Point: **1_20200707_WL4_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-6	10YR 3/2	100					Clay Loam	
6-13	10YR 3/1	99	10YR 3/4	1	C	M	Clay Loam	
13-20	10YR 5/1	80	10YR 5/6	20	C	M	Clay	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/7/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200707_WL05_W1

Investigator(s): Andrew Sorci Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Linear Slope (%) 0 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.102705 Long: -78.255315 Datum: NAD83

Soil Map Unit Name: La NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL05_W1
Wetland Hydrology Present?	Yes X No ____		

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

Drainage ditch

HYDROLOGY

Wetland Hydrology Indicators:

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

____	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)
____	Sparsley Vegetated Concave Surface (B8)		

Secondary Indicators (minimum of two required)

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

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200707_WL05_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Cornus racemosa	30	X	FAC
Sambucus racemosa	5		FACU
	35 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Typha angustifolia	30	X	OBL
Rumex crispus	15	X	FAC
Asclepias incarnata	10		OBL
Cicuta maculata	5		OBL
Symphyotrichum urophyllum	5		UPL
	65 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	45	x 1	45	
FACW species	0	x 2	0	
FAC species	45	x 3	135	
FACU species	5	x 4	20	
UPL species	5	x 5	25	
Column Totals	100	(A)	225	(B)

Prevalence Index = B/A = 2.25

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_20200707_WL05_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 4/1	70	10YR 4/6	30	C	M	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/7/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200709_WL05_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Floodplain Local relief (concave, convex, none): None Slope (%) 0 - 3

Subregion (LRR or MLRA): LRR L Lat: 43.102842 Long: -78.255215 Datum: NAD83

Soil Map Unit Name: La NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	____
Wetland Hydrology Present?	Yes ____ No X		

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

Edge of agricultural field, disturbed

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200709_WL05_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Artemisia vulgaris	30	X	UPL
Zea mays	20	X	UPL
Rumex crispus	10		FAC
Daucus carota	5		UPL
	65	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

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

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

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

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	10	x 3	30	
FACU species	0	x 4	0	
UPL species	55	x 5	275	
Column Totals	65	(A)	305	(B)

Prevalence Index = B/A = 4.69

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **1_20200709_WL05_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-18	10YR 3/2	100					Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/7/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200707_WL6_W1

Investigator(s): Andrew Sorci Section, Township, Range:

Landform (hillslope, terrace,etc.): Dip Local relief (concave, convex, none): Linear Slope (%) 2 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.108082 Long: -78.242825 Datum: NAD83

Soil Map Unit Name: Ma NWI Classification: PEM

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

Are Vegetation X , 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 X	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL06
Wetland Hydrology Present?	Yes X No ____		

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

depressional wetland in active soy bean field; vegetation problemmatic

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: 1_20200707_WL6_W1

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Glycine max	15	X	UPL
	15 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 0% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	0	x 3	0	
FACU species	0	x 4	0	
UPL species	15	x 5	75	
Column Totals	15	(A)	75	(B)

Prevalence Index = B/A = 5

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: 1_20200707_WL6_W1

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-5	10YR 3/2	100					Loam	
5-9	10YR 3/1	95	10YR 4/6	5	C	M	Loam	
9-16	10YR 4/1	90	10YR 4/1	10	C	M	Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/7/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200707_WL6_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): Convex Slope (%) 2 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.108083 Long: -78.242820 Datum: NAD83

Soil Map Unit Name: Ma NWI Classification: UPL

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

Are Vegetation X , 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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

active soy bean field

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200707_WL6_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Glyciene max	15	X	UPL
	15 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 0% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	0	x 3	0	
FACU species	0	x 4	0	
UPL species	15	x 5	75	
Column Totals	15	(A)	75	(B)

Prevalence Index = B/A = 5

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **1_20200707_WL6_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-6	10YR 3/2	100					Loam	
6-14	10YR 3/1	100					Clay Loam	
14-20	10YR 4/1	90	10YR 4/4	10	C	M	Clay	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/8/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200708_WL07_W1

Investigator(s): Andrew Sorci Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Linear Slope (%) 0 - 10

Subregion (LRR or MLRA): LRR L Lat: 43.099916 Long: -78.261152 Datum: NAD83

Soil Map Unit Name: OdA NWI Classification: PSS

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL07
Wetland Hydrology Present?	Yes X No ____		

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

Riparian area to stream

HYDROLOGY

Wetland Hydrology Indicators:

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

X	Surface Water (A1)		Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
X	High Water Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)
X	Saturation (A3)		Marl Deposits (B15)		Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)	X	Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)	X	Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
				X	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes X No ____	Depth (inches)	1
Water Table Present?	Yes X No ____	Depth (inches)	0
Saturation Present?	Yes X No ____	Depth (inches)	0

Wetland Hydrology Present? Yes X No ____

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200708_WL07_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer negundo	20	X	FAC
	20	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Cornus amomum	40	X	FACW
Cornus racemosa	25	X	FAC
	65	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Typha angustifolia	40	X	OBL
Symphyotrichum lanceolatum	40	X	FACW
	80	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= 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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	40	x 1	40	
FACW species	80	x 2	160	
FAC species	45	x 3	135	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	165	(A)	335	(B)

Prevalence Index = B/A = 2.03

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_20200708_WL07_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-5	10YR 5/1	70	10YR 4/6	30	C	M	Silt Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/7/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200708_WL07_W2

Investigator(s): Andrew Sorci Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Linear Slope (%) 0 - 3

Subregion (LRR or MLRA): LRR L Lat: 43.098942 Long: -78.266750 Datum: NAD83

Soil Map Unit Name: OdA NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL07
Wetland Hydrology Present?	Yes X 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)	____	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)
____	Sparsley Vegetated Concave Surface (B8)		

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)
X	Saturation Visible in Aerial Imagery (C9)
____	Stunted or Stressed Plants (D1)
X	Geomorphic Position (D2)
____	Shallow Aquitard (D3)
____	Microtopographic Relief (D4)
X	FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200708_WL07_W2**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Salix interior	15	X	FACW
	15 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Poa palustris	90	X	FACW
Agrostis gigantea	10		FACW
Alisma plantago-aquatica	5		OBL
Typha angustifolia	3		OBL
Asclepias incarnata	3		OBL
	111 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	11	x 1	11	
FACW species	115	x 2	230	
FAC species	0	x 3	0	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	126	(A)	241	(B)

Prevalence Index = B/A = 1.91

Hydrophytic Vegetation Indicators:

X 1- Rapid Test For Hydrophytic Vegetation

X 2- Dominance Test is > 50%

X 3- Prevalence Index is =< 3.0

4- Morphological Adaptations

5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

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

SOIL Sampling Point: **1_20200708_WL07_W2**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-2	10YR 3/2	100					Loam	
2-12	10YR 5/1	65	7.5YR 5/6	35	C	M	Clay	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/7/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200708_WL07_U1

Investigator(s): Andy Smith Section, Township, Range:

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): Convex Slope (%) 5 - 15

Subregion (LRR or MLRA): LRR L Lat: 43.099862 Long: -78.261138 Datum: NAD83

Soil Map Unit Name: OdA NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200708_WL07_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer negundo	60	X	FAC
	60	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Rubus idaeus	20	X	FACU
Cornus racemosa	15	X	FAC
Lonicera morrowii	15	X	FACU
	50	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Artemisia vulgaris	35	X	UPL
Symphyotrichum lanceolatum	15	X	FACW
Solidago canadensis	15	X	FACU
	65	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

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

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 42.9% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	15	x 2	30	
FAC species	75	x 3	225	
FACU species	50	x 4	200	
UPL species	35	x 5	175	
Column Totals	175	(A)	630	(B)

Prevalence Index = B/A = 3.6

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **1_20200708_WL07_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 3/2	100					Silt Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 12

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/8/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200708_WL08_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 2

Subregion (LRR or MLRA): LRR L Lat: 43.106040 Long: -78.270946 Datum: NAD83

Soil Map Unit Name: PhB NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL08
Wetland Hydrology Present?	Yes X No ____		

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

Edge of agricultural field, no crops growing in wetland area

HYDROLOGY

Wetland Hydrology Indicators:

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

____	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)
____	Sparsley Vegetated Concave Surface (B8)		

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)
X	Saturation Visible in Aerial Imagery (C9)
____	Stunted or Stressed Plants (D1)
X	Geomorphic Position (D2)
____	Shallow Aquitard (D3)
____	Microtopographic Relief (D4)
X	FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200708_WL08_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phalaris arundinacea	25	X	FACW
Eleocharis obtusa	25	X	OBL
	50 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	25	x 1	25	
FACW species	25	x 2	50	
FAC species	0	x 3	0	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	50	(A)	75	(B)

Prevalence Index = B/A = 1.5

Hydrophytic Vegetation Indicators:

X 1- Rapid Test For Hydrophytic Vegetation

X 2- Dominance Test is > 50%

X 3- Prevalence Index is =< 3.0

4- Morphological Adaptations

5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

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

SOIL Sampling Point: **1_20200708_WL08_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-3	10YR 4/2	90	10YR 5/8	10	C	M	Clay Loam	
3-13	10YR 5/1	80	10YR 4/6	20	C	M	Clay Loam	
13-18	10YR 6/1	70	10YR 5/8	30	C	M	Clay	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/8/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_0200708_WL08_U1

Investigator(s): Andy Smith Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): Convex Slope (%) 2 - 4

Subregion (LRR or MLRA): LRR L Lat: 43.106006 Long: -78.270827 Datum: NAD83

Soil Map Unit Name: PhB NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_0200708_WL08_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Carya tomentosa	30	X	UPL
	30	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Cornus racemosa	25	X	FAC
Rhus aromatica	15	X	UPL
	40	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Cirsium arvense	35	X	FACU
Toxicodendron radicans	30	X	FAC
Leucanthemum vulgare	5		UPL
Dipsacus fullonum	5		FACU
	75	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= 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: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	55	x 3	165	
FACU species	40	x 4	160	
UPL species	50	x 5	250	
Column Totals	145	(A)	575	(B)

Prevalence Index = B/A = 3.97

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **1_0200708_WL08_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-10	10YR 6/3	80	10YR 5/4	20	C	M	Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 10

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/9/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200709_WL09_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Dip Local relief (concave, convex, none): Concave Slope (%) 0 - 2

Subregion (LRR or MLRA): LRR L Lat: 43.107164 Long: -78.260358 Datum: NAD83

Soil Map Unit Name: Ma NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL09
Wetland Hydrology Present?	Yes X 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)		Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)
	Saturation (A3)		Marl Deposits (B15)		Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)	X	Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)	X	Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
				X	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200709_WL09_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Salix interior	10	X	FACW
	10 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Poa palustris	30	X	FACW
Agrostis gigantea	30	X	FACW
Bidens frondosa	20	X	FACW
Alisma plantago-aquatica	15		OBL
Phalaris arundinacea	10		FACW
Eleocharis obtusa	8		OBL
Bromus inermis	5		UPL
Arctium minus	5		FACU
Plantago major	3		FACU
	126 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

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

Prevalence Index Worksheet:

OBL species	23	x 1	23	
FACW species	100	x 2	200	
FAC species	0	x 3	0	
FACU species	8	x 4	32	
UPL species	5	x 5	25	
Column Totals	136	(A)	280	(B)

Prevalence Index = B/A = 2.06

Hydrophytic Vegetation Indicators:

X 1- Rapid Test For Hydrophytic Vegetation

X 2- Dominance Test is > 50%

X 3- Prevalence Index is =< 3.0

4- Morphological Adaptations

5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

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

SOIL Sampling Point: **1_20200709_WL09_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-8	10YR 2/1	95	10YR 4/6	5	C	PL	Sandy Loam	
8-15	10YR 5/1	85	10YR 5/8	15	C	M	Clay	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/9/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200709_WL09_U1

Investigator(s): Andy Smith Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): Convex Slope (%) 2 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.107061 Long: -78.260631 Datum: NAD83

Soil Map Unit Name: Ma NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200709_WL09_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Zea mays	90	X	UPL
Cyperus strigosus	5		FACW
	95 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 0% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	5	x 2	10	
FAC species	0	x 3	0	
FACU species	0	x 4	0	
UPL species	90	x 5	450	
Column Totals	95	(A)	460	(B)

Prevalence Index = B/A = 4.84

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **1_20200709_WL09_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 3/1	100					Silty Clay Loam	
12-18	10YR 5/1	90	10YR 5/8	10	C	M	Clay	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/9/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200709_WL10_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 2

Subregion (LRR or MLRA): LRR L Lat: 43.101376 Long: -78.256767 Datum: NAD83

Soil Map Unit Name: La NWI Classification: PEM

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

Are Vegetation X , 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL10
Wetland Hydrology Present?	Yes X No ____		

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

edge of agricultural field

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)
- ____ Sparsley 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)

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

Surface Water Present?	Yes ____ No X Depth (inches) ____	Wetland Hydrology Present?	Yes X No ____
Water Table Present?	Yes ____ No X Depth (inches) ____		
Saturation Present?	Yes ____ No X Depth (inches) ____		

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200709_WL10_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Cyperus strigosus	60	X	FACW
Abutilon theophrasti	15	X	FACU
	75 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	60	x 2	120	
FAC species	0	x 3	0	
FACU species	15	x 4	60	
UPL species	0	x 5	0	
Column Totals	75	(A)	180	(B)

Prevalence Index = B/A = 2.4

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ____

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

SOIL Sampling Point: **1_20200709_WL10_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-3	10YR 3/2	100					Clay Loam	
3-8	10YR 3/1	95	10YR 4/6	5	C	M	Clay Loam	
8-16	7.5YR 4/4	40	7.5YR 5/8	60	C	M	Clay	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennessee Sampling Date: 7/9/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200709_WL10_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): Convex Slope (%) 0 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.101396 Long: -78.257187 Datum: NAD83

Soil Map Unit Name: La NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200709_WL10_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phalaris arundinacea	25	X	FACW
Trifolium repens	20	X	FACU
Ambrosia artemisiifolia	20	X	FACU
Plantago major	8		FACU
Symphyotrichum lanceolatum	6		FACW
Euthamia graminifolia	5		FAC
Solidago canadensis	5		FACU
Juncus tenuis	5		FAC
Rumex crispus	3		FAC
Dipsacus fullonum	3		FACU
Persicaria maculosa	2		FAC
	102	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	31	x 2	62	
FAC species	15	x 3	45	
FACU species	56	x 4	224	
UPL species	0	x 5	0	
Column Totals	102	(A)	331	(B)

Prevalence Index = B/A = 3.25

Hydrophytic Vegetation Indicators:

- 1- Rapid Test For Hydrophytic Vegetation
- 2- Dominance Test is > 50%
- 3- Prevalence Index is =< 3.0
- 4- Morphological Adaptations
- 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **1_20200709_WL10_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-16	10YR 3/1	100					Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennessee Sampling Date: 7/9/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200709_WL11_W1

Investigator(s): Andrew Sorci Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Linear Slope (%) 0 - 10

Subregion (LRR or MLRA): LRR L Lat: 43.089847 Long: -78.275840 Datum: NAD83

Soil Map Unit Name: OvA NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL11
Wetland Hydrology Present?	Yes X No ____		

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

Agricultural field drainage

HYDROLOGY

Wetland Hydrology Indicators:

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

	Surface Water (A1)		Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Fauna (B13)	X	Drainage Patterns (B10)
	Saturation (A3)		Marl Deposits (B15)		Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)	X	Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)	X	Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)	X	Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
				X	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X Depth (inches) ____	Wetland Hydrology Present?	Yes X No ____
Water Table Present?	Yes ____ No X Depth (inches) ____		
Saturation Present?	Yes ____ No X Depth (inches) ____		

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200709_WL11_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Leersia oryzoides	15	X	OBL
Typha angustifolia	10	X	OBL
Phalaris arundinacea	5		FACW
Bidens frondosa	3		FACW
	33	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	25	x 1	25	
FACW species	8	x 2	16	
FAC species	0	x 3	0	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	33	(A)	41	(B)

Prevalence Index = B/A = 1.24

Hydrophytic Vegetation Indicators:

X 1- Rapid Test For Hydrophytic Vegetation

X 2- Dominance Test is > 50%

X 3- Prevalence Index is =< 3.0

4- Morphological Adaptations

5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

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

SOIL Sampling Point: **1_20200709_WL11_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-5	5YR 5/2	90	5YR 5/8	10	C	PL	Clay	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennessee Sampling Date: 7/9/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200709_WL11_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Shoulder Local relief (concave, convex, none): Convex Slope (%) 0 - 45

Subregion (LRR or MLRA): LRR L Lat: 43.089877 Long: -78.275804 Datum: NAD83

Soil Map Unit Name: OvA NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200709_WL11_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Cornus racemosa	5	X	FAC
	5 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Solidago canadensis	35	X	FACU
Daucus carota	10		UPL
Agrostis gigantea	5		FACW
Ambrosia artemisiifolia	5		FACU
Juncus tenuis	5		FAC
Packera anonyma	4		UPL
Geum canadense	3		FAC
	67 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	5	x 2	10	
FAC species	13	x 3	39	
FACU species	40	x 4	160	
UPL species	14	x 5	70	
Column Totals	72	(A)	279	(B)

Prevalence Index = B/A = 3.88

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **1_20200709_WL11_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-8	7.5YR 3/2	100					Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennessee Sampling Date: 7/9/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200709_WL12_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Linear Slope (%) 0 - 10

Subregion (LRR or MLRA): LRR L Lat: 43.091616 Long: -78.276189 Datum: NAD83

Soil Map Unit Name: La NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL12
Wetland Hydrology Present?	Yes X 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)	____	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)
____	Sparsley Vegetated Concave Surface (B8)		

Secondary Indicators (minimum of two required)

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

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200709_WL12_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Leersia oryzoides	25	X	OBL
Epilobium hirsutum	5		FACW
Typha angustifolia	5		OBL
Bidens frondosa	5		FACW
Alisma subcordatum	1		OBL
	41	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

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

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

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

Prevalence Index Worksheet:

OBL species	31	x 1	31	
FACW species	10	x 2	20	
FAC species	0	x 3	0	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	41	(A)	51	(B)

Prevalence Index = B/A = 1.24

Hydrophytic Vegetation Indicators:

- X 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- 4- Morphological Adaptations
- 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

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

SOIL Sampling Point: **1_20200709_WL12_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-3	7.5YR 4/2	85	7.5YR 5/6	15	C	M	Clay Loam	
3-7	5YR 5/2	80	5YR 5/8	20	C	M	Clay	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: Gravel Fill

Depth (inches): 7

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennessee Sampling Date: 7/9/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200709_WL12_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Shoulder Local relief (concave, convex, none): Convex Slope (%) 0 - 45

Subregion (LRR or MLRA): LRR L Lat: 43.091599 Long: -78.276210 Datum: NAD83

Soil Map Unit Name: La NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200709_WL12_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Agrostis gigantea	25	X	FACW
Solidago canadensis	25	X	FACU
Centaurea nigra	15		UPL
Daucus carota	10		UPL
Geum canadense	5		FAC
	80	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	25	x 2	50	
FAC species	5	x 3	15	
FACU species	25	x 4	100	
UPL species	25	x 5	125	
Column Totals	80	(A)	290	(B)

Prevalence Index = B/A = 3.62

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **1_20200709_WL12_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-8	7.5YR 3/2	100					Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: Gravel Fill

Depth (inches): 8

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/9/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200709_WL13_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Linear Slope (%) 0 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.091516 Long: -78.274663 Datum: NAD83

Soil Map Unit Name: GnA NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL13
Wetland Hydrology Present?	Yes X 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)		Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)
X	Saturation (A3)		Marl Deposits (B15)		Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)	X	Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
				X	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes X No ____	Depth (inches) 0	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200709_WL13_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Ludwigia palustris	25	X	OBL
Bidens frondosa	5		FACW
	30 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

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

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

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

Prevalence Index Worksheet:

OBL species	25	x 1	25	
FACW species	5	x 2	10	
FAC species	0	x 3	0	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	30	(A)	35	(B)

Prevalence Index = B/A = 1.17

Hydrophytic Vegetation Indicators:

X 1- Rapid Test For Hydrophytic Vegetation

X 2- Dominance Test is > 50%

X 3- Prevalence Index is =< 3.0

4- Morphological Adaptations

5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

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

SOIL Sampling Point: **1_20200709_WL13_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-8	10YR 5/1	60	10YR 5/8	40	C	M	Silty Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/9/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200710_WL13_W2

Investigator(s): Andrew Sorci Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Linear Slope (%) 2 - 4

Subregion (LRR or MLRA): LRR L Lat: 43.090548 Long: -78.273061 Datum: NAD83

Soil Map Unit Name: GnA NWI Classification: PEM

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

Are Vegetation X , 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 X	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL13
Wetland Hydrology Present?	Yes X No ____		

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

corn field

HYDROLOGY

Wetland Hydrology Indicators:

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

	Surface Water (A1)		Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
X	High Water Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)
X	Saturation (A3)		Marl Deposits (B15)		Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)	X	Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
					FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes X No ____	Depth (inches) 5	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes X No ____	Depth (inches) 3	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200710_WL13_W2**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Daucus carota	15	X	UPL
Cyperus strigosus	2		FACW
	17 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 0% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	2	x 2	4	
FAC species	0	x 3	0	
FACU species	0	x 4	0	
UPL species	15	x 5	75	
Column Totals	17	(A)	79	(B)

Prevalence Index = B/A = 4.65

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **1_20200710_WL13_W2**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-6	10YR 5/2	80	10YR 5/6	20	C	M	Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/9/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200709_WL13_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Terrace Local relief (concave, convex, none): None Slope (%) 2 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.091540 Long: -78.274772 Datum: NAD83

Soil Map Unit Name: GnA NWI Classification: UPL

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

Are Vegetation X , Soil X , 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X		
Wetland Hydrology Present?	Yes ____ No X	if yes, optional Wetland Site ID:	____

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

Edge of field, recent ground disturbance

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches)	____
Water Table Present?	Yes ____ No X	Depth (inches)	____
Saturation Present?	Yes ____ No X	Depth (inches)	0

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200709_WL13_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Solidago canadensis	40	X	FACU
Agrostis gigantea	15		FACW
Lotus corniculatus	10		FACU
Equisetum arvense	5		FAC
Artemisia vulgaris	5		UPL
Trifolium repens	5		FACU
	80	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 0% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	15	x 2	30	
FAC species	5	x 3	15	
FACU species	55	x 4	220	
UPL species	5	x 5	25	
Column Totals	80	(A)	290	(B)

Prevalence Index = B/A = 3.62

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **1_20200709_WL13_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-7	10YR 4/1	85	10YR 5/8	15	C	M	Clay Loam	
7-12	10YR 5/1	60	10YR 5/8	40	C	M	Clay	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennesee Sampling Date: 10/8/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200710_WL15_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Dip Local relief (concave, convex, none): None Slope (%) 0 - 2

Subregion (LRR or MLRA): LRR L Lat: 43.090927 Long: -78.271248 Datum: NAD83

Soil Map Unit Name: _____ NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL15
Wetland Hydrology Present?	Yes X No ____		

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

riparian to pond

HYDROLOGY

Wetland Hydrology Indicators:

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

____	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)
____	Sparsley Vegetated Concave Surface (B8)		

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)
X	Saturation Visible in Aerial Imagery (C9)
____	Stunted or Stressed Plants (D1)
X	Geomorphic Position (D2)
____	Shallow Aquitard (D3)
____	Microtopographic Relief (D4)
X	FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200710_WL15_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	60	X	FACW
	60	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phalaris arundinacea	40	X	FACW
Bidens frondosa	10	X	FACW
Impatiens capensis	10	X	FACW
Alisma subcordatum	5		OBL
Ranunculus hispidus	5		FAC
Agrostis gigantea	5		FACW
Euthamia graminifolia	5		FAC
Asclepias incarnata	3		OBL
	83	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

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

Prevalence Index Worksheet:

OBL species	8	x 1	8	
FACW species	125	x 2	250	
FAC species	10	x 3	30	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	143	(A)	288	(B)

Prevalence Index = B/A = 2.01

Hydrophytic Vegetation Indicators:

- X 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- 4- Morphological Adaptations
- 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

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

SOIL Sampling Point: **1_20200710_WL15_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-3	10YR 2/2	100					Sandy Loam	
3-12	10YR 4/1	90	10YR 5/6	10	C	M	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/14/2020

Applicant/Owner: Hecate State: NY Sampling Point: Upland-WL15

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.095836 Long: -78.185447 Datum: NAD83

Soil Map Unit Name: OdA NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Upland-WL15**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Zea mays	60	X	UPL
Abutilon theophrasti	25	X	FACU
Alliaria petiolata	20		FACU
Daucus carota	10		UPL
Asclepias syriaca	10		UPL
Leucanthemum vulgare	10		UPL
Rumex crispus	5		FAC
	140	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

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

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

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

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	5	x 3	15	
FACU species	45	x 4	180	
UPL species	90	x 5	450	
Column Totals	140	(A)	645	(B)

Prevalence Index = B/A = 4.61

Hydrophytic Vegetation Indicators:

- 1- Rapid Test For Hydrophytic Vegetation
- 2- Dominance Test is > 50%
- 3- Prevalence Index is =< 3.0
- 4- Morphological Adaptations
- 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **Upland-WL15**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-10	10YR 4/2	95	7.5YR 5/8	5	C	PL	Silty Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 10

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennesee Sampling Date: 7/10/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200710_WL16_W1

Investigator(s): Andrew Sorci Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 2

Subregion (LRR or MLRA): LRR L Lat: 43.091146 Long: -78.270969 Datum: NAD83

Soil Map Unit Name: NWI Classification: PEM

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

Are Vegetation X, 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 X	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL16
Wetland Hydrology Present?	Yes X No ____		

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

edge of corn field

HYDROLOGY

Wetland Hydrology Indicators:

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

	Surface Water (A1)		Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
X	High Water Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)
X	Saturation (A3)		Marl Deposits (B15)		Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)	X	Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)	X	Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)	X	Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
					FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes X No ____	Depth (inches) 6	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes X No ____	Depth (inches) 0	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200710_WL16_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Zea mays	15	X	UPL
	15 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 0% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	0	x 3	0	
FACU species	0	x 4	0	
UPL species	15	x 5	75	
Column Totals	15	(A)	75	(B)

Prevalence Index = B/A = 5

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **1_20200710_WL16_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-6	10YR 5/2	80	10YR 5/6	20	C	M	Clay	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/14/2020

Applicant/Owner: Hecate State: NY Sampling Point: Upland-WL16

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.103463 Long: -78.164127 Datum: NAD83

Soil Map Unit Name: Ld NWI Classification: UPL

Are climatic / hyrologic 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 X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	if yes, optional Wetland Site ID: _____
Wetland Hydrology Present?	Yes ____	No X	

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____	No X	Depth (inches) ____
Water Table Present?	Yes ____	No X	Depth (inches) ____
Saturation Present?	Yes ____	No X	Depth (inches) ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Upland-WL16**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer rubrum	40	X	FAC
Fagus grandifolia	30	X	FACU
	70	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Alliaria petiolata	40	X	FACU
Menispermum canadense	30	X	FAC
Phalaris arundinacea	10		FACW
Oxalis corniculata	5		FACU
	85	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	15	X	FAC
	15	= Total Cover	

Dominance Test Worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 60% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	10	x 2	20	
FAC species	85	x 3	255	
FACU species	75	x 4	300	
UPL species	0	x 5	0	
Column Totals	170	(A)	575	(B)

Prevalence Index = B/A = 3.38

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- ___ 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **Upland-WL16**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-10	10YR 4/3	100					Silt Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 10

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennesee Sampling Date: 7/10/2020
Applicant/Owner: Hecate State: NY Sampling Point: 1_20200710_WL17_W1
Investigator(s): Andrew Sorci Section, Township, Range:
Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Linear Slope (%) 0 - 15
Subregion (LRR or MLRA): LRR L Lat: 43.091589 Long: -78.264761 Datum: NAD83
Soil Map Unit Name: Wy NWI Classification: PEM
Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL17
Wetland Hydrology Present?	Yes X No ____		

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

HYDROLOGY

Wetland Hydrology Indicators:

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

X	Surface Water (A1)		Water-Stained Leaves (B9)	X	Drainage Patterns (B10)
	High Water Table (A2)		Aquatic Fauna (B13)		Moss Trim Lines (B16)
	Saturation (A3)		Marl Deposits (B15)		Dry-Season Water Table (C2)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Saturation Visible in Aerial Imagery (C9)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Stunted or Stressed Plants (D1)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)	X	Geomorphic Position (D2)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Shallow Aquitard (D3)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Microtopographic Relief (D4)
	Sparsley Vegetated Concave Surface (B8)			X	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

	Surface Soil Cracks (B6)

Surface Water Present?	Yes X No ____	Depth (inches)	3
Water Table Present?	Yes ____ No X	Depth (inches)	____
Saturation Present?	Yes ____ No X	Depth (inches)	____

Wetland Hydrology Present? Yes X No ____

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200710_WL17_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phragmites australis	20	X	FACW
Potamogeton crispus	15	X	OBL
Nasturtium officinale	15	X	OBL
Bidens frondosa	10		FACW
Typha angustifolia	10		OBL
	70	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	40	x 1	40	
FACW species	30	x 2	60	
FAC species	0	x 3	0	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	70	(A)	100	(B)

Prevalence Index = B/A = 1.43

Hydrophytic Vegetation Indicators:

- X 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- 4- Morphological Adaptations
- 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

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

SOIL Sampling Point: **1_20200710_WL17_W1**

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- X Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

Assumed hydric due to primary hydrology indicators and doinant obligate and FACW veg.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennessee Sampling Date: 7/10/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200710_WL17_W2

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Floodplain Local relief (concave, convex, none): None Slope (%) 0 - 3

Subregion (LRR or MLRA): LRR L Lat: 43.091594 Long: -78.264762 Datum: NAD83

Soil Map Unit Name: Wy NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL17
Wetland Hydrology Present?	Yes X No ____		

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

Disturbed area

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200710_WL17_W2**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer saccharinum	10	X	FACW
	10	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Euthamia graminifolia	35	X	FAC
Eupatorium perfoliatum	25	X	FACW
Solidago canadensis	25	X	FACU
Symphyotrichum lanceolatum	10		FACW
Impatiens pallida	10		FACW
Scirpus atrovirens	8		OBL
Juncus effusus	8		OBL
Cirsium arvense	5		FACU
Cirsium vulgare	3		FACU
	129	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	10	X	FAC
	10	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 80% (A/B)

Prevalence Index Worksheet:

OBL species	16	x 1	16	
FACW species	55	x 2	110	
FAC species	45	x 3	135	
FACU species	33	x 4	132	
UPL species	0	x 5	0	
Column Totals	149	(A)	393	(B)

Prevalence Index = B/A = 2.64

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_20200710_WL17_W2**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-6	10YR 3/1	90	10YR 5/6	10	C	M	Clay Loam	
6-12	10YR 5/1	80	10YR 5/8	20	C	M	Clay	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennessee Sampling Date: 7/10/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200710_WL 17_W3

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%) 0 - 2

Subregion (LRR or MLRA): LRR L Lat: 43.091961 Long: -78.267903 Datum: NAD83

Soil Map Unit Name: Wy NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL17
Wetland Hydrology Present?	Yes X 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)		Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)
	Saturation (A3)		Marl Deposits (B15)	X	Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)	X	Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)	X	Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
					FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X Depth (inches) ____	Wetland Hydrology Present?	Yes X No ____
Water Table Present?	Yes ____ No X Depth (inches) ____		
Saturation Present?	Yes ____ No X Depth (inches) ____		

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200710_WL 17_W3**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer saccharinum	60	X	FACW
Fraxinus pennsylvanica	10		FACW
Quercus macrocarpa	10		FACU
	80	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Rubus idaeus	10	X	FACU
	10	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Euthamia graminifolia	40	X	FAC
Symphyotrichum lanceolatum	10		FACW
Alliaria petiolata	10		FACU
Geum canadense	5		FAC
	65	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus inserta	10	X	FACU
Vitis riparia	5	X	FAC
	15	= Total Cover	

Dominance Test Worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 60% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	80	x 2	160	
FAC species	50	x 3	150	
FACU species	40	x 4	160	
UPL species	0	x 5	0	
Column Totals	170	(A)	470	(B)

Prevalence Index = B/A = 2.76

Hydrophytic Vegetation Indicators:

- [ ] 1- Rapid Test For Hydrophytic Vegetation
- [x] 2- Dominance Test is > 50%
- [x] 3- Prevalence Index is =< 3.0
- [ ] 4- Morphological Adaptations
- [ ] 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ____

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

SOIL Sampling Point: **1_20200710_WL 17_W3**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-8	10YR 3/1	98	10YR 4/5	2	C	M	Clay Loam	
8-15	10YR 5/1	90	10YR 5/1	10	C	M	Clay	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennessee Sampling Date: 7/10/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200710_WL17_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Shoulder Local relief (concave, convex, none): Convex Slope (%) 3 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.091684 Long: -78.264863 Datum: NAD83

Soil Map Unit Name: Wy NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200710_WL17_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Rubus idaeus	20	X	FACU
Lonicera tatarica	8	X	FACU
Ulmus americana	5		FACW
	33 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Cirsium arvense	30	X	FACU
Solidago canadensis	30	X	FACU
Arctium minus	15	X	FACU
	75 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	10	X	FAC
	10 = Total Cover		

Dominance Test Worksheet:

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

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 16.7% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	5	x 2	10	
FAC species	10	x 3	30	
FACU species	103	x 4	412	
UPL species	0	x 5	0	
Column Totals	118	(A)	452	(B)

Prevalence Index = B/A = 3.83

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **1_20200710_WL17_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-3	10YR 3/1	100					Sandy Clay Loam	
3-12	10YR 3/2	95	10YR 5/6	5	C	M	Sandy Clay Loam	
12-18	10YR 4/2	90	10YR 5/8	10	C	M	Sandy Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennessee Sampling Date: 7/13/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_2020073_WL18_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 3

Subregion (LRR or MLRA): LRR L Lat: 43.088360 Long: -78.247405 Datum: NAD83

Soil Map Unit Name: RsA NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL18
Wetland Hydrology Present?	Yes X 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)	____	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)
____	Sparsley Vegetated Concave Surface (B8)		

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 in Aerial Imagery (C9)
____	Stunted or Stressed Plants (D1)
X	Geomorphic Position (D2)
____	Shallow Aquitard (D3)
____	Microtopographic Relief (D4)
X	FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_2020073_WL18_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Populus deltoides	15	X	FAC
	15	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phalaris arundinacea	70	X	FACW
Phragmites australis	10		FACW
Agrostis gigantea	5		FACW
Asclepias incarnata	3		OBL
Carex vulpinoidea	3		OBL
	91	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	5	X	FAC
	5	= Total Cover	

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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	6	x 1	6	
FACW species	85	x 2	170	
FAC species	20	x 3	60	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	111	(A)	236	(B)

Prevalence Index = B/A = 2.13

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_2020073_WL18_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-2	10YR 2/1	100					Sandy Loam	
2-9	10YR 3/1	95	10YR 5/6	5	C	M	Sandy Loam	
9-16	10YR 5/2	85	10YR 5/8	15	C	M	Loamy Sand	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennessee Sampling Date: 7/13/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200713_WL18_W2

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 3

Subregion (LRR or MLRA): LRR L Lat: 43.088176 Long: -78.247515 Datum: NAD83

Soil Map Unit Name: RsA NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL18
Wetland Hydrology Present?	Yes X 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)	____	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)
____	Sparsley Vegetated Concave Surface (B8)		

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 in Aerial Imagery (C9)
____	Stunted or Stressed Plants (D1)
X	Geomorphic Position (D2)
____	Shallow Aquitard (D3)
____	Microtopographic Relief (D4)
X	FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200713_WL18_W2**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Populus deltoides	25	X	FAC
Fraxinus pennsylvanica	20	X	FACW
	45	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Cornus amomum	60	X	FACW
Lonicera tatarica	15	X	FACU
	75	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Symphyotrichum lanceolatum	15	X	FACW
Ranunculus acris	5		FAC
Urtica dioica	3		FAC
Viburnum dentatum	3		FAC
	26	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus inserta	5	X	FACU
	5	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	95	x 2	190	
FAC species	36	x 3	108	
FACU species	20	x 4	80	
UPL species	0	x 5	0	
Column Totals	151	(A)	378	(B)

Prevalence Index = B/A = 2.5

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_20200713_WL18_W2**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-3	10YR 2/2	100					Sandy Loam	
3-9	10YR 3/1	95	10YR 5/6	5	C	M	Sandy Loam	
9-16	10YR 5/2	85	10YR 5/8	15	C	M	Loamy Sand	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/15/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200713_WL18_U1

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.100398 Long: -78.157093 Datum: NAD83

Soil Map Unit Name: RsA NWI Classification: UPL

Are climatic / hyrologic 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 X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	if yes, optional Wetland Site ID: _____
Wetland Hydrology Present?	Yes ____	No X	

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____	No X	Depth (inches) ____
Water Table Present?	Yes ____	No X	Depth (inches) ____
Saturation Present?	Yes ____	No X	Depth (inches) ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200713_WL18_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer saccharinum	50	X	FACW
Fraxinus pennsylvanica	20	X	FACW
	70	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lonicera tatarica	20	X	FACU
	20	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Toxicodendron radicans	30	X	FAC
Solidago canadensis	15	X	FACU
Persicaria virginiana	15	X	FAC
Prunella vulgaris	5		FAC
	65	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus quinquefolia	20	X	FACU
	20	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 57.1% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	70	x 2	140	
FAC species	50	x 3	150	
FACU species	55	x 4	220	
UPL species	0	x 5	0	
Column Totals	175	(A)	510	(B)

Prevalence Index = B/A = 2.91

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_20200713_WL18_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-18	10YR 3/6	100					Silty Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennessee Sampling Date: 7/13/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200713_WL19_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Dip Local relief (concave, convex, none): Concave Slope (%) 0 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.087079 Long: -78.251662 Datum: NAD83

Soil Map Unit Name: OvA NWI Classification: PSS

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL19
Wetland Hydrology Present?	Yes X 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)	____	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)
____	Sparsley Vegetated Concave Surface (B8)		

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 in Aerial Imagery (C9)
____	Stunted or Stressed Plants (D1)
X	Geomorphic Position (D2)
____	Shallow Aquitard (D3)
____	Microtopographic Relief (D4)
X	FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200713_WL19_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Cornus racemosa	30	X	FAC
Fraxinus pennsylvanica	25	X	FACW
	55 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Juncus tenuis	20	X	FAC
Carex scoparia	15	X	FACW
Symphyotrichum lanceolatum	10		FACW
Agrostis gigantea	10		FACW
Solidago canadensis	5		FACU
Carex vulpinoidea	5		OBL
Phleum pratense	4		FACU
	69 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

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

Prevalence Index Worksheet:

OBL species	5	x 1	5	
FACW species	60	x 2	120	
FAC species	50	x 3	150	
FACU species	9	x 4	36	
UPL species	0	x 5	0	
Column Totals	124	(A)	311	(B)

Prevalence Index = B/A = 2.51

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_20200713_WL19_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-8	10YR 3/2	98	10YR 5/6	2	C	M	Sandy Loam	
8-15	10YR 4/2	90	10YR 5/8	10	C	M	Loamy Sand	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennessee Sampling Date: 7/13/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200713_WL19_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Shoulder Local relief (concave, convex, none): Convex Slope (%) 2 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.087174 Long: -78.251662 Datum: NAD83

Soil Map Unit Name: OvA NWI Classification: UPL

Are climatic / hyrologic 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 X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	if yes, optional Wetland Site ID: ____
Wetland Hydrology Present?	Yes ____	No X	

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____	No X	Depth (inches) ____
Water Table Present?	Yes ____	No X	Depth (inches) ____
Saturation Present?	Yes ____	No X	Depth (inches) ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200713_WL19_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	20	X	FACW
Cornus racemosa	15	X	FAC
	35 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Solidago canadensis	45	X	FACU
Toxicodendron radicans	15		FAC
Phleum pratense	10		FACU
Symphyotrichum lanceolatum	7		FACW
Juncus tenuis	5		FAC
	82 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	5	X	FAC
	5 = Total Cover		

Dominance Test Worksheet:

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

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	27	x 2	54	
FAC species	40	x 3	120	
FACU species	55	x 4	220	
UPL species	0	x 5	0	
Column Totals	122	(A)	394	(B)

Prevalence Index = B/A = 3.23

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- ___ 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_20200713_WL19_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-8	10YR 3/2	100					Sandy Loam	
8-18	10YR 3/3	95	10YR 4/6	5	C	M	Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennessee Sampling Date: 7/14/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200714_WL20_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.087035 Long: -78.253518 Datum: NAD83

Soil Map Unit Name: La NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL20
Wetland Hydrology Present?	Yes X 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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200714_WL20_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Viburnum dentatum	4		FAC
	4 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Echinochloa crus-galli	30	X	FAC
Impatiens pallida	20	X	FACW
Ranunculus hispidus	15	X	FAC
Lysimachia nummularia	10		FACW
Glyceria striata	8		OBL
Eupatorium perfoliatum	7		FACW
Scirpus atrovirens	6		OBL
Symphyotrichum lanceolatum	5		FACW
	101 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	14	x 1	14	
FACW species	42	x 2	84	
FAC species	49	x 3	147	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	105	(A)	245	(B)

Prevalence Index = B/A = 2.33

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_20200714_WL20_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-7	10YR 2/1	95	10YR 4/6	5	C	M	Silty Clay Loam	
7-15	10YR 4/1	90	10YR 4/6	10	C	M	Silty Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennessee Sampling Date: 7/14/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200714_WL20_W2

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Floodplain Local relief (concave, convex, none): None Slope (%) 0 - 3

Subregion (LRR or MLRA): LRR L Lat: 43.087122 Long: -78.253799 Datum: NAD83

Soil Map Unit Name: La NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL20
Wetland Hydrology Present?	Yes X 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)	____	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)
____	Sparsley Vegetated Concave Surface (B8)		

Secondary Indicators (minimum of two required)

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

Surface Water Present?	Yes ____	No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Water Table Present?	Yes ____	No X	Depth (inches) ____	
Saturation Present?	Yes ____	No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200714_WL20_W2**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	85	X	FACW
	85	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Rosa multiflora	10	X	FACU
	10	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Impatiens pallida	35	X	FACW
Toxicodendron radicans	15	X	FAC
Ranunculus hispidus	15	X	FAC
Parthenocissus quinquefolia	10		FACU
Persicaria virginiana	10		FAC
Circaea canadensis	5		FACU
	90	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	15	X	FAC
	15	= 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: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83.3% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	120	x 2	240	
FAC species	55	x 3	165	
FACU species	25	x 4	100	
UPL species	0	x 5	0	
Column Totals	200	(A)	505	(B)

Prevalence Index = B/A = 2.52

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_20200714_WL20_W2**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-7	10YR 2/1	95	10YR 4/6	5	C	M	Silty Clay Loam	
7-15	10YR 4/1	90	10YR 4/6	10	C	M	Silty Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennessee Sampling Date: 7/14/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200714_WL20_W3

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Dip Local relief (concave, convex, none): None Slope (%) 3 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.088437 Long: -78.255322 Datum: NAD83

Soil Map Unit Name: La NWI Classification: PSS

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL20
Wetland Hydrology Present?	Yes X 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)	____	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)
____	Sparsley Vegetated Concave Surface (B8)		

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 in Aerial Imagery (C9)
____	Stunted or Stressed Plants (D1)
X	Geomorphic Position (D2)
____	Shallow Aquitard (D3)
____	Microtopographic Relief (D4)
X	FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200714_WL20_W3**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Cornus amomum	35	X	FACW
Fraxinus pennsylvanica	35	X	FACW
Apocynum cannabinum	5		FAC
	75	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Carex vulpinoidea	10	X	OBL
Phalaris arundinacea	10	X	FACW
Carex cristatella	10	X	FACW
Juncus effusus	8	X	OBL
Eutrochium purpureum	5		FAC
Lycopus americanus	5		OBL
Toxicodendron radicans	5		FAC
Agrostis gigantea	5		FACW
Scirpus atrovirens	5		OBL
	63	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

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

Prevalence Index Worksheet:

OBL species	28	x 1	28	
FACW species	95	x 2	190	
FAC species	15	x 3	45	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	138	(A)	263	(B)

Prevalence Index = B/A = 1.91

Hydrophytic Vegetation Indicators:

X 1- Rapid Test For Hydrophytic Vegetation

X 2- Dominance Test is > 50%

X 3- Prevalence Index is =< 3.0

4- Morphological Adaptations

5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

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

SOIL Sampling Point: **1_20200714_WL20_W3**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-4	10YR 3/1	95	10YR 4/6	5	C	M	Clay Loam	
4-10	10YR 4/1	85	10YR 5/8	15	C	M	Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennessee Sampling Date: 7/14/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200714_WL20_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Side Slope Local relief (concave, convex, none): Convex Slope (%) 5 - 15

Subregion (LRR or MLRA): LRR L Lat: 43.087079 Long: -78.253398 Datum: NAD83

Soil Map Unit Name: La NWI Classification: UPL

Are climatic / hyrologic 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 X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	if yes, optional Wetland Site ID: ____
Wetland Hydrology Present?	Yes ____	No X	

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____	No X	Depth (inches) ____
Water Table Present?	Yes ____	No X	Depth (inches) ____
Saturation Present?	Yes ____	No X	Depth (inches) ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200714_WL20_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Pinus strobus	15	X	FACU
Fraxinus pennsylvanica	10	X	FACW
Populus deltoides	5		FAC
	30 = Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Cornus racemosa	20	X	FAC
Fraxinus pennsylvanica	15	X	FACW
	35 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Solidago canadensis	30	X	FACU
Juncus tenuis	15	X	FAC
Toxicodendron radicans	10		FAC
Asclepias syriaca	8		UPL
Phleum pratense	8		FACU
Symphyotrichum lanceolatum	5		FACW
Phalaris arundinacea	5		FACW
Parthenocissus inserta	5		FACU
	86 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	10	X	FAC
	10 = 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: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71.4% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	35	x 2	70	
FAC species	60	x 3	180	
FACU species	58	x 4	232	
UPL species	8	x 5	40	
Column Totals	161	(A)	522	(B)

Prevalence Index = B/A = 3.24

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- ___ 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_20200714_WL20_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-8	10YR 4/2	99	10YR 3/6	1	C	M	Sandy Clay Loam	
8-15	10YR 5/3	80	10YR 3/2	20	C	M	Loamy Sand	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennessee Sampling Date: 7/14/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200714_WL20_U2

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): Convex Slope (%) 3 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.088481 Long: -78.255411 Datum: NAD83

Soil Map Unit Name: La NWI Classification: UPL

Are climatic / hyrologic 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 X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	if yes, optional Wetland Site ID: ____
Wetland Hydrology Present?	Yes ____	No X	

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____	No X	Depth (inches) ____
Water Table Present?	Yes ____	No X	Depth (inches) ____
Saturation Present?	Yes ____	No X	Depth (inches) ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200714_WL20_U2**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Cornus amomum	25	X	FACW
Fraxinus pennsylvanica	25	X	FACW
	50 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Daucus carota	20	X	UPL
Dipsacus fullonum	20	X	FACU
Prunella vulgaris	15	X	FAC
Phleum pratense	10		FACU
Poa compressa	10		FACU
Erigeron annuus	5		FACU
Solidago canadensis	5		FACU
Toxicodendron radicans	5		FAC
Cirsium vulgare	4		FACU
	94 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 60% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	50	x 2	100	
FAC species	20	x 3	60	
FACU species	54	x 4	216	
UPL species	20	x 5	100	
Column Totals	144	(A)	476	(B)

Prevalence Index = B/A = 3.31

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- ___ 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_20200714_WL20_U2**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-5	10YR 3/2	100					Clay Loam	
5-14	10YR 4/3	95	10YR 4/4	5	C	M	Clay Loam	
14-20	10YR 5/3	90	10YR 4/4	10	C	M	Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennessee Sampling Date: 7/14/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200714_WL21_W2

Investigator(s): Andrew Sorci Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 2

Subregion (LRR or MLRA): LRR L Lat: 43.089945 Long: -78.253185 Datum: NAD83

Soil Map Unit Name: OvB NWI Classification: PUB

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL21
Wetland Hydrology Present?	Yes X 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)

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

Surface Water Present?	Yes X	No ____	Depth (inches)	36	
Water Table Present?	Yes X	No ____	Depth (inches)	0	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes X	No ____	Depth (inches)	0	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200714_WL21_W2**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Salix interior	25	X	FACW
	25 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Oenanthe javanica	20	X	OBL
Asclepias incarnata	15	X	OBL
Scirpus atrovirens	15	X	OBL
Typha angustifolia	10		OBL
	60 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	15	X	FAC
	15 = 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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	60	x 1	60	
FACW species	25	x 2	50	
FAC species	15	x 3	45	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	100	(A)	155	(B)

Prevalence Index = B/A = 1.55

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_20200714_WL21_W2**

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- X Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks: Open water, primary hydrology/vegetation indicators

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennessee Sampling Date: 7/14/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200714_WL21_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Shoulder Local relief (concave, convex, none): Convex Slope (%) 0 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.089950 Long: -78.253116 Datum: NAD83

Soil Map Unit Name: OvB NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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

Mowed/maintained farm road

HYDROLOGY

Wetland Hydrology Indicators:

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

____ Surface Water (A1)	____ Water-Stained Leaves (B9)	____ Surface Soil Cracks (B6)
____ High Water Table (A2)	____ Aquatic Fauna (B13)	____ Drainage Patterns (B10)
____ Saturation (A3)	____ Marl Deposits (B15)	____ Moss Trim Lines (B16)
____ Water Marks (B1)	____ Hydrogen Sulfide Odor (C1)	____ Dry-Season Water Table (C2)
____ Sediment Deposits (B2)	____ Oxidized Rhizospheres on Living Roots (C3)	____ Crayfish Burrows (C8)
____ Drift Deposits (B3)	____ Presence of Reduced Iron (C4)	____ Saturation Visible in Aerial Imagery (C9)
____ Algal Mat or Crust (B4)	____ Recent Iron Reduction in Tilled Soils (C6)	____ Stunted or Stressed Plants (D1)
____ Iron Deposits (B5)	____ Thin Muck Surface (C7)	____ Geomorphic Position (D2)
____ Inundation Visible on Aerial Imagery (B7)	____ Other (Explain in Remarks)	____ Shallow Aquitard (D3)
____ Sparsley Vegetated Concave Surface (B8)		____ Microtopographic Relief (D4)
		____ FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X	Depth (inches) ____
Water Table Present?	Yes ____ No X	Depth (inches) ____
Saturation Present?	Yes ____ No X	Depth (inches) ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200714_WL21_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Plantago lanceolata	15	X	FACU
Solidago canadensis	15	X	FACU
Oxalis corniculata	15	X	FACU
Dactylis glomerata	15	X	FACU
Unknown species	15	X	UNK
Daucus carota	10		UPL
Taraxacum officinale	10		FACU
	95	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 5 (B)

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

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	0	x 3	0	
FACU species	70	x 4	280	
UPL species	10	x 5	50	
Column Totals	80	(A)	330	(B)

Prevalence Index = B/A = 4.12

Hydrophytic Vegetation Indicators:

- 1- Rapid Test For Hydrophytic Vegetation
- 2- Dominance Test is > 50%
- 3- Prevalence Index is =< 3.0
- 4- Morphological Adaptations
- 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
unknown sedge; unidentifiable due to recent mowing.

SOIL Sampling Point: **1_20200714_WL21_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-10	10R 4/1	50	2.5YR 5/4	50	C	M	Clay	
10-16	10YR 4/4	100					Clay	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennessee Sampling Date: 7/15/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200715_WL22_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Linear Slope (%) 0 - 3

Subregion (LRR or MLRA): LRR L Lat: 43.087922 Long: -78.239581 Datum: NAD83

Soil Map Unit Name: Wy NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL22
Wetland Hydrology Present?	Yes X No ____		

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

Stream riparian wetland

HYDROLOGY

Wetland Hydrology Indicators:

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

X	Surface Water (A1)		Water-Stained Leaves (B9)	X	Drainage Patterns (B10)
X	High Water Table (A2)		Aquatic Fauna (B13)	X	Moss Trim Lines (B16)
X	Saturation (A3)		Marl Deposits (B15)		Dry-Season Water Table (C2)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Saturation Visible in Aerial Imagery (C9)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Stunted or Stressed Plants (D1)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Geomorphic Position (D2)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Shallow Aquitard (D3)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Microtopographic Relief (D4)
	Sparsley Vegetated Concave Surface (B8)				FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

	Surface Soil Cracks (B6)

Surface Water Present?	Yes X No ____	Depth (inches)	5
Water Table Present?	Yes X No ____	Depth (inches)	0
Saturation Present?	Yes X No ____	Depth (inches)	0

Wetland Hydrology Present? Yes X No ____

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200715_WL22_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Populus deltoides	50	X	FAC
Salix nigra	25	X	OBL
	75 = Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Salix lucida	20	X	FACW
Cornus amomum	20	X	FACW
Lonicera morrowii	5		FACU
	45 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	15	X	FAC
	15 = 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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	25	x 1	25	
FACW species	40	x 2	80	
FAC species	65	x 3	195	
FACU species	5	x 4	20	
UPL species	0	x 5	0	
Column Totals	135	(A)	320	(B)

Prevalence Index = B/A = 2.37

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_20200715_WL22_W1**

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- X Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennessee Sampling Date: 7/15/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200715_WL23_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%) 0 - 3

Subregion (LRR or MLRA): LRR L Lat: 43.092225 Long: -78.243456 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL22
Wetland Hydrology Present?	Yes X 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)		Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)
	Saturation (A3)		Marl Deposits (B15)	X	Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)	X	Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
				X	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X Depth (inches) ____	Wetland Hydrology Present?	Yes X No ____
Water Table Present?	Yes ____ No X Depth (inches) ____		
Saturation Present?	Yes ____ No X Depth (inches) ____		

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200715_WL23_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Salix nigra	75	X	OBL
Fraxinus pennsylvanica	15		FACW
	90	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Rhamnus cathartica	10	X	FAC
Lonicera morrowii	10	X	FACU
	20	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Impatiens pallida	25	X	FACW
Boehmeria cylindrica	10	X	OBL
Ranunculus hispidus	4		FAC
	39	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 80% (A/B)

Prevalence Index Worksheet:

OBL species	85	x 1	85	
FACW species	40	x 2	80	
FAC species	14	x 3	42	
FACU species	10	x 4	40	
UPL species	0	x 5	0	
Column Totals	149	(A)	247	(B)

Prevalence Index = B/A = 1.66

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_20200715_WL23_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-7	10YR 3/1	100					Silty Clay Loam	
7-15	10YR 4/1	95	10YR 4/4	5	C	M	Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 15

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennessee Sampling Date: 7/15/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200715_WL22_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Shoulder Local relief (concave, convex, none): Convex Slope (%) 5 - 10

Subregion (LRR or MLRA): LRR L Lat: 43.092365 Long: -78.243538 Datum: NAD83

Soil Map Unit Name: Wy NWI Classification: UPL

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

Are Vegetation X , Soil X , 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	____
Wetland Hydrology Present?	Yes ____ No X		

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

Edge of agricultural field, recently tilled

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200715_WL22_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lonicera morrowii	10	X	FACU
Cornus racemosa	5	X	FAC
	15 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Bromus inermis	5	X	UPL
Daucus carota	5	X	UPL
Erigeron annuus	5	X	FACU
Poa compressa	5	X	FACU
	20 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

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

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 16.7% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	5	x 3	15	
FACU species	20	x 4	80	
UPL species	10	x 5	50	
Column Totals	35	(A)	145	(B)

Prevalence Index = B/A = 4.14

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **1_20200715_WL22_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-10	10YR 3/2	100					Sandy Loam	
10-18	10YR 4/3	99	10YR 3/6	1	C	M	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennessee Sampling Date: 7/15/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200715_WL23_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Terrace Local relief (concave, convex, none): None Slope (%) 0 - 2

Subregion (LRR or MLRA): LRR L Lat: 43.087956 Long: -78.239522 Datum: NAD83

Soil Map Unit Name: Wy NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200715_WL23_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Picea abies	85	X	UPL
Prunus serotina	15		FACU
	100 = Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Populus deltoides	5	X	FAC
Fraxinus pennsylvanica	5	X	FACW
	10 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lonicera morrowii	15	X	FACU
	15 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	5	x 2	10	
FAC species	5	x 3	15	
FACU species	30	x 4	120	
UPL species	85	x 5	425	
Column Totals	125	(A)	570	(B)

Prevalence Index = B/A = 4.56

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **1_20200715_WL23_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-18	10YR 4/3	100					Loamy Sand	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennesee Sampling Date: 10/8/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20201008_WL23_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 2 - 4

Subregion (LRR or MLRA): LRR L Lat: 43.096690 Long: -78.234159 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL23
Wetland Hydrology Present?	Yes X 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)	____	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)
____	Sparsley Vegetated Concave Surface (B8)		

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)
X	Saturation Visible in Aerial Imagery (C9)
____	Stunted or Stressed Plants (D1)
X	Geomorphic Position (D2)
____	Shallow Aquitard (D3)
____	Microtopographic Relief (D4)
X	FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20201008_WL23_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Populus deltoides	40	X	FAC
Fraxinus pennsylvanica	20	X	FACW
	60	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Salix nigra	15	X	OBL
Cornus amomum	15	X	FACW
	30	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Euthamia graminifolia	30	X	FAC
Symphyotrichum lanceolatum	20	X	FACW
Agrostis gigantea	10		FACW
	60	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

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

Prevalence Index Worksheet:

OBL species	15	x 1	15	
FACW species	65	x 2	130	
FAC species	70	x 3	210	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	150	(A)	355	(B)

Prevalence Index = B/A = 2.37

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_20201008_WL23_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-7	10YR 3/2	98	10YR 4/4	2	C	M	Sandy Loam	
7-16	10YR 4/2	90	10YR 4/6	10	C	M	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 10/08/2020

Applicant/Owner: Hecate State: NY Sampling Point: Upland-WL23

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.096799 Long: -78.23409 Datum: NAD83

Soil Map Unit Name: Ma NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches)	____
Water Table Present?	Yes ____ No X	Depth (inches)	____
Saturation Present?	Yes ____ No X	Depth (inches)	____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Upland-WL23**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Ambrosia artemisiifolia	30	X	FACU
Alliaria petiolata	25	X	FACU
Plantago lanceolata	15		FACU
Medicago lupulina	10		FACU
Bidens frondosa	10		FACW
	90	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

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

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

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

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	10	x 2	20	
FAC species	0	x 3	0	
FACU species	80	x 4	320	
UPL species	0	x 5	0	
Column Totals	90	(A)	340	(B)

Prevalence Index = B/A = 3.78

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **Upland-WL23**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 3/3	100					Silt Loam	
12-18	10YR 6/3	100					Silt Loam	
18-24	10YR 7/2	90	7.5YR 5/8	10	C	PL	Silt Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennessee Sampling Date: 7/15/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200715_WL24_W1

Investigator(s): Andy Smith Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Dip Local relief (concave, convex, none): Concave Slope (%) 2 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.092619 Long: -78.23802 Datum: NAD83

Soil Map Unit Name: OvA NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL24
Wetland Hydrology Present?	Yes X 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)	____	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)
____	Sparsley Vegetated Concave Surface (B8)		

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 in Aerial Imagery (C9)
____	Stunted or Stressed Plants (D1)
X	Geomorphic Position (D2)
____	Shallow Aquitard (D3)
____	Microtopographic Relief (D4)
X	FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200715_WL24_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	25	X	FACW
Populus deltoides	20	X	FAC
	45	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Rhamnus cathartica	10	X	FAC
	10	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Bidens frondosa	15	X	FACW
Toxicodendron radicans	15	X	FAC
Daucus carota	5		UPL
Ranunculus hispidus	5		FAC
Boehmeria cylindrica	5		OBL
	45	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= 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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	5	x 1	5	
FACW species	40	x 2	80	
FAC species	50	x 3	150	
FACU species	0	x 4	0	
UPL species	5	x 5	25	
Column Totals	100	(A)	260	(B)

Prevalence Index = B/A = 2.6

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_20200715_WL24_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-9	10YR 3/1	90	10YR 4/4	10	C	M	Sandy Loam	
9-15	10YR 5/4	85	10YR 4/6	15	C	M	Sand	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/15/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200715_WL24_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): Convex Slope (%) 2 - 5

Subregion (LRR or MLRA): LRR R Lat: 43.092621 Long: -78.238158 Datum: NAD83

Soil Map Unit Name: OvA NWI Classification: UPL

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

Are Vegetation X , Soil X , 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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

Recently plowed field

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200715_WL24_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Remarks: (Include photo numbers here or on a separate sheet.)
No vegetation present due to recent plowing

SOIL Sampling Point: **1_20200715_WL24_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-3	10YR 3/1	100					Loam	
3-12	10YR 3/2	100					Loam	
12-18	10YR 5/4	90	10YR 4/6	10	C	M	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennesee Sampling Date: 10/8/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200925_WL_111_w1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Dip Local relief (concave, convex, none): None Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.105627 Long: -78.225259 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL25
Wetland Hydrology Present?	Yes X 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)		Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required)
	High Water Table (A2)		Aquatic Fauna (B13)		Surface Soil Cracks (B6)
	Saturation (A3)		Marl Deposits (B15)		Drainage Patterns (B10)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)	X	Moss Trim Lines (B16)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Dry-Season Water Table (C2)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Crayfish Burrows (C8)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)	X	Saturation Visible in Aerial Imagery (C9)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Stunted or Stressed Plants (D1)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)	X	Geomorphic Position (D2)
	Sparsley Vegetated Concave Surface (B8)				Shallow Aquitard (D3)
					Microtopographic Relief (D4)
					FAC-Neutral Test (D5)

Surface Water Present?	Yes ____	No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Water Table Present?	Yes ____	No X	Depth (inches) ____	
Saturation Present?	Yes ____	No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200925_WL_111_w1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	35	X	FACW
	35	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Viburnum lentago	45	X	FAC
Lonicera morrowii	20	X	FACU
Fraxinus pennsylvanica	15		FACW
Rhamnus cathartica	5		FAC
	85	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus quinquefolia	10	X	FACU
Vitis riparia	5	X	FAC
	15	= Total Cover	

Dominance Test Worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 60% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	50	x 2	100	
FAC species	55	x 3	165	
FACU species	30	x 4	120	
UPL species	0	x 5	0	
Column Totals	135	(A)	385	(B)

Prevalence Index = B/A = 2.85

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_20200925_WL_111_w1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-7	10YR 3/1	100					Sandy Loam	
7-16	10YR 5/1	75	10YR 5/8	25	C	M	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 9/22/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200925_WL_111_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): None Slope (%) 3 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.105655 Long: -78.225306 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X		
Wetland Hydrology Present?	Yes ____ No X	if yes, optional Wetland Site ID:	____

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

Edge of field

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200925_WL_111_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Quercus macrocarpa	15	X	FACU
	15	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lonicera morrowii	40	X	FACU
	40	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Unknown species	30	X	UNK
Trifolium pratense	15	X	FACU
Prunus serotina	15	X	FACU
Daucus carota	10		UPL
Lotus corniculatus	10		FACU
Plantago major	5		FACU
Plantago lanceolata	5		FACU
Symphyotrichum pilosum	5		FACU
	95	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= 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: 5 (B)

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

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	0	x 3	0	
FACU species	110	x 4	440	
UPL species	10	x 5	50	
Column Totals	120	(A)	490	(B)

Prevalence Index = B/A = 4.08

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
unknown grass due to recent mowing

SOIL Sampling Point: **1_20200925_WL_111_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-14	10YR 3/2	100					Sandy Loam	
14-20	10YR 4/3	100					Sand	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/16/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200716_WL26_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.089285 Long: -78.246334 Datum: NAD83

Soil Map Unit Name: OvB NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL26
Wetland Hydrology Present?	Yes X 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)	____	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)
____	Sparsley Vegetated Concave Surface (B8)		

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)
X	Saturation Visible in Aerial Imagery (C9)
____	Stunted or Stressed Plants (D1)
X	Geomorphic Position (D2)
____	Shallow Aquitard (D3)
____	Microtopographic Relief (D4)
X	FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200716_WL26_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	5	X	FACW
	5 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phalaris arundinacea	75	X	FACW
Eupatorium perfoliatum	8		FACW
Bidens frondosa	4		FACW
Ranunculus hispidus	1		FAC
	88 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	92	x 2	184	
FAC species	1	x 3	3	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	93	(A)	187	(B)

Prevalence Index = B/A = 2.01

Hydrophytic Vegetation Indicators:

X 1- Rapid Test For Hydrophytic Vegetation

X 2- Dominance Test is > 50%

X 3- Prevalence Index is =< 3.0

4- Morphological Adaptations

5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

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

SOIL Sampling Point: **1_20200716_WL26_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-3	10YR 3/1	98	10YR 4/6	2	C	M	Silt Loam	
3-14	10YR 4/2	90	10YR 5/6	10	C	M	Silt Loam	
14-18	7.5YR 5/3	85	7.5YR 5/6	15	C	M	Sand	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/16/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200716_WL26_W2

Investigator(s): Andrew Sorci Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Linear Slope (%) 0 - 2

Subregion (LRR or MLRA): LRR L Lat: 43.088495 Long: -78.246886 Datum: NAD83

Soil Map Unit Name: NWI Classification: PSS

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL26
Wetland Hydrology Present?	Yes X 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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200716_WL26_W2**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Cornus amomum	40	X	FACW
Fraxinus pennsylvanica	40	X	FACW
Rosa multiflora	15		FACU
	95	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Typha angustifolia	15	X	OBL
Bidens frondosa	10	X	FACW
Boehmeria cylindrica	10	X	OBL
Symphyotrichum lanceolatum	10	X	FACW
Lycopus americanus	10	X	OBL
Geum canadense	3		FAC
	58	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

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

Prevalence Index Worksheet:

OBL species	35	x 1	35	
FACW species	100	x 2	200	
FAC species	3	x 3	9	
FACU species	15	x 4	60	
UPL species	0	x 5	0	
Column Totals	153	(A)	304	(B)

Prevalence Index = B/A = 1.99

Hydrophytic Vegetation Indicators:

X 1- Rapid Test For Hydrophytic Vegetation

X 2- Dominance Test is > 50%

X 3- Prevalence Index is =< 3.0

4- Morphological Adaptations

5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

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

SOIL Sampling Point: **1_20200716_WL26_W2**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-5	10YR 2/2	100					Sandy Loam	
5-12	10YR 4/2	80	10YR 4/6	20	C	M	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/16/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200716_WL26_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): Convex Slope (%) 3 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.089193 Long: -78.246262 Datum: NAD83

Soil Map Unit Name: OvB NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200716_WL26_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Picea abies	75	X	UPL
	75	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	10	X	FACW
	10	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Solidago canadensis	5	X	FACU
Boehmeria cylindrica	5	X	OBL
Toxicodendron radicans	5	X	FAC
Cirsium vulgare	5	X	FACU
Ranunculus hispidus	4		FAC
Impatiens pallida	3		FACW
	27	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

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

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

OBL species	5	x 1	5	
FACW species	13	x 2	26	
FAC species	9	x 3	27	
FACU species	10	x 4	40	
UPL species	75	x 5	375	
Column Totals	112	(A)	473	(B)

Prevalence Index = B/A = 4.22

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **1_20200716_WL26_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-3	10YR 3/2	100					Sandy Loam	
3-14	10YR 4/3	99	10YR 3/4	1	C	M	Sandy Loam	
14-20	7.5YR 5/3	95	7.5YR 4/6	5	C	M	Sand	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/16/2020
Applicant/Owner: Hecate State: NY Sampling Point: 1_20200716_WL27_W1
Investigator(s): Andrew Sorci Section, Township, Range:
Landform (hillslope, terrace,etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%) 0 - 2
Subregion (LRR or MLRA): LRR L Lat: 43.090822 Long: -78.246629 Datum: NAD83
Soil Map Unit Name: Wy NWI Classification: PFO
Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL27
Wetland Hydrology Present?	Yes X No ____		

Remarks: (Explain alternative procedures here or in a separate report.)
Riparian Area to ST26

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Surface Water Present?	Yes X	No ____	Depth (inches)	4
Water Table Present?	Yes ____	No X	Depth (inches)	____
Saturation Present?	Yes ____	No X	Depth (inches)	____

Wetland Hydrology Present? Yes X No ____

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200716_WL27_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	35	X	FACW
Salix nigra	30	X	OBL
	65	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Cornus racemosa	20	X	FAC
	20	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Leersia oryzoides	30	X	OBL
Eutrochium purpureum	20	X	FAC
Verbena hastata	10		FACW
Cicuta maculata	10		OBL
	70	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= 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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	70	x 1	70	
FACW species	45	x 2	90	
FAC species	40	x 3	120	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	155	(A)	280	(B)

Prevalence Index = B/A = 1.81

Hydrophytic Vegetation Indicators:

- [ ] 1- Rapid Test For Hydrophytic Vegetation
- [x] 2- Dominance Test is > 50%
- [x] 3- Prevalence Index is =< 3.0
- [ ] 4- Morphological Adaptations
- [ ] 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ____

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

SOIL Sampling Point: **1_20200716_WL27_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	%	Type	Loc	Texture	Remarks
0-3	10YR 3/2	100					Sandy Loam	
3-6	10YR 2.5/1	100					Sand	

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)
- X Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 6

Hydric Soil Present? Yes X No ___

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/15/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200716_WL27_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Shoulder Local relief (concave, convex, none): Convex Slope (%) 3 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.090755 Long: -78.246608 Datum: NAD83

Soil Map Unit Name: Wy NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200716_WL27_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Juglans nigra	50	X	FACU
	50	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lonicera morrowii	25	X	FACU
Rubus idaeus	25	X	FACU
Cornus racemosa	15	X	FAC
	65	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Artemisia vulgaris	25	X	UPL
Solidago canadensis	20	X	FACU
Glechoma hederacea	10		FACU
Helminthotheca echioides	5		UPL
Hesperis matronalis	5		FACU
Oxalis stricta	5		FACU
	70	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus quinquefolia	20	X	FACU
	20	= Total Cover	

Dominance Test Worksheet:

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

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 14.3% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	15	x 3	45	
FACU species	160	x 4	640	
UPL species	30	x 5	150	
Column Totals	205	(A)	835	(B)

Prevalence Index = B/A = 4.07

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **1_20200716_WL27_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-9	10YR 3/2	100					Sandy Loam	
9-20	10YR 3/3	100					Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/16/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200716_WL28_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Dip Local relief (concave, convex, none): None Slope (%) 2 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.096660 Long: -78.227723 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL28
Wetland Hydrology Present?	Yes X 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)	____	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)
____	Sparsley Vegetated Concave Surface (B8)		

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 in Aerial Imagery (C9)
____	Stunted or Stressed Plants (D1)
X	Geomorphic Position (D2)
____	Shallow Aquitard (D3)
____	Microtopographic Relief (D4)
X	FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20209716_WL28_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	25	X	FACW
	25	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Cornus racemosa	15	X	FAC
Viburnum opulus	12	X	FACW
Ribes americanum	10	X	FACW
Lonicera tatarica	10	X	FACU
	47	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Onoclea sensibilis	25	X	FACW
Symphyotrichum lanceolatum	25	X	FACW
	50	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	15	X	FAC
Parthenocissus quinquefolia	10	X	FACU
	25	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 77.8% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	97	x 2	194	
FAC species	30	x 3	90	
FACU species	20	x 4	80	
UPL species	0	x 5	0	
Column Totals	147	(A)	364	(B)

Prevalence Index = B/A = 2.48

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_20209716_WL28_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-5	10YR 3/1	90	5YR 4/6	10	C	M	Silty Clay Loam	
5-12	10YR 4/2	85	5YR 4/6	15	C	M	Silty Clay Loam	
12-20	10YR 4/1	80	5YR 4/6	20	C	M	Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennesee Sampling Date: 7/15/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200720_WL28_W2

Investigator(s): Andrew Sorci Section, Township, Range:

Landform (hillslope, terrace,etc.): Dip Local relief (concave, convex, none): None Slope (%) 2 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.096482 Long: -78.227739 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL28-2
Wetland Hydrology Present?	Yes X 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)

X	Surface Water (A1)		Water-Stained Leaves (B9)		Drainage Patterns (B10)
	High Water Table (A2)		Aquatic Fauna (B13)		Moss Trim Lines (B16)
	Saturation (A3)		Marl Deposits (B15)		Dry-Season Water Table (C2)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)
	Sediment Deposits (B2)	X	Oxidized Rhizospheres on Living Roots (C3)	X	Saturation Visible in Aerial Imagery (C9)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Stunted or Stressed Plants (D1)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Geomorphic Position (D2)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Shallow Aquitard (D3)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Microtopographic Relief (D4)
	Sparsley Vegetated Concave Surface (B8)			X	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

	Surface Soil Cracks (B6)

Surface Water Present?	Yes X No ____	Depth (inches)	1
Water Table Present?	Yes ____ No X	Depth (inches)	____
Saturation Present?	Yes ____ No X	Depth (inches)	____

Wetland Hydrology Present? Yes X No ____

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200720_WL28_W2**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Agrostis capillaris	25	X	FAC
Agrostis gigantea	25	X	FACW
Persicaria maculosa	15		FAC
Carex vulpinoidea	15		OBL
Glyceria striata	8		OBL
Ambrosia artemisiifolia	4		FACU
Acalypha rhomboidea	4		FACU
	96	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	23	x 1	23	
FACW species	25	x 2	50	
FAC species	40	x 3	120	
FACU species	8	x 4	32	
UPL species	0	x 5	0	
Column Totals	96	(A)	225	(B)

Prevalence Index = B/A = 2.34

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ____

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

SOIL

Sampling Point: **1_20200720_WL28_W2**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-8	10YR 4/1	90	10YR 5/8	10	C	M	Clay	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennesee Sampling Date: 7/20/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200720_WL28_W3

Investigator(s): Andrew Sorci Section, Township, Range:

Landform (hillslope, terrace,etc.): Dip Local relief (concave, convex, none): None Slope (%) 0 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.097307 Long: -78.226059 Datum: NAD83

Soil Map Unit Name: HlB NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL28
Wetland Hydrology Present?	Yes X 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)		Water-Stained Leaves (B9)		Drainage Patterns (B10)
	High Water Table (A2)		Aquatic Fauna (B13)		Moss Trim Lines (B16)
	Saturation (A3)		Marl Deposits (B15)		Dry-Season Water Table (C2)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)	X	Saturation Visible in Aerial Imagery (C9)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Stunted or Stressed Plants (D1)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)	X	Geomorphic Position (D2)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Shallow Aquitard (D3)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Microtopographic Relief (D4)
	Sparsley Vegetated Concave Surface (B8)			X	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200720_WL28_W3**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Unknown species	20	X	UNK
Solidago canadensis	15	X	FACU
Cyperus strigosus	15	X	FACW
Verbena hastata	15	X	FACW
Agrostis stolonifera	15	X	FACW
Cirsium arvense	10		FACU
	90 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 60% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	45	x 2	90	
FAC species	0	x 3	0	
FACU species	25	x 4	100	
UPL species	0	x 5	0	
Column Totals	70	(A)	190	(B)

Prevalence Index = B/A = 2.71

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)
unknown grass species unidentifiable due to recent mowing

SOIL Sampling Point: **1_20200720_WL28_W3**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 4/2	90	10YR 5/8	10	C	M	Clay	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/16/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200716_WL28_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): Convex Slope (%) 3 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.096604 Long: -78.227693 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200716_WL28_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	40	X	FACW
Prunus serotina	15	X	FACU
	55	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lonicera tatarica	25	X	FACU
	25	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Alliaria petiolata	10	X	FACU
Toxicodendron radicans	8	X	FAC
Geum canadense	4		FAC
	22	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus quinquefolia	20	X	FACU
	20	= 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: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	40	x 2	80	
FAC species	12	x 3	36	
FACU species	70	x 4	280	
UPL species	0	x 5	0	
Column Totals	122	(A)	396	(B)

Prevalence Index = B/A = 3.25

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **1_20200716_WL28_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-3	10YR 2/2	100					Clay Loam	
3-12	10YR 3/2	99	10YR 3/4	1	C	M	Clay Loam	
12-20	10YR 4/2	85	10YR 4/4	15	C	M	Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 9/24/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200924_WL29

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Dip Local relief (concave, convex, none): Concave Slope (%) 1 - 2

Subregion (LRR or MLRA): LRR L Lat: 43.098268 Long: -78.228343 Datum: NAD83

Soil Map Unit Name: _____ NWI Classification: PSS

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL29
Wetland Hydrology Present?	Yes X 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)		Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)
	Saturation (A3)		Marl Deposits (B15)	X	Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)	X	Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)	X	Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
				X	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X Depth (inches) ____	Wetland Hydrology Present?	Yes X No ____
Water Table Present?	Yes ____ No X Depth (inches) ____		
Saturation Present?	Yes ____ No X Depth (inches) ____		

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200924_WL29**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	75	X	FACW
Cornus racemosa	25	X	FAC
Lonicera morrowii	20		FACU
	120 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Agrostis stolonifera	15	X	FACW
Symphyotrichum lateriflorum	8	X	FAC
Persicaria virginiana	6		FAC
Scirpus atrovirens	3		OBL
	32 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	15	X	FAC
	15 = 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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	3	x 1	3	
FACW species	90	x 2	180	
FAC species	54	x 3	162	
FACU species	20	x 4	80	
UPL species	0	x 5	0	
Column Totals	167	(A)	425	(B)

Prevalence Index = B/A = 2.54

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_20200924_WL29**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-3	10YR 3/1	98	10YR 3/6	2	C	PL	Sandy Loam	
3-8	10YR 3/1	95	10YR 4/6	5	C	M	Sandy Clay Loam	
8-16	10YR 6/2	80	10YR 5/6	20	C	M	Sandy Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/17/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200715_WL30_W1

Investigator(s): Andrew Sorci Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 2

Subregion (LRR or MLRA): LRR L Lat: 43.094814 Long: -78.233172 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: PEM

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

Are Vegetation X , 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL29
Wetland Hydrology Present?	Yes X No ____		

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

In agricultural field; wet area not cultivated

HYDROLOGY

Wetland Hydrology Indicators:

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

X	Surface Water (A1)		Water-Stained Leaves (B9)		Drainage Patterns (B10)
X	High Water Table (A2)		Aquatic Fauna (B13)		Moss Trim Lines (B16)
X	Saturation (A3)		Marl Deposits (B15)		Dry-Season Water Table (C2)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)	X	Saturation Visible in Aerial Imagery (C9)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Stunted or Stressed Plants (D1)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)	X	Geomorphic Position (D2)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Shallow Aquitard (D3)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Microtopographic Relief (D4)
	Sparsley Vegetated Concave Surface (B8)			X	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes X No ____	Depth (inches)	3
Water Table Present?	Yes X No ____	Depth (inches)	0
Saturation Present?	Yes X No ____	Depth (inches)	0

Wetland Hydrology Present? Yes X No ____

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200715_WL30_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Cyperus strigosus	30	X	FACW
Persicaria maculosa	25	X	FAC
Echinochloa crus-galli	20	X	FAC
Agrostis gigantea	6		FACW
Ambrosia artemisiifolia	6		FACU
Abutilon theophrasti	5		FACU
Daucus carota	5		UPL
Asclepias incarnata	2		OBL
	99	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	2	x 1	2	
FACW species	36	x 2	72	
FAC species	45	x 3	135	
FACU species	11	x 4	44	
UPL species	5	x 5	25	
Column Totals	99	(A)	278	(B)

Prevalence Index = B/A = 2.81

Hydrophytic Vegetation Indicators:

- [ ] 1- Rapid Test For Hydrophytic Vegetation
- [x] 2- Dominance Test is > 50%
- [x] 3- Prevalence Index is =< 3.0
- [ ] 4- Morphological Adaptations
- [ ] 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ____

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

SOIL Sampling Point: **1_20200715_WL30_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-13	10YR 4/2	90	10YR 5/8	10	C	M	Clay Loam	
13-18	10YR 5/2	70	10YR 5/8	30	C	M	Sand	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/17/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200715_WL29_W3

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Dip Local relief (concave, convex, none): Concave Slope (%) 0 - 2

Subregion (LRR or MLRA): LRR L Lat: 43.095764 Long: -78.231925 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL29
Wetland Hydrology Present?	Yes X 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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200715_WL29_W3**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Populus deltoides	60	X	FAC
Salix nigra	30	X	OBL
	90	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	30	X	FACW
Lonicera morrowii	15	X	FACU
	45	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phragmites australis	20	X	FACW
Toxicodendron radicans	15	X	FAC
	35	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	5	X	FAC
	5	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 85.7% (A/B)

Prevalence Index Worksheet:

OBL species	30	x 1	30	
FACW species	50	x 2	100	
FAC species	80	x 3	240	
FACU species	15	x 4	60	
UPL species	0	x 5	0	
Column Totals	175	(A)	430	(B)

Prevalence Index = B/A = 2.46

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_20200715_WL29_W3**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-8	10YR 2/1	90	10YR 4/4	10	C	PL	Loam	
8-12	10YR 2/2	95	10YR 4/4	5	C	M	Loam	
12-16	10YR 5/2	80	10YR 5/8	20	C	M	Sand	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/17/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200717_WL29_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): None Slope (%) 0 - 3

Subregion (LRR or MLRA): LRR L Lat: 43.095362 Long: -78.231783 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200717_WL29_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Daucus carota	85	X	UPL
Ambrosia artemisiifolia	10		FACU
Plantago major	5		FACU
Cyperus strigosus	4		FACW
	104	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 0% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	4	x 2	8	
FAC species	0	x 3	0	
FACU species	15	x 4	60	
UPL species	85	x 5	425	
Column Totals	104	(A)	493	(B)

Prevalence Index = B/A = 4.74

Hydrophytic Vegetation Indicators:

- 1- Rapid Test For Hydrophytic Vegetation
- 2- Dominance Test is > 50%
- 3- Prevalence Index is =< 3.0
- 4- Morphological Adaptations
- 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **1_20200717_WL29_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-16	10YR 2/2	100					Sandy Clay Loam	
16-20	10YR 5/2	70	10YR 5/8	30	C	M	Sand	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/24/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200724-WL-53-53W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.098335 Long: -78.192491 Datum: NAD83

Soil Map Unit Name: Wk NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL30
Wetland Hydrology Present?	Yes X 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)

X	Surface Water (A1)	____	Water-Stained Leaves (B9)	____	Surface Soil Cracks (B6)
____	High Water Table (A2)	____	Aquatic Fauna (B13)	____	Drainage Patterns (B10)
X	Saturation (A3)	____	Marl Deposits (B15)	____	Moss Trim Lines (B16)
____	Water Marks (B1)	____	Hydrogen Sulfide Odor (C1)	____	Dry-Season Water Table (C2)
____	Sediment Deposits (B2)	____	Oxidized Rhizospheres on Living Roots (C3)	____	Crayfish Burrows (C8)
____	Drift Deposits (B3)	____	Presence of Reduced Iron (C4)	____	Saturation Visible in Aerial Imagery (C9)
____	Algal Mat or Crust (B4)	____	Recent Iron Reduction in Tilled Soils (C6)	____	Stunted or Stressed Plants (D1)
____	Iron Deposits (B5)	____	Thin Muck Surface (C7)	____	Geomorphic Position (D2)
____	Inundation Visible on Aerial Imagery (B7)	____	Other (Explain in Remarks)	____	Shallow Aquitard (D3)
____	Sparsley Vegetated Concave Surface (B8)			____	Microtopographic Relief (D4)
				____	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes X No ____	Depth (inches) 1	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes X No ____	Depth (inches) 0	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200724-WL-53-53W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Typha angustifolia	40	X	OBL
Alisma triviale	10		OBL
Bidens frondosa	10		FACW
	60 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	5	X	FAC
	5 = 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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	50	x 1	50	
FACW species	10	x 2	20	
FAC species	5	x 3	15	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	65	(A)	85	(B)

Prevalence Index = B/A = 1.31

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **02-20200724-WL-53-53W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-14	10YR 5/1	80	10YR 6/8	20	C	M	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/24/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200724-WL-53-53U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.098366 Long: -78.192498 Datum: NAD83

Soil Map Unit Name: Wk NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200724-WL-53-53U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Equisetum arvense	20	X	FAC
Typha angustifolia	5		OBL
Abutilon theophrasti	5		FACU
	30 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus quinquefolia	10	X	FACU
	10 = Total Cover		

Dominance Test Worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

OBL species	5	x 1	5	
FACW species	0	x 2	0	
FAC species	20	x 3	60	
FACU species	15	x 4	60	
UPL species	0	x 5	0	
Column Totals	40	(A)	125	(B)

Prevalence Index = B/A = 3.12

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **02-20200724-WL-53-53U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-20	10YR 3/3	100					Silty Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/20/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_07202020_WL31_W3

Investigator(s): Andrew Sorci Section, Township, Range:

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Concave Slope (%) 2 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.095153 Long: -78.226697 Datum: NAD83

Soil Map Unit Name: HlB NWI Classification: PSS

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL31
Wetland Hydrology Present?	Yes X 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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_07202020_WL31_W3**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Salix nigra	10	X	OBL
	10	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Salix amygdaloides	45	X	FACW
Acer negundo	20	X	FAC
	65	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phragmites australis	40	X	FACW
Agrostis stolonifera	5		FACW
	45	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

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

Prevalence Index Worksheet:

OBL species	10	x 1	10	
FACW species	90	x 2	180	
FAC species	20	x 3	60	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	120	(A)	250	(B)

Prevalence Index = B/A = 2.08

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_07202020_WL31_W3**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-9	7.5YR 4/2	90	10YR 5/6	10	C	M	Loamy Sand	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

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

HYDROLOGY

VEGETATION - Use scientific names of plants Sampling Point: **Upland-WL31**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Quercus muehlenbergii	15	X	FACU
	15	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Berberis vulgaris	15	X	FACU
	15	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Daucus carota	40	X	UPL
Agrostis gigantea	10		FACW
Ambrosia artemisiifolia	10		FACU
Plantago major	5		FACU
Taraxacum officinale	5		FACU
Juncus tenuis	5		FAC
	75	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= 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% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	10	x 2	20	
FAC species	5	x 3	15	
FACU species	50	x 4	200	
UPL species	40	x 5	200	
Column Totals	105	(A)	435	(B)

Prevalence Index = B/A = 4.14

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **Upland-WL31**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-18	10YR 3/2	95	10YR 4/6	5	C	M	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennesee Sampling Date: 10/8/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200720_WL32_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 3

Subregion (LRR or MLRA): LRR L Lat: 43.093354 Long: -78.227280 Datum: NAD83

Soil Map Unit Name: _____ NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL32
Wetland Hydrology Present?	Yes X 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)		Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)
X	Saturation (A3)		Marl Deposits (B15)		Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)	X	Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
				X	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes X No ____	Depth (inches) 8	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200720_WL32_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Leersia oryzoides	20	X	OBL
Impatiens capensis	15	X	FACW
Symphyotrichum lanceolatum	15	X	FACW
Eutrochium purpureum	10		FAC
Bidens frondosa	10		FACW
Alisma subcordatum	10		OBL
	80	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	30	x 1	30	
FACW species	40	x 2	80	
FAC species	10	x 3	30	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	80	(A)	140	(B)

Prevalence Index = B/A = 1.75

Hydrophytic Vegetation Indicators:

X 1- Rapid Test For Hydrophytic Vegetation

X 2- Dominance Test is > 50%

X 3- Prevalence Index is =< 3.0

4- Morphological Adaptations

5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

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

SOIL Sampling Point: **1_20200720_WL32_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-3	10YR 4/5	70	10YR 3/2	30	C	M	Sandy Loam	
3-8	7.5YR 2.5/1	98	7.5YR 5/6	2	C	M	Mucky Loam	
8-16	10YR 3/1	95	10YR 4/6	5	C	M	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/15/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200720_WL32_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): Convex Slope (%) 3 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.093281 Long: -78.227351 Datum: NAD83

Soil Map Unit Name: OvA NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200720_WL32_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Prunus serotina	40	X	FACU
	40	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lonicera morrowii	25	X	FACU
Cornus racemosa	15	X	FAC
Rosa multiflora	5		FACU
	45	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phleum pratense	15	X	FACU
Bromus inermis	15	X	UPL
Dactylis glomerata	15	X	FACU
Toxicodendron radicans	12	X	FAC
Taraxacum officinale	10		FACU
Trifolium pratense	10		FACU
Daucus carota	6		UPL
Ranunculus acris	5		FAC
Geum canadense	5		FAC
	93	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= 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: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 28.6% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	37	x 3	111	
FACU species	120	x 4	480	
UPL species	21	x 5	105	
Column Totals	178	(A)	696	(B)

Prevalence Index = B/A = 3.91

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **1_20200720_WL32_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-2	10YR 4/2	100					Sandy Clay Loam	
2-5	10YR 4/2	60	2.5YR 4/6	40	C	M	Sandy Clay Loam	
5-16	7.5YR 3/2	60	7.5YR 4/6	40	C	M	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/20/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200720_WL33_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Linear Slope (%) 0 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.089710 Long: -78.216954 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL33
Wetland Hydrology Present?	Yes X No ____		

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

Drainage ditch

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)
- ____ Sparsley 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)
- X Saturation Visible in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200720_WL33_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Apocynum cannabinum	10	X	FAC
	10 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phalaris arundinacea	20	X	FACW
Poa palustris	20	X	FACW
Agrostis gigantea	15		FACW
Phragmites australis	15		FACW
Asclepias incarnata	10		OBL
	80 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	10	x 1	10	
FACW species	70	x 2	140	
FAC species	10	x 3	30	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	90	(A)	180	(B)

Prevalence Index = B/A = 2

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_20200720_WL33_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-9	10YR 4/2	90	10YR 4/6	10	C	M	Sandy Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 9

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/20/2020
Applicant/Owner: Hecate State: NY Sampling Point: 1_20200720_WL33_W2
Investigator(s): Andrew Sorci Section, Township, Range:
Landform (hillslope, terrace,etc.): Dip Local relief (concave, convex, none): Concave Slope (%) 0 - 3
Subregion (LRR or MLRA): LRR L S Lat: 43.088280 Long: -78.219097 Datum: NAD83
oil Map Unit Name: CaA NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL33
Wetland Hydrology Present?	Yes X 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)	____	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)
____	Sparsley Vegetated Concave Surface (B8)		

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 in Aerial Imagery (C9)
____	Stunted or Stressed Plants (D1)
X	Geomorphic Position (D2)
____	Shallow Aquitard (D3)
____	Microtopographic Relief (D4)
X	FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200720_WL33_W2**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	50	X	FACW
Populus deltoides	25	X	FAC
Acer saccharinum	15		FACW
	90	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	30	X	FACW
	30	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Carex tuckermanii	5	X	OBL
	5	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

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

Prevalence Index Worksheet:

OBL species	5	x 1	5	
FACW species	95	x 2	190	
FAC species	25	x 3	75	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	125	(A)	270	(B)

Prevalence Index = B/A = 2.16

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_20200720_WL33_W2**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-9	10YR 2/1	85	10YR 5/2	15	D	M	Sandy Clay Loam	
9-16	10YR 4/2	80	10YR 5/6	20	C	M	Sandy Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/20/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200720_WL33_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Shoulder Local relief (concave, convex, none): Convex Slope (%) 2 - 30

Subregion (LRR or MLRA): LRR L Lat: 43.089694 Long: -78.216920 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: UPL

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

Are Vegetation X , Soil X , 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200720_WL33_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Unknown species	25	X	UNK
Phleum pratense	20	X	FACU
Phalaris arundinacea	20	X	FACW
Daucus carota	15		UPL
Plantago lanceolata	15		FACU
	95 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	20	x 2	40	
FAC species	0	x 3	0	
FACU species	35	x 4	140	
UPL species	15	x 5	75	
Column Totals	70	(A)	255	(B)

Prevalence Index = B/A = 3.64

Hydrophytic Vegetation Indicators:

- 1- Rapid Test For Hydrophytic Vegetation
- 2- Dominance Test is > 50%
- 3- Prevalence Index is =< 3.0
- 4- Morphological Adaptations
- 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
unknown grass species due to recent mowing

SOIL Sampling Point: **1_20200720_WL33_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-4	10YR 3/2	100					Sandy Loam	Gravelly

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: Dense Road Fill

Depth (inches): 4

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/20/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200720_WL34_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Linear Slope (%) 0 - 10

Subregion (LRR or MLRA): LRR L Lat: 43.094391 Long: -78.217803 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL34
Wetland Hydrology Present?	Yes X No ____		

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

Associated with drainage ditch

HYDROLOGY

Wetland Hydrology Indicators:

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

____	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)
____	Sparsley Vegetated Concave Surface (B8)		

Secondary Indicators (minimum of two required)

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

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200720_WL34_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Populus deltoides	80	X	FAC
	80	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	20	X	FACW
	20	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus quinquefolia	15	X	FACU
	15	= Total Cover	

Dominance Test Worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	20	x 2	40	
FAC species	80	x 3	240	
FACU species	15	x 4	60	
UPL species	0	x 5	0	
Column Totals	115	(A)	340	(B)

Prevalence Index = B/A = 2.96

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ____

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

SOIL Sampling Point: **1_20200720_WL34_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-5	10YR 2/1	100					Sandy Loam	
5-12	10YR 3/1	100					Sandy Loam	
12-15	10YR 3/2	90	7.5YR 5/6	10	C	M	Sandy Clay Loam	
15-20	10YR 6/3	50	10YR 4/6	50	C	M	Sand	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- X Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/21/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200720_WL34_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): Convex Slope (%) 3 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.094332 Long: -78.217788 Datum: NAD83

Soil Map Unit Name: HlA NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200720_WL34_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Juglans nigra	45	X	FACU
	45	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Alliaria petiolata	50	X	FACU
Xanthium strumarium	25	X	FAC
Lolium perenne	15		FACU
Solidago canadensis	10		FACU
Geum canadense	5		FAC
	105	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus quinquefolia	20	X	FACU
Vitis riparia	20	X	FAC
	40	= 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: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	50	x 3	150	
FACU species	140	x 4	560	
UPL species	0	x 5	0	
Column Totals	190	(A)	710	(B)

Prevalence Index = B/A = 3.74

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **1_20200720_WL34_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-16	10YR 3/2	100					Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/21/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_07212020_WL35_W1

Investigator(s): Andrew Sorci Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.089777 Long: -78.225032 Datum: NAD83

Soil Map Unit Name: HlA NWI Classification: PEM

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

Are Vegetation X , 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 X	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL35
Wetland Hydrology Present?	Yes X No ____		

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

Edge of active agricultural field (wheat)

HYDROLOGY

Wetland Hydrology Indicators:

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

____	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)
____	Sparsley Vegetated Concave Surface (B8)		

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)
X	Saturation Visible in Aerial Imagery (C9)
____	Stunted or Stressed Plants (D1)
X	Geomorphic Position (D2)
____	Shallow Aquitard (D3)
____	Microtopographic Relief (D4)
____	FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_07212020_WL35_W1**

Tree Stratum (Plot Size: 30'radius) Absolute % Cover | Dominant Species? | Indicator Status

= Total Cover

Shrub Stratum (Plot Size: 15'radius) Absolute % Cover | Dominant Species? | Indicator Status

= Total Cover

Herb Stratum (Plot Size: 5'radius)

	Absolute % Cover	Dominant Species?	Indicator Status
Amaranthus retroflexus	25	X	FACU
Echinochloa crus-galli	25	X	FAC
Persicaria maculosa	10	X	FAC
Daucus carota	10	X	UPL
Portulaca oleracea	8		FACU
Eleocharis obtusa	8		OBL
Gnaphalium uliginosum	5		FAC
Setaria pumila	5		FAC
Panicum virgatum	3		FAC
Chenopodium album	2		FACU
	101	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius) Absolute % Cover | Dominant Species? | Indicator Status

= 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: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

OBL species	8	x 1	8	
FACW species	0	x 2	0	
FAC species	48	x 3	144	
FACU species	35	x 4	140	
UPL species	10	x 5	50	
Column Totals	101	(A)	342	(B)

Prevalence Index = B/A = 3.39

Hydrophytic Vegetation Indicators:

1- Rapid Test For Hydrophytic Vegetation

2- Dominance Test is > 50%

3- Prevalence Index is =< 3.0

4- Morphological Adaptations

5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **1_07212020_WL35_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-14	7.5YR 4/2	90	10YR 4/4	10	C	M	Clay Loam	
14-18	7.5YR 5/3	70	7.5YR 5/8	30	C	M	Sandy Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/21/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_07212020_WL35_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): Convex Slope (%) 1 - 3

Subregion (LRR or MLRA): LRR L Lat: 43.089788 Long: -78.225128 Datum: NAD83

Soil Map Unit Name: HlA NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_07212020_WL35_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Daucus carota	35	X	UPL
Daucus carota	20	X	UPL
Polygonum aviculare	15		FACU
Plantago major	8		FACU
Echinochloa crus-galli	5		FAC
Gnaphalium uliginosum	2		FAC
	85	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

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

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

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

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	7	x 3	21	
FACU species	23	x 4	92	
UPL species	55	x 5	275	
Column Totals	85	(A)	388	(B)

Prevalence Index = B/A = 4.56

Hydrophytic Vegetation Indicators:

- 1- Rapid Test For Hydrophytic Vegetation
- 2- Dominance Test is > 50%
- 3- Prevalence Index is =< 3.0
- 4- Morphological Adaptations
- 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **1_07212020_WL35_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-15	10YR 3/2	98	10YR 4/4	2	C	M	Sandy Clay Loam	
15-20	10YR 4/2	95	10YR 5/6	5	C	M	Sandy Clay Loam	

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)

____ Polyvalue Below Surface (B15)
____ Thin Dark Surface (S9)
____ Loamy Mucky Mineral (F1)
____ Loamy Gleyed Matric (F2)
____ Depleted Matrix (F3)
____ Redox Dark Surface (F6)
____ Depleted Dark Surface (F7)
____ Redox Depressions (F8)

Indicators for Problematic Soils:

____ 2 cm Muck (A10)
____ Coast Prarie Redox (A16)
____ 5 cm Mucky Peat or Peat (S3)
____ Dark Surface (S7)
____ Polyvalue Below Surface (S8)
____ Thin Dark Surface (S9)
____ Iron-Manganese Masses (F12)
____ Piedmont Floodplain Soils (F19)
____ Mesic Spodic (TA6)
____ Red Parent Material (F21)
____ Very Shallow Dark Surface (TF12)
____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/21/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_07212020_WL36_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.090225 Long: -78.224613 Datum: NAD83

Soil Map Unit Name: LoA NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL36
Wetland Hydrology Present?	Yes X 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)	____	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)
____	Sparsley Vegetated Concave Surface (B8)		

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 in Aerial Imagery (C9)
____	Stunted or Stressed Plants (D1)
X	Geomorphic Position (D2)
____	Shallow Aquitard (D3)
____	Microtopographic Relief (D4)
X	FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_07212020_WL36_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer saccharinum	90	X	FACW
	90	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

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

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

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

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	90	x 2	180	
FAC species	0	x 3	0	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	90	(A)	180	(B)

Prevalence Index = B/A = 2

Hydrophytic Vegetation Indicators:

X 1- Rapid Test For Hydrophytic Vegetation

X 2- Dominance Test is > 50%

X 3- Prevalence Index is =< 3.0

4- Morphological Adaptations

5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

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

SOIL Sampling Point: **1_07212020_WL36_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-4	10YR 2/1	100					Loam	
4-8	10YR 3/1	100					Silty Clay Loam	
8-16	10YR 5/2	80	10YR 5/8	20	C	M	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/21/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_07212020_WL36_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): Convex Slope (%) 2 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.090153 Long: -78.224691 Datum: NAD83

Soil Map Unit Name: HlA NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_07212020_WL36_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer rubrum	30	X	FAC
Acer saccharinum	30	X	FACW
	60	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Rhamnus cathartica	80	X	FAC
	80	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Ambrosia artemisiifolia	4	X	FACU
Solidago canadensis	3	X	FACU
Cirsium arvense	3	X	FACU
Oxalis corniculata	3	X	FACU
Carex cristatella	1		FACW
	14	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus inserta	10	X	FACU
Vitis riparia	7	X	FAC
	17	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 44.4% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	31	x 2	62	
FAC species	117	x 3	351	
FACU species	23	x 4	92	
UPL species	0	x 5	0	
Column Totals	171	(A)	505	(B)

Prevalence Index = B/A = 2.95

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **1_07212020_WL36_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-3	10YR 2/2	100					Sandy Loam	
3-12	10YR 3/2	100					Sandy Loam	
12-18	10YR 5/2	85	10YR 5/8	15	C	M	Sandy Loam	

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)

____ Polyvalue Below Surface (B15)
____ Thin Dark Surface (S9)
____ Loamy Mucky Mineral (F1)
____ Loamy Gleyed Matric (F2)
____ Depleted Matrix (F3)
____ Redox Dark Surface (F6)
____ Depleted Dark Surface (F7)
____ Redox Depressions (F8)

Indicators for Problematic Soils:

____ 2 cm Muck (A10)
____ Coast Prarie Redox (A16)
____ 5 cm Mucky Peat or Peat (S3)
____ Dark Surface (S7)
____ Polyvalue Below Surface (S8)
____ Thin Dark Surface (S9)
____ Iron-Manganese Masses (F12)
____ Piedmont Floodplain Soils (F19)
____ Mesic Spodic (TA6)
____ Red Parent Material (F21)
____ Very Shallow Dark Surface (TF12)
____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/21/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_07212020_WL37_W1

Investigator(s): Andrew Sorci Section, Township, Range:

Landform (hillslope, terrace,etc.): Dip Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Soil Lat: 43.090503 Long: -78.226211 Datum: NAD83

Map Unit Name: HlB NWI Classification: PEM

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

Are Vegetation X , 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL37
Wetland Hydrology Present?	Yes X No ____		

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

Edge of agricultural field

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)
- ____ Sparsley 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)
- X Saturation Visible in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_07212020_WL37_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Echinochloa crus-galli	90	X	FAC
Eleocharis obtusa	20		OBL
Daucus carota	4		UPL
Abutilon theophrasti	2		FACU
	116	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

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

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

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

Prevalence Index Worksheet:

OBL species	20	x 1	20	
FACW species	0	x 2	0	
FAC species	90	x 3	270	
FACU species	2	x 4	8	
UPL species	4	x 5	20	
Column Totals	116	(A)	318	(B)

Prevalence Index = B/A = 2.74

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_07212020_WL37_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-14	7.5YR 4/2	90	10YR 4/4	10	C	M	Clay Loam	
14-18	7.5YR 5/3	70	7.5YR 5/8	30	C	M	Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/21/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_07212020_WL38_W1

Investigator(s): Andrew Sorci Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 2

Subregion (LRR or MLRA): LRR L Lat: 43.090235 Long: -78.226793 Datum: NAD83

Soil Map Unit Name: HlB NWI Classification: PEM

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

Are Vegetation X , 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL38
Wetland Hydrology Present?	Yes X No ____		

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

Edge of agricultural field

HYDROLOGY

Wetland Hydrology Indicators:

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

____	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)
____	Sparsley Vegetated Concave Surface (B8)		

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)
X	Saturation Visible in Aerial Imagery (C9)
____	Stunted or Stressed Plants (D1)
X	Geomorphic Position (D2)
____	Shallow Aquitard (D3)
____	Microtopographic Relief (D4)
X	FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_07212020_WL38_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Echinochloa crus-galli	25	X	FAC
Eleocharis obtusa	20	X	OBL
Persicaria maculosa	15	X	FAC
Polygonum aviculare	12		FACU
	72 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	20	x 1	20	
FACW species	0	x 2	0	
FAC species	40	x 3	120	
FACU species	12	x 4	48	
UPL species	0	x 5	0	
Column Totals	72	(A)	188	(B)

Prevalence Index = B/A = 2.61

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_07212020_WL38_W1**

Hydric Soil Indicators:

____	Histosol (A1)	____	Polyvalue Below Surface (B15)
____	Histic Epipedon (A2)	____	Thin Dark Surface (S9)
____	Black Histic (A3)	____	Loamy Mucky Mineral (F1)
____	Hydrogen Sulfide (A4)	____	Loamy Gleyed Matric (F2)
____	Stratified Layers (A5)	X	Depleted Matrix (F3)
____	Depleted Below Dark Surface (A11)	____	Redox Dark Surface (F6)
____	Thick Dark Surface (A12)	____	Depleted Dark Surface (F7)
____	Sandy Mucky Mineral (S1)	____	Redox Depressions (F8)
____	Sandy Gleyed Matrix (S4)		
____	Sandy Redox (S5)		
____	Stripped Matrix (S6)		
____	Dark Surface (S7)		

Indicators for Problematic Soils:

____	2 cm Muck (A10)
____	Coast Prarie Redox (A16)
____	5 cm Mucky Peat or Peat (S3)
____	Dark Surface (S7)
____	Polyvalue Below Surface (S8)
____	Thin Dark Surface (S9)
____	Iron-Manganese Masses (F12)
____	Piedmont Floodplain Soils (F19)
____	Mesic Spodic (TA6)
____	Red Parent Material (F21)
____	Very Shallow Dark Surface (TF12)
____	Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/21/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_07212020_WL37/38_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): None Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.090427 Long: -78.226432 Datum: NAD83

Soil Map Unit Name: HlB NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_07212020_WL37/38_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Daucus carota	75	X	UPL
Daucus carota	3	X	UPL
Echinochloa crus-galli	2		FAC
Abutilon theophrasti	1		FACU
	81 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

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

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

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

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	2	x 3	6	
FACU species	1	x 4	4	
UPL species	78	x 5	390	
Column Totals	81	(A)	400	(B)

Prevalence Index = B/A = 4.94

Hydrophytic Vegetation Indicators:

- 1- Rapid Test For Hydrophytic Vegetation
- 2- Dominance Test is > 50%
- 3- Prevalence Index is =< 3.0
- 4- Morphological Adaptations
- 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **1_07212020_WL37/38_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 3/2	99	10YR 3/4	1	C	M	Sandy Clay Loam	
12-18	7.5YR 4/2	85	10YR 5/6	15	C	M	Sandy Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/21/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_07212020_WL39_W1

Investigator(s): Andrew Sorci Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 2 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.090066 Long: -78.231832 Datum: NAD83

Soil Map Unit Name: RsA NWI Classification: PSS

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL39
Wetland Hydrology Present?	Yes X 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)		Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
X	High Water Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)
X	Saturation (A3)		Marl Deposits (B15)	X	Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)	X	Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)	X	Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
				X	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes X No ____	Depth (inches) 8	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes X No ____	Depth (inches) 0	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_07212020_WL39_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Cephalanthus occidentalis	50	X	OBL
Salix nigra	25	X	OBL
Fraxinus pennsylvanica	15		FACW
Cornus amomum	10		FACW
	100 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Typha angustifolia	40	X	OBL
Carex lupulina	10		OBL
Alisma subcordatum	10		OBL
	60 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	5	X	FAC
	5 = Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

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

Prevalence Index Worksheet:

OBL species	135	x 1	135	
FACW species	25	x 2	50	
FAC species	5	x 3	15	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	165	(A)	200	(B)

Prevalence Index = B/A = 1.21

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_07212020_WL39_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-2	10YR 2/1	100					Silt Loam	
2-8	10YR 3/1	90	10YR 3/6	10	C	M	Silt Loam	
8-14	10YR 4/2	85	10YR 5/6	15	C	M	Clay	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/21/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_07212020_WL39_W2

Investigator(s): Andrew Sorci Section, Township, Range:

Landform (hillslope, terrace,etc.): Dip Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Soil Lat: 43.090062 Long: -78.231918 Datum: NAD83

Map Unit Name: RsA NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL39
Wetland Hydrology Present?	Yes X No ____		

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

Edge of agricultural field

HYDROLOGY

Wetland Hydrology Indicators:

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

____	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)
____	Sparsley Vegetated Concave Surface (B8)		

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)
X	Saturation Visible in Aerial Imagery (C9)
____	Stunted or Stressed Plants (D1)
X	Geomorphic Position (D2)
____	Shallow Aquitard (D3)
____	Microtopographic Relief (D4)
X	FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_07212020_WL39_W2**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Eleocharis obtusa	75	X	OBL
Echinochloa crus-galli	20	X	FAC
Abutilon theophrasti	2		FACU
Xanthium strumarium	2		FAC
	99 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	75	x 1	75	
FACW species	0	x 2	0	
FAC species	22	x 3	66	
FACU species	2	x 4	8	
UPL species	0	x 5	0	
Column Totals	99	(A)	149	(B)

Prevalence Index = B/A = 1.51

Hydrophytic Vegetation Indicators:

- [ ] 1- Rapid Test For Hydrophytic Vegetation
- [x] 2- Dominance Test is > 50%
- [x] 3- Prevalence Index is =< 3.0
- [ ] 4- Morphological Adaptations
- [ ] 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ____

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

SOIL Sampling Point: **1_07212020_WL39_W2**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 4/2	75	10YR 4/4	25	C	M	Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/20/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_07212020_WL39_W3

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 2

Subregion (LRR or MLRA): LRR L Lat: 43.090034 Long: -78.231475 Datum: NAD83

Soil Map Unit Name: RsA NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL39
Wetland Hydrology Present?	Yes X 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)		Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
X	High Water Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)
X	Saturation (A3)		Marl Deposits (B15)	X	Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)	X	Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
				X	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes X No ____	Depth (inches) 5	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes X No ____	Depth (inches) 0	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_07212020_WL39_W3**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	50	X	FACW
Salix nigra	15	X	OBL
	65	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Cephalanthus occidentalis	15	X	OBL
Fraxinus pennsylvanica	10	X	FACW
	25	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Bidens frondosa	20	X	FACW
Solanum dulcamara	20	X	FAC
Panicum virgatum	15	X	FAC
Boehmeria cylindrica	10		OBL
Alisma subcordatum	5		OBL
	70	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

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

Prevalence Index Worksheet:

OBL species	45	x 1	45	
FACW species	80	x 2	160	
FAC species	35	x 3	105	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	160	(A)	310	(B)

Prevalence Index = B/A = 1.94

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_07212020_WL39_W3**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-14	2.5Y 3/1	80	7.5YR 3/4	20	C	M	Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/21/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_07212020_WL39_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): None Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.090098 Long: -78.232046 Datum: NAD83

Soil Map Unit Name: RsA NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_07212020_WL39_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Daucus carota	80	X	UPL
Echinochloa crus-galli	5		FAC
	85 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 0% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	5	x 3	15	
FACU species	0	x 4	0	
UPL species	80	x 5	400	
Column Totals	85	(A)	415	(B)

Prevalence Index = B/A = 4.88

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **1_07212020_WL39_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-14	10YR 3/2	100					Sandy Clay Loam	
14-20	7.5YR 4/2	90	7.5YR 4/6	10	C	M	Sandy Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/21/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200720_WL40_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Concave Slope (%) 0 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.093694 Long: -78.225875 Datum: NAD83

Soil Map Unit Name: HlB NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL40
Wetland Hydrology Present?	Yes X 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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200720_WL40_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	60	X	FACW
Salix nigra	15	X	OBL
	75 = Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Rhamnus cathartica	10	X	FAC
	10 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phragmites australis	35	X	FACW
Carex stipata	15	X	OBL
Boehmeria cylindrica	10		OBL
Symphyotrichum lanceolatum	8		FACW
	68 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	40	x 1	40	
FACW species	103	x 2	206	
FAC species	10	x 3	30	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	153	(A)	276	(B)

Prevalence Index = B/A = 1.8

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_20200720_WL40_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 2/1	100					Silt Loam	
12-18	2.5Y 5/1	95	2.5Y 7/8	5	C	M	Loamy Sand	

Hydric Soil Indicators:

- ____ Histosol (A1)
- ____ Histic Epipedon (A2)
- ____ Black Histic (A3)
- ____ Hydrogen Sulfide (A4)
- ____ Stratified Layers (A5)
- X 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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/21/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200720_WL40_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): Convex Slope (%) 3 - 8

Subregion (LRR or MLRA): LRR L Lat: 43.093680 Long: -78.226019 Datum: NAD83

Soil Map Unit Name: HlB NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200720_WL40_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	40	X	FACW
	40	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lonicera morrowii	50	X	FACU
Rhamnus cathartica	50	X	FAC
	100	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Circaea canadensis	5	X	FACU
	5	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus quinquefolia	10	X	FACU
Vitis riparia	5	X	FAC
	15	= Total Cover	

Dominance Test Worksheet:

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

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	40	x 2	80	
FAC species	55	x 3	165	
FACU species	65	x 4	260	
UPL species	0	x 5	0	
Column Totals	160	(A)	505	(B)

Prevalence Index = B/A = 3.16

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **1_20200720_WL40_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-10	10YR 3/2	100					Sandy Loam	
10-14	10YR 4/3	100					Sandy Loam	
14-20	10YR 5/4	100					Sandy Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/20/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200720_WL41_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Dip Local relief (concave, convex, none): Concave Slope (%) 0 - 3

Subregion (LRR or MLRA): LRR L Lat: 43.094835 Long: -78.222539 Datum: NAD83

Soil Map Unit Name: LoA NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL41
Wetland Hydrology Present?	Yes X 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)	____	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)
____	Sparsley Vegetated Concave Surface (B8)		

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 in Aerial Imagery (C9)
____	Stunted or Stressed Plants (D1)
X	Geomorphic Position (D2)
____	Shallow Aquitard (D3)
____	Microtopographic Relief (D4)
X	FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200720_WL41_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	40	X	FACW
Crataegus crus-galli	15	X	FAC
	55	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lonicera morrowii	15	X	FACU
Fraxinus pennsylvanica	15	X	FACW
	30	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Cicuta maculata	20	X	OBL
Symplocarpus foetidus	20	X	OBL
Impatiens pallida	10		FACW
Bidens frondosa	5		FACW
Geranium robertianum	1		FACU
	56	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= 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: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83.3% (A/B)

Prevalence Index Worksheet:

OBL species	40	x 1	40	
FACW species	70	x 2	140	
FAC species	15	x 3	45	
FACU species	16	x 4	64	
UPL species	0	x 5	0	
Column Totals	141	(A)	289	(B)

Prevalence Index = B/A = 2.05

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_20200720_WL41_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-10	10YR 3/1	90	10YR 4/4	10	C	M	Silty Clay Loam	
10-16	10YR 4/1	90	10YR 4/6	10	C	M	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/20/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200720_WL42_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Linear Slope (%) 0 - 10

Subregion (LRR or MLRA): LRR L Lat: 43.097417 Long: -78.219370 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL41
Wetland Hydrology Present?	Yes X No ____		

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

Associated with drainage ditch

HYDROLOGY

Wetland Hydrology Indicators:

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

	Surface Water (A1)		Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)
	Saturation (A3)		Marl Deposits (B15)	X	Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)	X	Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)	X	Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
				X	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X Depth (inches) ____	Wetland Hydrology Present?	Yes X No ____
Water Table Present?	Yes ____ No X Depth (inches) ____		
Saturation Present?	Yes ____ No X Depth (inches) ____		

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200720_WL42_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Populus deltoides	90	X	FAC
	90	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	10	X	FACW
	10	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Symphyotrichum lanceolatum	5	X	FACW
	5	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus quinquefolia	3		FACU
	3	= Total Cover	

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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	15	x 2	30	
FAC species	90	x 3	270	
FACU species	3	x 4	12	
UPL species	0	x 5	0	
Column Totals	108	(A)	312	(B)

Prevalence Index = B/A = 2.89

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ____

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

SOIL Sampling Point: **1_20200720_WL42_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-8	10YR 2/1	95	2.5YR 4/8	5	C	PL	Sandy Loam	
8-18	10YR 3/2	100					Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/21/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200720_WL41_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): Convex Slope (%) 2 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.094754 Long: -78.222372 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: UPL

Are climatic / hyrologic 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 X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	if yes, optional Wetland Site ID: ____
Wetland Hydrology Present?	Yes ____	No X	

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____	No X	Depth (inches) ____
Water Table Present?	Yes ____	No X	Depth (inches) ____
Saturation Present?	Yes ____	No X	Depth (inches) ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200720_WL41_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Rhamnus cathartica	25	X	FAC
Lonicera morrowii	20	X	FACU
Rosa multiflora	6		FACU
	51 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Persicaria virginiana	15	X	FAC
Agrostis stolonifera	10	X	FACW
Impatiens pallida	5		FACW
Geum canadense	5		FAC
Symphyotrichum lateriflorum	5		FAC
Toxicodendron radicans	5		FAC
Circaea canadensis	4		FACU
	49 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus quinquefolia	10	X	FACU
	10 = Total Cover		

Dominance Test Worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 60% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	15	x 2	30	
FAC species	55	x 3	165	
FACU species	40	x 4	160	
UPL species	0	x 5	0	
Column Totals	110	(A)	355	(B)

Prevalence Index = B/A = 3.23

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- ___ 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_20200720_WL41_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 3/2	98	10YR 3/4	2	C	M	Sandy Clay Loam	
12-20	10YR 4/3	90	5Y 7/6	10	C	M	Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennesee Sampling Date: 10/1/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20201001_WL113_W1

Investigator(s): Andrew Sorci Section, Township, Range:

Landform (hillslope, terrace,etc.): Footslope Local relief (concave, convex, none): Concave Slope (%) 0 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.108947 Long: -78.171408 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL42
Wetland Hydrology Present?	Yes X 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)		Water-Stained Leaves (B9)		Drainage Patterns (B10)
	High Water Table (A2)		Aquatic Fauna (B13)	X	Moss Trim Lines (B16)
	Saturation (A3)		Marl Deposits (B15)		Dry-Season Water Table (C2)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Saturation Visible in Aerial Imagery (C9)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Stunted or Stressed Plants (D1)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)	X	Geomorphic Position (D2)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Shallow Aquitard (D3)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Microtopographic Relief (D4)
	Sparsley Vegetated Concave Surface (B8)			X	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20201001_WL113_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Quercus bicolor	25	X	FACW
Acer saccharinum	20	X	FACW
	45	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	30	X	FACW
	30	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Agrostis stolonifera	50	X	FACW
Impatiens capensis	30	X	FACW
Lysimachia nummularia	25		FACW
Symphyotrichum lanceolatum	20		FACW
Urtica dioica	15		FAC
Persicaria virginiana	5		FAC
	145	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= 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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	200	x 2	400	
FAC species	20	x 3	60	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	220	(A)	460	(B)

Prevalence Index = B/A = 2.09

Hydrophytic Vegetation Indicators:

X 1- Rapid Test For Hydrophytic Vegetation

X 2- Dominance Test is > 50%

X 3- Prevalence Index is =< 3.0

4- Morphological Adaptations

5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

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

SOIL Sampling Point: **1_20201001_WL113_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-8	10YR 3/2	98	10YR 3/3	2	C	M	Sandy Clay Loam	
8-16	10YR 5/2	70	10YR 5/8	30	C	M	Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/21/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200720_WL42_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): Concave Slope (%) 1 - 10

Subregion (LRR or MLRA): LRR L Lat: 43.097375 Long: -78.219360 Datum: NAD83

Soil Map Unit Name: HlB NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200720_WL42_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Zea mays	25	X	UPL
Lolium perenne	15	X	FACU
Trifolium pratense	5		FACU
Solidago canadensis	5		FACU
Daucus carota	5	X	UPL
Plantago major	4		FACU
Ambrosia artemisiifolia	3		FACU
	62	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus quinquefolia	10	X	FACU
Vitis riparia	3	X	FAC
	13	= Total Cover	

Dominance Test Worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 20% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	3	x 3	9	
FACU species	42	x 4	168	
UPL species	30	x 5	150	
Column Totals	75	(A)	327	(B)

Prevalence Index = B/A = 4.36

Hydrophytic Vegetation Indicators:

- 1- Rapid Test For Hydrophytic Vegetation
- 2- Dominance Test is > 50%
- 3- Prevalence Index is =< 3.0
- 4- Morphological Adaptations
- 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **1_20200720_WL42_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-14	10YR 3/2	100					Sandy Loam	
14-20	10YR 3/2	95	10YR 5/6	5	C	M	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/22/2020

Applicant/Owner: Hecate State: NY Sampling Point: Upland-WL41

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.097375 Long: -78.219358 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Upland-WL41**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phalaris arundinacea	40	X	FACW
Trifolium pratense	20	X	FACU
Symphyotrichum lanceolatum	10		FACW
Trifolium repens	5		FACU
Erigeron strigosus	5		FACU
Daucus carota	5		UPL
	85 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	50	x 2	100	
FAC species	0	x 3	0	
FACU species	30	x 4	120	
UPL species	5	x 5	25	
Column Totals	85	(A)	245	(B)

Prevalence Index = B/A = 2.88

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
disturbed, farm land

SOIL Sampling Point: **Upland-WL41**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-20	10YR 4/6	100					Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennesee Sampling Date: 10/1/2020

Applicant/Owner: Hecate State: NY Sampling Point: Upland-WL42

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): Convex Slope (%) 5 - 15

Subregion (LRR or MLRA): LRR L Lat: 43.108852 Long: -78.171311 Datum: NAD83

Soil Map Unit Name: _____ NWI Classification: UPL

Are climatic / hyrologic 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 X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	if yes, optional Wetland Site ID: _____
Wetland Hydrology Present?	Yes ____	No X	

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____	No X	Depth (inches) ____
Water Table Present?	Yes ____	No X	Depth (inches) ____
Saturation Present?	Yes ____	No X	Depth (inches) ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Upland-WL42**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	15	X	FACW
Quercus macrocarpa	15	X	FACU
	30	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Cornus racemosa	5	X	FAC
Lonicera morrowii	5	X	FACU
Rubus idaeus	5	X	FACU
	15	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lysimachia nummularia	50	X	FACW
Symphyotrichum lateriflorum	35	X	FAC
Impatiens capensis	25	X	FACW
Dryopteris expansa	5		FAC
Persicaria virginiana	5		FAC
	120	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	10	X	FAC
Toxicodendron radicans	5	X	FAC
	15	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 10 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 70% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	90	x 2	180	
FAC species	65	x 3	195	
FACU species	25	x 4	100	
UPL species	0	x 5	0	
Column Totals	180	(A)	475	(B)

Prevalence Index = B/A = 2.64

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **Upland-WL42**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-15	10YR 3/2	100					Silt Loam	
15-20	7.5YR 5/3	85	7.5YR 4/4	15	C	M	Silt Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/20/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200720_WL43_W1

Investigator(s): Andrew Sorci Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Linear Slope (%) 0 - 10

Subregion (LRR or MLRA): LRR L Lat: 43.090674 Long: -78.217708 Datum: NAD83

Soil Map Unit Name: HlB NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL43
Wetland Hydrology Present?	Yes X No ____		

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

Associated with stream

HYDROLOGY

Wetland Hydrology Indicators:

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

____	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)
____	Sparsley Vegetated Concave Surface (B8)		

Secondary Indicators (minimum of two required)

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

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200720_WL43_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer negundo	55	X	FAC
Populus deltoides	25	X	FAC
	80	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lonicera morrowii	10	X	FACU
Fraxinus pennsylvanica	5	X	FACW
	15	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phalaris arundinacea	35	X	FACW
Boehmeria cylindrica	10		OBL
Impatiens capensis	10		FACW
Symphyotrichum lateriflorum	7		FAC
Asclepias incarnata	4		OBL
	66	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	15	X	FAC
	15	= 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: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83.3% (A/B)

Prevalence Index Worksheet:

OBL species	14	x 1	14	
FACW species	50	x 2	100	
FAC species	102	x 3	306	
FACU species	10	x 4	40	
UPL species	0	x 5	0	
Column Totals	176	(A)	460	(B)

Prevalence Index = B/A = 2.61

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_20200720_WL43_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-8	7.5YR 3/1	95	10YR 4/6	5	C	M	Sandy Clay Loam	
8-16	10YR 4/2	100					Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/20/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200720_WL43_W2

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Dip Local relief (concave, convex, none): None Slope (%) 0 - 2

Subregion (LRR or MLRA): LRR L Lat: 43.090849 Long: -78.217833 Datum: NAD83

Soil Map Unit Name: HlB NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL43
Wetland Hydrology Present?	Yes X No ____		

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

Edge of agricultural field; on margin of stream bank

HYDROLOGY

Wetland Hydrology Indicators:

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

____	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)
____	Sparsley Vegetated Concave Surface (B8)		

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)
X	Saturation Visible in Aerial Imagery (C9)
____	Stunted or Stressed Plants (D1)
____	Geomorphic Position (D2)
____	Shallow Aquitard (D3)
____	Microtopographic Relief (D4)
X	FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200720_WL43_W2**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phalaris arundinacea	20	X	FACW
Bidens frondosa	15	X	FACW
Carex vulpinoidea	15	X	OBL
Acalypha rhomboidea	15	X	FACU
Cicuta maculata	10		OBL
Symphyotrichum lateriflorum	5		FAC
Daucus carota	5		UPL
	85	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	10	X	FAC
	10	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 80% (A/B)

Prevalence Index Worksheet:

OBL species	25	x 1	25	
FACW species	35	x 2	70	
FAC species	15	x 3	45	
FACU species	15	x 4	60	
UPL species	5	x 5	25	
Column Totals	95	(A)	225	(B)

Prevalence Index = B/A = 2.37

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_20200720_WL43_W2**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 2/1	100					Sandy Clay Loam	
12-18	10YR 4/1	85	10YR 4/6	15	C	M	Sandy Loam	

Hydric Soil Indicators:

- ____ Histosol (A1)
- ____ Histic Epipedon (A2)
- ____ Black Histic (A3)
- ____ Hydrogen Sulfide (A4)
- ____ Stratified Layers (A5)
- X 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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/21/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200720_WL43_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): Convex Slope (%) 2 - 4

Subregion (LRR or MLRA): LRR L Lat: 43.090714 Long: 43.090714 Datum: NAD83

Soil Map Unit Name: HlB NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200720_WL43_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer negundo	10	X	FAC
	10	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Rubus idaeus	15	X	FACU
Rhus aromatica	15	X	UPL
Lonicera morrowii	10	X	FACU
	40	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Solidago canadensis	25	X	FACU
Zea mays	20	X	UPL
Alliaria petiolata	10		FACU
Asclepias syriaca	8		UPL
Boehmeria cylindrica	5		OBL
	68	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	40	X	FAC
	40	= 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: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 28.6% (A/B)

Prevalence Index Worksheet:

OBL species	5	x 1	5	
FACW species	0	x 2	0	
FAC species	50	x 3	150	
FACU species	60	x 4	240	
UPL species	43	x 5	215	
Column Totals	158	(A)	610	(B)

Prevalence Index = B/A = 3.86

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **1_20200720_WL43_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-14	10YR 3/2	100					Sandy Loam	
14-16	10YR 4/2	100					Sandy Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/20/2020
Applicant/Owner: Hecate State: NY Sampling Point: 1_20200721_WL44_W1
Investigator(s): Andrew Sorci Section, Township, Range:
Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 2 - 5
Subregion (LRR or MLRA): LRR L Lat: 43.073955 Long: -78.216827 Datum: NAD83
Soil Map Unit Name: Wy NWI Classification: PEM
Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL44
Wetland Hydrology Present?	Yes X 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)	____	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)
____	Sparsley Vegetated Concave Surface (B8)		

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)
X	Saturation Visible in Aerial Imagery (C9)
____	Stunted or Stressed Plants (D1)
X	Geomorphic Position (D2)
____	Shallow Aquitard (D3)
____	Microtopographic Relief (D4)
X	FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200721_WL44_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phalaris arundinacea	100	X	FACW
	100 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

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

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

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

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	100	x 2	200	
FAC species	0	x 3	0	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	100	(A)	200	(B)

Prevalence Index = B/A = 2

Hydrophytic Vegetation Indicators:

X 1- Rapid Test For Hydrophytic Vegetation

X 2- Dominance Test is > 50%

X 3- Prevalence Index is =< 3.0

4- Morphological Adaptations

5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

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

SOIL Sampling Point: **1_20200721_WL44_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
3-12	10YR 3/1	85	10YR 4/4	15	C	M	Clay Loam	
12-16	10YR 3/1	80	10YR 5/6	20	C	M	Sandy Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/21/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200721_WL44_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): Convex Slope (%) 3 - 8

Subregion (LRR or MLRA): LRR L Lat: 43.074137 Long: -78.216873 Datum: NAD83

Soil Map Unit Name: HlB NWI Classification: UPL

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	____
Wetland Hydrology Present?	Yes X 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)	____ Water-Stained Leaves (B9)	____ Surface Soil Cracks (B6)
____ High Water Table (A2)	____ Aquatic Fauna (B13)	____ Drainage Patterns (B10)
____ Saturation (A3)	____ Marl Deposits (B15)	____ Moss Trim Lines (B16)
____ Water Marks (B1)	____ Hydrogen Sulfide Odor (C1)	____ Dry-Season Water Table (C2)
____ Sediment Deposits (B2)	____ Oxidized Rhizospheres on Living Roots (C3)	____ Crayfish Burrows (C8)
____ Drift Deposits (B3)	____ Presence of Reduced Iron (C4)	____ Saturation Visible in Aerial Imagery (C9)
____ Algal Mat or Crust (B4)	____ Recent Iron Reduction in Tilled Soils (C6)	____ Stunted or Stressed Plants (D1)
____ Iron Deposits (B5)	____ Thin Muck Surface (C7)	X Geomorphic Position (D2)
____ Inundation Visible on Aerial Imagery (B7)	____ Other (Explain in Remarks)	____ Shallow Aquitard (D3)
____ Sparsley Vegetated Concave Surface (B8)		____ Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X	Depth (inches) ____
Water Table Present?	Yes ____ No X	Depth (inches) ____
Saturation Present?	Yes ____ No X	Depth (inches) ____

Wetland Hydrology Present? Yes X No ____

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200721_WL44_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Populus deltoides	30	X	FAC
	30 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phalaris arundinacea	60	X	FACW
Euthamia graminifolia	40	X	FAC
	100 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	60	x 2	120	
FAC species	70	x 3	210	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	130	(A)	330	(B)

Prevalence Index = B/A = 2.54

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ____

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

SOIL Sampling Point: **1_20200721_WL44_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-14	10YR 3/2	100					Sandy Loam	
14-20	10YR 3/2	95	5YR 4/6	5	C	M	Sandy Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/22/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_07222020_WL45_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.080266 Long: -78.216803 Datum: NAD83

Soil Map Unit Name: ApA NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL45
Wetland Hydrology Present?	Yes X No ____		

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

Associated with drainage ditch

HYDROLOGY

Wetland Hydrology Indicators:

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

____	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)
____	Sparsley Vegetated Concave Surface (B8)		

Secondary Indicators (minimum of two required)

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

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_07222020_WL45_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Typha angustifolia	8	X	OBL
Persicaria maculosa	5	X	FAC
Phalaris arundinacea	3		FACW
	16 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	8	x 1	8	
FACW species	3	x 2	6	
FAC species	5	x 3	15	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	16	(A)	29	(B)

Prevalence Index = B/A = 1.81

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_07222020_WL45_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-4	10YR 4/1	95	10YR 4/4	5	C	M	Loamy Sand	
4-16	7.5YR 5/1	90	7.5YR 4/6	10	C	M	Sandy Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/22/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_07222020_WL45_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Terrace Local relief (concave, convex, none): None Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.080195 Long: -78.216840 Datum: NAD83

Soil Map Unit Name: OnB NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_07222020_WL45_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Cornus racemosa	5	X	FAC
Fraxinus pennsylvanica	3	X	FACW
	8 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Abutilon theophrasti	20	X	FACU
Bromus inermis	15	X	UPL
Glycine max	15	X	UPL
Solidago canadensis	7		FACU
Ambrosia artemisiifolia	5		FACU
Phalaris arundinacea	5		FACW
	67 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	8	x 2	16	
FAC species	5	x 3	15	
FACU species	32	x 4	128	
UPL species	30	x 5	150	
Column Totals	75	(A)	309	(B)

Prevalence Index = B/A = 4.12

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **1_07222020_WL45_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-9	10YR 2/2	100					Sandy Loam	
9-18	7.5YR 5/3	80	7.5YR 5/8	20	C	M	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennesee Sampling Date: 7/22/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_07222020_WL45_U2

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Terrace Local relief (concave, convex, none): None Slope (%) 0 - 10

Subregion (LRR or MLRA): LRR L Lat: 43.080183 Long: -78.216830 Datum: NAD83

Soil Map Unit Name: RsA NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_07222020_WL45_U2**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Cornus racemosa	5	X	FAC
Fraxinus pennsylvanica	3	X	FACW
	8 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Abutilon theophrasti	20	X	FACU
Bromus inermis	15	X	UPL
Daucus carota	15	X	UPL
Solidago canadensis	7		FACU
Ambrosia artemisiifolia	5		FACU
Phalaris arundinacea	5		FACW
	67 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	8	x 2	16	
FAC species	5	x 3	15	
FACU species	32	x 4	128	
UPL species	30	x 5	150	
Column Totals	75	(A)	309	(B)

Prevalence Index = B/A = 4.12

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **1_07222020_WL45_U2**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-9	10YR 2/2	100					Sandy Loam	
9-20	7.5YR 5/3	95	7.5YR 5/8	5	C	M	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/20/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200722_WL46_W2

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Dip Local relief (concave, convex, none): None Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.079274 Long: -78.220638 Datum: NAD83

Soil Map Unit Name: RaA NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL46
Wetland Hydrology Present?	Yes X 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)
- ____ Sparsley 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)
- X Moss Trim Lines (B16)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200722_WL46_W2**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	75	X	FACW
	75	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Rhamnus cathartica	70	X	FAC
	70	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Alliaria petiolata	10	X	FACU
Persicaria virginiana	10	X	FAC
	20	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

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

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	75	x 2	150	
FAC species	80	x 3	240	
FACU species	10	x 4	40	
UPL species	0	x 5	0	
Column Totals	165	(A)	430	(B)

Prevalence Index = B/A = 2.61

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_20200722_WL46_W2**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-7	10YR 2/1	100					Clay Loam	
7-14	10YR 5/1	90	7.5YR 6/6	10	C	M	Clay Loam	
14-18	10YR 4/2	85	7.5YR 5/6	15	C	M	Sandy Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/22/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200722_WL46_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): None Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.079277 Long: -78.220641 Datum: NAD83

Soil Map Unit Name: RaA NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL46
Wetland Hydrology Present?	Yes X 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)
- ____ Sparsley 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)
- X Moss Trim Lines (B16)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200722_WL46_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	20	X	FACW
	20	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phalaris arundinacea	65	X	FACW
Scirpus atrovirens	15		OBL
Eutrochium purpureum	15		FAC
Euthamia graminifolia	15		FAC
Solidago gigantea	15		FACW
	125	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= 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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	15	x 1	15	
FACW species	100	x 2	200	
FAC species	30	x 3	90	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	145	(A)	305	(B)

Prevalence Index = B/A = 2.1

Hydrophytic Vegetation Indicators:

- X 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- 4- Morphological Adaptations
- 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

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

SOIL Sampling Point: **1_20200722_WL46_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-14	5Y 4/2	97	10YR 4/4	3	C	M	Sandy Clay Loam	
14-18	7.5YR 5/3	90	10YR 5/6	10	C	M	Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/23/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200722_WL46_U1

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.080479 Long: -78.219795 Datum: NAD83

Soil Map Unit Name: RsA NWI Classification: UPL

Are climatic / hyrologic 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 X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	if yes, optional Wetland Site ID: _____
Wetland Hydrology Present?	Yes ____	No X	

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____	No X	Depth (inches) ____
Water Table Present?	Yes ____	No X	Depth (inches) ____
Saturation Present?	Yes ____	No X	Depth (inches) ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200722_WL46_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	40	X	FACW
Acer negundo	20	X	FAC
	60	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lindera benzoin	20	X	FACW
Populus deltoides	10	X	FAC
	30	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Toxicodendron radicans	30	X	FAC
Alliaria petiolata	10	X	FACU
	40	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus quinquefolia	20	X	FACU
Vitis riparia	10	X	FAC
	30	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	60	x 2	120	
FAC species	70	x 3	210	
FACU species	30	x 4	120	
UPL species	0	x 5	0	
Column Totals	160	(A)	450	(B)

Prevalence Index = B/A = 2.81

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_20200722_WL46_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-10	10YR 4/6	100					Silt Loam	
10-20	10YR 4/6	90	7.5YR 5/8	10	C	PL	Silt Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/20/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200722_WL47_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Dip Local relief (concave, convex, none): Concave Slope (%) 0 - 2

Subregion (LRR or MLRA): LRR L Lat: 43.108216 Long: -78.232744 Datum: NAD83

Soil Map Unit Name: CbA NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL47-1
Wetland Hydrology Present?	Yes X 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)		Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)
	Saturation (A3)		Marl Deposits (B15)	X	Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)	X	Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)	X	Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
				X	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X Depth (inches) ____	Wetland Hydrology Present?	Yes X No ____
Water Table Present?	Yes ____ No X Depth (inches) ____		
Saturation Present?	Yes ____ No X Depth (inches) ____		

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200722_WL47_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	50	X	FACW
Quercus macrocarpa	10		FACU
	60 = Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Rhamnus cathartica	10	X	FAC
Fraxinus pennsylvanica	10	X	FACW
Acer rubrum	3		FAC
	23 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Carex grayi	35	X	FACW
Agrostis stolonifera	20	X	FACW
Toxicodendron radicans	20	X	FAC
Boehmeria cylindrica	15		OBL
	90 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

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

Prevalence Index Worksheet:

OBL species	15	x 1	15	
FACW species	115	x 2	230	
FAC species	33	x 3	99	
FACU species	10	x 4	40	
UPL species	0	x 5	0	
Column Totals	173	(A)	384	(B)

Prevalence Index = B/A = 2.22

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_20200722_WL47_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 2/1	95	5YR 5/6	5	C	PL	Silt Loam	
12-16	10YR 6/1	80	7.5YR 5/6	20	C	M	Silty Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/22/2020
Applicant/Owner: Hecate State: NY Sampling Point: 1_20200722_WL47_W2
Investigator(s): Andrew Sorci Section, Township, Range:
Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): None Slope (%) 0 - 5
Subregion (LRR or MLRA): LRR L Lat: 43.108174 Long: -78.233044 Datum: NAD83
Soil Map Unit Name: CbA NWI Classification: PEM
Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL47-2
Wetland Hydrology Present?	Yes X No ____		

Remarks: (Explain alternative procedures here or in a separate report.)
Fallow agricultural field; may have been sprayed by pesticide recently

HYDROLOGY

Wetland Hydrology Indicators:

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

- X Surface Water (A1)
- X High Water Table (A2)
- X 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)
- ____ Sparsley 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)

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

Surface Water Present?	Yes X No ____	Depth (inches)	1
Water Table Present?	Yes X No ____	Depth (inches)	5
Saturation Present?	Yes X No ____	Depth (inches)	0

Wetland Hydrology Present? Yes X No ____

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200722_WL47_W2**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Cyperus strigosus	40	X	FACW
Abutilon theophrasti	15	X	FACU
	55 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	40	x 2	80	
FAC species	0	x 3	0	
FACU species	15	x 4	60	
UPL species	0	x 5	0	
Column Totals	55	(A)	140	(B)

Prevalence Index = B/A = 2.55

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ____

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

SOIL Sampling Point: **1_20200722_WL47_W2**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-9	2.5Y 3/1	95	10YR 4/6	5	C	M	Clay Loam	
9-16	2.5Y 2.5/1	100					Clay	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/22/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200722_WL48_W1

Investigator(s): Andrew Sorci Section, Township, Range:

Landform (hillslope, terrace,etc.): Dip Local relief (concave, convex, none): Linear Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.107837 Long: -78.232852 Datum: NAD83

Soil Map Unit Name: CbA NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL48
Wetland Hydrology Present?	Yes X No ____		

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

Along dirt access road

HYDROLOGY

Wetland Hydrology Indicators:

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

X	Surface Water (A1)		Water-Stained Leaves (B9)		Drainage Patterns (B10)
X	High Water Table (A2)		Aquatic Fauna (B13)		Moss Trim Lines (B16)
X	Saturation (A3)		Marl Deposits (B15)		Dry-Season Water Table (C2)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)	X	Saturation Visible in Aerial Imagery (C9)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Stunted or Stressed Plants (D1)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)	X	Geomorphic Position (D2)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Shallow Aquitard (D3)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Microtopographic Relief (D4)
	Sparsley Vegetated Concave Surface (B8)			X	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

X	Surface Soil Cracks (B6)

Surface Water Present?	Yes X	No ____	Depth (inches)	2	
Water Table Present?	Yes X	No ____	Depth (inches)	0	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes X	No ____	Depth (inches)	0	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200722_WL48_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Agrostis stolonifera	50	X	FACW
Typha angustifolia	5		OBL
	55 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

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

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

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

Prevalence Index Worksheet:

OBL species	5	x 1	5	
FACW species	50	x 2	100	
FAC species	0	x 3	0	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	55	(A)	105	(B)

Prevalence Index = B/A = 1.91

Hydrophytic Vegetation Indicators:

X 1- Rapid Test For Hydrophytic Vegetation

X 2- Dominance Test is > 50%

X 3- Prevalence Index is =< 3.0

4- Morphological Adaptations

5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

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

SOIL Sampling Point: **1_20200722_WL48_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 4/2	80	10YR 5/8	20	C	M	Clay	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/22/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200722_WL47/W48_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): None Slope (%) 0 - 3

Subregion (LRR or MLRA): LRR L Lat: 43.107831 Long: -78.232790 Datum: NAD83

Soil Map Unit Name: CbA NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200722_WL47/W48_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lotus corniculatus	25	X	FACU
Phleum pratense	20	X	FACU
Dactylis glomerata	20	X	FACU
Cirsium arvense	15	X	FACU
Trifolium pratense	15	X	FACU
Toxicodendron radicans	10		FAC
Agrostis gigantea	10		FACW
Phalaris arundinacea	10		FACW
Daucus carota	5		UPL
Cichorium intybus	5		FACU
	135	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 5 (B)

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

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	20	x 2	40	
FAC species	10	x 3	30	
FACU species	100	x 4	400	
UPL species	5	x 5	25	
Column Totals	135	(A)	495	(B)

Prevalence Index = B/A = 3.67

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL

Sampling Point: **1_20200722_WL47/W48_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-11	10YR 4/3	99	10YR 6/2	1	C	M	Sandy Clay Loam	
11-20	10YR 4/3	95	10YR 5/8	5	C	M	Sandy Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/22/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200722_WL49_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Dip Local relief (concave, convex, none): None Slope (%) 0 - 2

Subregion (LRR or MLRA): LRR L Lat: 43.107692 Long: -78.235515 Datum: NAD83

Soil Map Unit Name: CbA NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL49
Wetland Hydrology Present?	Yes X 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)		Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)
	Saturation (A3)		Marl Deposits (B15)	X	Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
				X	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X Depth (inches) ____	Wetland Hydrology Present?	Yes X No ____
Water Table Present?	Yes ____ No X Depth (inches) ____		
Saturation Present?	Yes ____ No X Depth (inches) ____		

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200722_WL49_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer rubrum	65	X	FAC
Ulmus americana	30	X	FACW
	95	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lindera benzoin	20	X	FACW
	20	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Dryopteris carthusiana	15	X	FACW
Saururus cernuus	15	X	OBL
	30	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	5	X	FAC
	5	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

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

Prevalence Index Worksheet:

OBL species	15	x 1	15	
FACW species	65	x 2	130	
FAC species	70	x 3	210	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	150	(A)	355	(B)

Prevalence Index = B/A = 2.37

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_20200722_WL49_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-7	10YR 2/1	100					Sandy Clay Loam	
7-16	10YR 6/1	85	10YR 6/6	15	C	M	Sandy Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/22/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200722_WL49_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): Convex Slope (%) 1 - 3

Subregion (LRR or MLRA): LRR L Lat: 43.107899 Long: -78.235469 Datum: NAD83

Soil Map Unit Name: CbA NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200722_WL49_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	40	X	FACW
Ulmus americana	40	X	FACW
Fagus grandifolia	10		FACU
	90	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Rhamnus cathartica	25	X	FAC
Unknown species	10	X	UNK
Lonicera morrowii	10	X	FACU
Rubus idaeus	10	X	FACU
Lindera benzoin	5		FACW
Rosa multiflora	5		FACU
	65	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Alliaria petiolata	15	X	FACU
Circaea canadensis	10	X	FACU
Ranunculus hispidus	5		FAC
	30	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

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

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 37.5% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	85	x 2	170	
FAC species	30	x 3	90	
FACU species	60	x 4	240	
UPL species	0	x 5	0	
Column Totals	175	(A)	500	(B)

Prevalence Index = B/A = 2.86

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- ___ 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ___ No X

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

SOIL Sampling Point: **1_20200722_WL49_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	7.5YR 3/1	100					Sandy Loam	
12-20	7.5YR 3/1	99	7.5YR 4/6	1	C	M	Sandy Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennesee Sampling Date: 7/23/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_07232020_WL50_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Terrace Local relief (concave, convex, none): Convex Slope (%) 0 - 15

Subregion (LRR or MLRA): LRR L Lat: 43.099432 Long: -78.225268 Datum: NAD83

Soil Map Unit Name: Ma NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_07232020_WL50_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Juglans cinerea	10	X	FACU
	10	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Rubus idaeus	25	X	FACU
Lonicera morrowii	10	X	FACU
	35	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Solidago canadensis	40	X	FACU
Euthamia graminifolia	20	X	FAC
Symphyotrichum lateriflorum	5		FAC
	65	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus quinquefolia	5	X	FACU
	5	= Total Cover	

Dominance Test Worksheet:

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

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 16.7% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	25	x 3	75	
FACU species	90	x 4	360	
UPL species	0	x 5	0	
Column Totals	115	(A)	435	(B)

Prevalence Index = B/A = 3.78

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **1_07232020_WL50_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 3/2	100					Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 12

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/23/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_07232020_WL51_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): None Slope (%) 0 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.106205 Long: -78.235031 Datum: NAD83

Soil Map Unit Name: Ma NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL51
Wetland Hydrology Present?	Yes X 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)
- ____ Sparsley 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)
- X Moss Trim Lines (B16)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_07232020_WL51_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer rubrum	50	X	FAC
Ulmus americana	25	X	FACW
Acer saccharinum	25	X	FACW
Fraxinus pennsylvanica	10		FACW
	110	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Alliaria petiolata	25	X	FACU
Toxicodendron radicans	10	X	FAC
Geum canadense	5		FAC
Persicaria virginiana	5		FAC
Geranium robertianum	5		FACU
	50	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus quinquefolia	5	X	FACU
	5	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	60	x 2	120	
FAC species	70	x 3	210	
FACU species	35	x 4	140	
UPL species	0	x 5	0	
Column Totals	165	(A)	470	(B)

Prevalence Index = B/A = 2.85

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_07232020_WL51_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-13	10YR 2/1	100					Sandy Loam	
13-18	2.5Y 6/1	85	2.5Y 6/1	15	C	M	Loamy Sand	

Hydric Soil Indicators:

- ____ Histosol (A1)
- ____ Histic Epipedon (A2)
- ____ Black Histic (A3)
- ____ Hydrogen Sulfide (A4)
- ____ Stratified Layers (A5)
- X 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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/20/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_07232020_WL51_W2

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): None Slope (%) 0 - 3

Subregion (LRR or MLRA): LRR L Lat: 43.106078 Long: -78.234980 Datum: NAD83

Soil Map Unit Name: Ma NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL51-2
Wetland Hydrology Present?	Yes X No ____		

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

Edge of agricultural field

HYDROLOGY

Wetland Hydrology Indicators:

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

	Surface Water (A1)		Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)
	Saturation (A3)		Marl Deposits (B15)		Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)	X	Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)	X	Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
				X	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X Depth (inches) ____	Wetland Hydrology Present?	Yes X No ____
Water Table Present?	Yes ____ No X Depth (inches) ____		
Saturation Present?	Yes ____ No X Depth (inches) ____		

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_07232020_WL51_W2**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phalaris arundinacea	35	X	FACW
Cyperus strigosus	30	X	FACW
Solidago canadensis	20	X	FACU
Ambrosia artemisiifolia	15		FACU
Abutilon theophrasti	15		FACU
Setaria pumila	15		FAC
Amaranthus albus	5		FACU
Rumex crispus	2		FAC
	137	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	65	x 2	130	
FAC species	17	x 3	51	
FACU species	55	x 4	220	
UPL species	0	x 5	0	
Column Totals	137	(A)	401	(B)

Prevalence Index = B/A = 2.93

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_07232020_WL51_W2**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-5	10YR 3/1	90	7.5YR 4/6	10	C	PL	Loam	
5-13	10YR 4/2	90	7.5YR 4/6	10	C	M	Sandy Loam	
13-18	2.5Y 6/1	90	2.5Y 4/6	10	C	M	Loamy Sand	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/23/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_07232020_WL51_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): None Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.105810 Long: -78.234917 Datum: NAD83

Soil Map Unit Name: NgA NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_07232020_WL51_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phalaris arundinacea	25	X	FACW
Unknown species	25	X	UNK
Abutilon theophrasti	5		FACU
Avena sativa	5		UPL
Chenopodium album	5		FACU
Plantago major	3		FACU
	68 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	25	x 2	50	
FAC species	0	x 3	0	
FACU species	13	x 4	52	
UPL species	5	x 5	25	
Column Totals	43	(A)	127	(B)

Prevalence Index = B/A = 2.95

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
unknown grass species; area may have been sprayed recently

SOIL Sampling Point: **1_07232020_WL51_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-18	10YR 3/2	95	10YR 4/6	5	C	M	Sandy Loam	
18-20	10YR 2/1	90	7.5YR 6/1	10	C	M	Sandy Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/20/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_07232020_WL52_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Dip Local relief (concave, convex, none): Concave Slope (%) 0 - 2

Subregion (LRR or MLRA): LRR L Lat: 43.107663 Long: -78.231590 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL52
Wetland Hydrology Present?	Yes X No ____		

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

Edge of corn field

HYDROLOGY

Wetland Hydrology Indicators:

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

	Surface Water (A1)		Water-Stained Leaves (B9)		Drainage Patterns (B10)
	High Water Table (A2)		Aquatic Fauna (B13)		Moss Trim Lines (B16)
	Saturation (A3)		Marl Deposits (B15)		Dry-Season Water Table (C2)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)
	Sediment Deposits (B2)	X	Oxidized Rhizospheres on Living Roots (C3)	X	Saturation Visible in Aerial Imagery (C9)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Stunted or Stressed Plants (D1)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)	X	Geomorphic Position (D2)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Shallow Aquitard (D3)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Microtopographic Relief (D4)
	Sparsley Vegetated Concave Surface (B8)			X	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

X	Surface Soil Cracks (B6)

Surface Water Present?	Yes ____	No X	Depth (inches) ____	
Water Table Present?	Yes ____	No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____	No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_07232020_WL52_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Echinochloa crus-galli	5	X	FAC
Cyperus strigosus	3	X	FACW
	8 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	3	x 2	6	
FAC species	5	x 3	15	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	8	(A)	21	(B)

Prevalence Index = B/A = 2.62

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ____

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

SOIL Sampling Point: **1_07232020_WL52_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-7	2.5Y 2.5/1	95	10YR 4/4	5	C	PL	Silt Loam	
7-14	10YR 3/1	95	10YR 4/6	5	C	M	Silty Clay Loam	
14-20	2.5Y 6/1	85	2.5Y 4/6	15	C	M	Loamy Sand	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/23/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200723_WL52_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): None Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.107644 Long: -78.230914 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X		
Wetland Hydrology Present?	Yes ____ No X	if yes, optional Wetland Site ID:	____

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200723_WL52_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Zea mays	75	X	UPL
	75 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 0% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	0	x 3	0	
FACU species	0	x 4	0	
UPL species	75	x 5	375	
Column Totals	75	(A)	375	(B)

Prevalence Index = B/A = 5

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **1_20200723_WL52_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-6	2.5Y 3/2	100					Silty Clay Loam	
6-14	2.5Y 3/2	95	10YR 4/4	5	C	M	Silty Clay Loam	
14-20	2.5Y 3/2	70	2.5Y 4/6	30	C	M	Clay Loam	

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)

____ Polyvalue Below Surface (B15)
____ Thin Dark Surface (S9)
____ Loamy Mucky Mineral (F1)
____ Loamy Gleyed Matric (F2)
____ Depleted Matrix (F3)
____ Redox Dark Surface (F6)
____ Depleted Dark Surface (F7)
____ Redox Depressions (F8)

Indicators for Problematic Soils:

____ 2 cm Muck (A10)
____ Coast Prarie Redox (A16)
____ 5 cm Mucky Peat or Peat (S3)
____ Dark Surface (S7)
____ Polyvalue Below Surface (S8)
____ Thin Dark Surface (S9)
____ Iron-Manganese Masses (F12)
____ Piedmont Floodplain Soils (F19)
____ Mesic Spodic (TA6)
____ Red Parent Material (F21)
____ Very Shallow Dark Surface (TF12)
____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/23/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200723_WL53_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%) 5 - 15

Subregion (LRR or MLRA): LRR L Lat: 43.105327 Long: -78.227485 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: PSS

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL53
Wetland Hydrology Present?	Yes X No ____		

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

Riparian area associated with stream

HYDROLOGY

Wetland Hydrology Indicators:

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

____	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)
____	Sparsley Vegetated Concave Surface (B8)		

Secondary Indicators (minimum of two required)

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

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200723_WL53_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Rhamnus cathartica	35	X	FAC
Fraxinus pennsylvanica	30	X	FACW
Cornus amomum	20	X	FACW
Lonicera morrowii	15		FACU
	100 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phalaris arundinacea	65	X	FACW
Bidens frondosa	10		FACW
Boehmeria cylindrica	10		OBL
	85 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

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

Prevalence Index Worksheet:

OBL species	10	x 1	10	
FACW species	125	x 2	250	
FAC species	35	x 3	105	
FACU species	15	x 4	60	
UPL species	0	x 5	0	
Column Totals	185	(A)	425	(B)

Prevalence Index = B/A = 2.3

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_20200723_WL53_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-4	10YR 3/1	95	10YR 3/4	5	C	M	Sandy Clay Loam	
4-6	10YR 4/2	80	10YR 6/8	20	C	M	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 6

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/23/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200723_WL53_W2

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Linear Slope (%) 1 - 3

Subregion (LRR or MLRA): LRR L Lat: 43.104319 Long: -78.227260 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL53
Wetland Hydrology Present?	Yes X No ____		

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

Associated with stream

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Surface Water Present?	Yes X	No ____	Depth (inches)	3
Water Table Present?	Yes X	No ____	Depth (inches)	0
Saturation Present?	Yes X	No ____	Depth (inches)	0

Wetland Hydrology Present? Yes X No ____

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200723_WL53_W2**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Typha angustifolia	75	X	OBL
	75 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

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

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

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

Prevalence Index Worksheet:

OBL species	75	x 1	75	
FACW species	0	x 2	0	
FAC species	0	x 3	0	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	75	(A)	75	(B)

Prevalence Index = B/A = 1

Hydrophytic Vegetation Indicators:

X 1- Rapid Test For Hydrophytic Vegetation

X 2- Dominance Test is > 50%

X 3- Prevalence Index is =< 3.0

4- Morphological Adaptations

5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

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

SOIL Sampling Point: **1_20200723_WL53_W2**

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- X Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks: Hydric soils assumed due to presence of primary hydrology and dominant obligate vegetation.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/24/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200723_WL53_U1

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.105302 Long: -78.227565 Datum: NAD83

Soil Map Unit Name: ClB NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200723_WL53_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Equisetum arvense	20	X	FAC
Typha angustifolia	5		OBL
Abutilon theophrasti	5		FACU
	30 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus quinquefolia	10	X	FACU
	10 = Total Cover		

Dominance Test Worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

OBL species	5	x 1	5	
FACW species	0	x 2	0	
FAC species	20	x 3	60	
FACU species	15	x 4	60	
UPL species	0	x 5	0	
Column Totals	40	(A)	125	(B)

Prevalence Index = B/A = 3.12

Hydrophytic Vegetation Indicators:

- 1- Rapid Test For Hydrophytic Vegetation
- 2- Dominance Test is > 50%
- 3- Prevalence Index is =< 3.0
- 4- Morphological Adaptations
- 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **1_20200723_WL53_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-20	10YR 3/3	100					Silty Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/23/2020
Applicant/Owner: Hecate State: NY Sampling Point: 1_20200723_WL54
Investigator(s): Andrew Sorci Section, Township, Range:
Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Linear Slope (%) 0 - 3
Subregion (LRR or MLRA): LRR L Lat: 43.085337 Long: -78.213647 Datum: NAD83
Soil Map Unit Name: ApA NWI Classification: PEM
Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL54
Wetland Hydrology Present?	Yes X No ____		

Remarks: (Explain alternative procedures here or in a separate report.)
Associated with drainage ditch

HYDROLOGY

Wetland Hydrology Indicators:

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

X	Surface Water (A1)		Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Fauna (B13)	X	Drainage Patterns (B10)
	Saturation (A3)		Marl Deposits (B15)		Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
				X	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes X No ____	Depth (inches) 2	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200723_WL54**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phalaris arundinacea	75	X	FACW
Phragmites australis	25	X	FACW
	100 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	100	x 2	200	
FAC species	0	x 3	0	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	100	(A)	200	(B)

Prevalence Index = B/A = 2

Hydrophytic Vegetation Indicators:

X 1- Rapid Test For Hydrophytic Vegetation

X 2- Dominance Test is > 50%

X 3- Prevalence Index is =< 3.0

4- Morphological Adaptations

5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

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

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- X Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks: Hydric soils assumed due to presence of primary hydrology and dominant FACW vegetation.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 9/28/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200928_WL54_W2

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Dip Local relief (concave, convex, none): None Slope (%) 5 - 10

Subregion (LRR or MLRA): LRR L Lat: 43.085554 Long: -78.216076 Datum: NAD83

Soil Map Unit Name: _____ NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL54
Wetland Hydrology Present?	Yes X 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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200928_WL54_W2**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer saccharinum	80	X	FACW
	80	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Rhamnus cathartica	60	X	FAC
	60	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Carex cristatella	8	X	FACW
Glyceria striata	8	X	OBL
Viola sororia	5		FAC
Circaea canadensis	5		FACU
Carex grayi	5		FACW
	31	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	10	X	FAC
	10	= 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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	8	x 1	8	
FACW species	93	x 2	186	
FAC species	75	x 3	225	
FACU species	5	x 4	20	
UPL species	0	x 5	0	
Column Totals	181	(A)	439	(B)

Prevalence Index = B/A = 2.43

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_20200928_WL54_W2**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-7	10YR 3/1	90	10Y 3/6	10	C	PL	Sandy Clay Loam	
7-16	10YR 5/2	85	10YR 4/6	15	C	M	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/22/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200723_WL54_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Terrace Local relief (concave, convex, none): None Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.085298 Long: -78.213700 Datum: NAD83

Soil Map Unit Name: ApA NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200723_WL54_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Daucus carota	15	X	UPL
Trifolium pratense	15	X	FACU
Phleum pratense	10	X	FACU
Leucanthemum vulgare	8	X	UPL
Solidago canadensis	8	X	FACU
Setaria pumila	7		FAC
Ambrosia artemisiifolia	6		FACU
Phalaris arundinacea	5		FACW
Acalypha rhomboidea	4		FACU
Erigeron annuus	4		FACU
Rumex crispus	2		FAC
	84	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 5 (B)

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

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	5	x 2	10	
FAC species	9	x 3	27	
FACU species	47	x 4	188	
UPL species	23	x 5	115	
Column Totals	84	(A)	340	(B)

Prevalence Index = B/A = 4.05

Hydrophytic Vegetation Indicators:

- 1- Rapid Test For Hydrophytic Vegetation
- 2- Dominance Test is > 50%
- 3- Prevalence Index is =< 3.0
- 4- Morphological Adaptations
- 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **1_20200723_WL54_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 3/2	100					Sandy Loam	
12-18	10YR 3/2	85	2.5YR 4/8	15	C	M	Sandy Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/23/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200723_WL55_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Dip Local relief (concave, convex, none): Concave Slope (%) 1 - 3

Subregion (LRR or MLRA): LRR L Lat: 43.084250 Long: -78.214293 Datum: NAD83

Soil Map Unit Name: HlB NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL55
Wetland Hydrology Present?	Yes X 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)	____	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)
____	Sparsley Vegetated Concave Surface (B8)		

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 in Aerial Imagery (C9)
____	Stunted or Stressed Plants (D1)
X	Geomorphic Position (D2)
____	Shallow Aquitard (D3)
____	Microtopographic Relief (D4)
X	FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200723_WL55_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Cornus amomum	5	X	FACW
Fraxinus pennsylvanica	3	X	FACW
	8 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phragmites australis	90	X	FACW
Symphyotrichum lanceolatum	5		FACW
Solanum dulcamara	5		FAC
Equisetum arvense	3		FAC
	103 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus quinquefolia	6	X	FACU
Vitis riparia	5	X	FAC
	11 = Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 80% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	103	x 2	206	
FAC species	13	x 3	39	
FACU species	6	x 4	24	
UPL species	0	x 5	0	
Column Totals	122	(A)	269	(B)

Prevalence Index = B/A = 2.2

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_20200723_WL55_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-9	10YR 3/1	90	10YR 4/4	10	C	M	Sandy Loam	
9-20	10YR 3/2	90	10YR 4/6	10	C	M	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/20/2020
Applicant/Owner: Hecate State: NY Sampling Point: 1_20200723_WL55_W2
Investigator(s): Andrew Sorci Section, Township, Range:
Landform (hillslope, terrace,etc.): Dip Local relief (concave, convex, none): None Slope (%) 2 - 4
Subregion (LRR or MLRA): LRR L Lat: 43.084367 Long: -78.215222 Datum: NAD83
Soil Map Unit Name: OvA NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL55
Wetland Hydrology Present?	Yes X 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)
- ____ Sparsley 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)
- X Moss Trim Lines (B16)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200723_WL55_W2**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	75	X	FACW
	75	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	20	X	FACW
	20	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lysimachia nummularia	15	X	FACW
Glyceria striata	10	X	OBL
	25	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	10	X	FAC
	10	= 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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	10	x 1	10	
FACW species	110	x 2	220	
FAC species	10	x 3	30	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	130	(A)	260	(B)

Prevalence Index = B/A = 2

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_20200723_WL55_W2**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-4	7.5YR 2.5/1	100					Loam	
4-15	10YR 3/1	90	5YR 3/4	10	C	M	Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/20/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200723_WL55_W3

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Dip Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR R Lat: 43.084008 Long: -78.214274 Datum: NAD83

Soil Map Unit Name: HlB NWI Classification: PSS

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL55
Wetland Hydrology Present?	Yes X 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)
- ____ Sparsley 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)
- X Saturation Visible in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200723_WL55_W3**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	75	X	FACW
Rosa multiflora	5		FACU
	80 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phalaris arundinacea	80	X	FACW
Solidago gigantea	20		FACW
Lysimachia nummularia	15		FACW
Symphyotrichum lanceolatum	10		FACW
	125 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	200	x 2	400	
FAC species	0	x 3	0	
FACU species	5	x 4	20	
UPL species	0	x 5	0	
Column Totals	205	(A)	420	(B)

Prevalence Index = B/A = 2.05

Hydrophytic Vegetation Indicators:

X 1- Rapid Test For Hydrophytic Vegetation

X 2- Dominance Test is > 50%

X 3- Prevalence Index is =< 3.0

4- Morphological Adaptations

5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

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

SOIL Sampling Point: **1_20200723_WL55_W3**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	7.5YR 2.5/1	100					Sandy Loam	
12-18	2.5Y 5/1	85	10YR 4/6	15	C	M	Sandy Clay Loam	

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- X 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)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/23/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200723_WL55_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): Convex Slope (%) 3 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.084181 Long: -78.214178 Datum: NAD83

Soil Map Unit Name: HlB NWI Classification: UPL

Are climatic / hyrologic 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 X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	if yes, optional Wetland Site ID: ____
Wetland Hydrology Present?	Yes ____	No X	

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____	No X	Depth (inches) ____
Water Table Present?	Yes ____	No X	Depth (inches) ____
Saturation Present?	Yes ____	No X	Depth (inches) ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

VEGETATION - Use scientific names of plants

Sampling Point: **1_20200723_WL55_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Populus deltoides	50	X	FAC
Salix nigra	20	X	OBL
	70	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Cornus racemosa	25	X	FAC
Lonicera morrowii	15	X	FACU
	40	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Solidago canadensis	25	X	FACU
Euthamia graminifolia	25	X	FAC
Equisetum arvense	5		FAC
Phragmites australis	5		FACW
Ranunculus acris	3		FAC
Geum canadense	3		FAC
	66	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus quinquefolia	5	X	FACU
	5	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 57.1% (A/B)

Prevalence Index Worksheet:

OBL species	20	x 1	20	
FACW species	5	x 2	10	
FAC species	111	x 3	333	
FACU species	45	x 4	180	
UPL species	0	x 5	0	
Column Totals	181	(A)	543	(B)

Prevalence Index = B/A = 3

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_20200723_WL55_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 3/2	100					Sandy Loam	
12-20	10YR 3/2	98	10YR 4/6	2	C	M	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennesee Sampling Date: 7/24/2020
Applicant/Owner: Hecate State: NY Sampling Point: 1_20200724_WL56_W1
Investigator(s): Andrew Sorci Section, Township, Range:
Landform (hillslope, terrace,etc.): Floodplain Local relief (concave, convex, none): Linear Slope (%) 0 - 15
Subregion (LRR or MLRA): LRR L Lat: 43.107468 Long: -78.253776 Datum: NAD83
Soil Map Unit Name: W NWI Classification: PFO
Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL56
Wetland Hydrology Present?	Yes X No ____		

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Surface Water Present?	Yes X	No ____	Depth (inches)	24
Water Table Present?	Yes X	No ____	Depth (inches)	0
Saturation Present?	Yes ____	No X	Depth (inches)	____

Wetland Hydrology Present? Yes X No ____

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200724_WL56_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer negundo	70	X	FAC
	70	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Impatiens pallida	15	X	FACW
Brassica juncea	15	X	UPL
Urtica dioica	15	X	FAC
Eutrochium maculatum	10		OBL
Xanthium strumarium	10		FAC
	65	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	15	X	FAC
	15	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 80% (A/B)

Prevalence Index Worksheet:

OBL species	10	x 1	10	
FACW species	15	x 2	30	
FAC species	110	x 3	330	
FACU species	0	x 4	0	
UPL species	15	x 5	75	
Column Totals	150	(A)	445	(B)

Prevalence Index = B/A = 2.97

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **1_20200724_WL56_W1**

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- X Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

Floodplain wetland, soils assumed hydric due to primary hydrology indicators and hydrophytic vegetation in stream channel.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/24/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200724_WL56_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Terrace Local relief (concave, convex, none): Convex Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.107573 Long: -78.253747 Datum: NAD83

Soil Map Unit Name: RoA NWI Classification: UPL

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

Are Vegetation X , 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	____
Wetland Hydrology Present?	Yes ____ No X		

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

Mowed access road

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200724_WL56_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Medicago lupulina	30	X	FACU
Plantago lanceolata	25	X	FACU
Taraxacum officinale	20	X	FACU
Unknown species	15		UNK
Artemisia vulgaris	10		UPL
	100 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	0	x 3	0	
FACU species	75	x 4	300	
UPL species	10	x 5	50	
Column Totals	85	(A)	350	(B)

Prevalence Index = B/A = 4.12

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
unknown grass species, due to recent mowing

SOIL Sampling Point: **1_20200724_WL56_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-4	10YR 3/2	100					Sandy Loam	
4-9	10YR 3/2	95	10YR 4/6	5	C	M	Sandy Loam	
9-18	7.5YR 5/3	85	7.5YR 5/8	15	C	M	Sand	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/8/2020

Applicant/Owner: Hecate State: NY Sampling Point: ____

Investigator(s): Justin Ahn Section, Township, Range: 02-20200708-WL-01-1W

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.109566 Long: -78.185488 Datum: NAD83

Soil Map Unit Name: HlB NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL57
Wetland Hydrology Present?	Yes X 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)
- ____ Sparsley 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)

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

Surface Water Present?	Yes ____ No X Depth (inches) ____	Wetland Hydrology Present?	Yes X No ____
Water Table Present?	Yes ____ No X Depth (inches) ____		
Saturation Present?	Yes ____ No X Depth (inches) ____		

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200708-WL-01-1W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	50	X	FACW
	50	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lindera benzoin	35	X	FACW
Carpinus caroliniana	20	X	FAC
	55	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Carex blanda	20	X	FAC
Impatiens capensis	15	X	FACW
Toxicodendron radicans	10	X	FAC
	45	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus quinquefolia	15	X	FACU
Vitis riparia	5	X	FAC
	20	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 87.5% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	100	x 2	200	
FAC species	55	x 3	165	
FACU species	15	x 4	60	
UPL species	0	x 5	0	
Column Totals	170	(A)	425	(B)

Prevalence Index = B/A = 2.5

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **02-20200708-WL-01-1W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-6	10YR 2/2	100					Clay Loam	
6-18	7.5YR 5/2	90	10YR 6/8	10	C	PL	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/13/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200713-WL-13-13W

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.106787 Long: -78.184244 Datum: NAD83

Soil Map Unit Name: OvA NWI Classification: PFO

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

Are Vegetation ____, Soil X, 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL57
Wetland Hydrology Present?	Yes X 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)	X	Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)
X	Saturation (A3)		Marl Deposits (B15)	X	Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
					FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes X No ____	Depth (inches) 5	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200713-WL-13-13W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Populus deltoides	30	X	FAC
	30	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	40	X	FACW
	40	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Carex retrorsa	40	X	OBL
Carex cristatella	30	X	FACW
Dactylis glomerata	30	X	FACU
Typha angustifolia	20		OBL
Scirpus atrovirens	20		OBL
Agrostis gigantea	10		FACW
Prunella vulgaris	5		FAC
	155	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 80% (A/B)

Prevalence Index Worksheet:

OBL species	80	x 1	80	
FACW species	80	x 2	160	
FAC species	35	x 3	105	
FACU species	30	x 4	120	
UPL species	0	x 5	0	
Column Totals	225	(A)	465	(B)

Prevalence Index = B/A = 2.07

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **02-20200713-WL-13-13W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-6	10YR 3/2	100					Sandy Clay Loam	
6-20	10YR 7/4	80	10YR 6/6	20	C	PL	Sandy Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- X Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/8/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200708-WL-01-1U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Convex Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.109319 Long: -78.185688 Datum: NAD83

Soil Map Unit Name: HlB NWI Classification: UPL

Are climatic / hyrologic 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 X	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	if yes, optional Wetland Site ID: _____
Wetland Hydrology Present?	Yes _____	No X	

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes _____	No X	Depth (inches) _____
Water Table Present?	Yes _____	No X	Depth (inches) _____
Saturation Present?	Yes _____	No X	Depth (inches) _____

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200708-WL-01-1U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer rubrum	40	X	FAC
	40	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Carpinus caroliniana	30	X	FAC
Fraxinus pennsylvanica	10	X	FACW
	40	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Impatiens capensis	30	X	FACW
Lindera benzoin	15	X	FACW
Fraxinus pennsylvanica	15	X	FACW
Solidago altissima	10		FACU
Parthenocissus quinquefolia	10		FACU
Phragmites australis	5		FACW
	85	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	10	X	FAC
	10	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

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

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	75	x 2	150	
FAC species	80	x 3	240	
FACU species	20	x 4	80	
UPL species	0	x 5	0	
Column Totals	175	(A)	470	(B)

Prevalence Index = B/A = 2.69

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **02-20200708-WL-01-1U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-6	10YR 4/3	100					Silt Loam	
6-16	7.5YR 5/6	100					Silt Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/13/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200713-WL-13-13U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.106867 Long: -78.188163 Datum: NAD83

Soil Map Unit Name: HlB NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200713-WL-13-13U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Abutilon theophrasti	40	X	FACU
Panicum virgatum	30	X	FAC
Ambrosia artemisiifolia	10		FACU
Rorippa palustris	10		OBL
Cyperus esculentus	5		FACW
Solidago canadensis	5		FACU
	100 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

OBL species	10	x 1	10	
FACW species	5	x 2	10	
FAC species	30	x 3	90	
FACU species	55	x 4	220	
UPL species	0	x 5	0	
Column Totals	100	(A)	330	(B)

Prevalence Index = B/A = 3.3

Hydrophytic Vegetation Indicators:

- 1- Rapid Test For Hydrophytic Vegetation
- 2- Dominance Test is > 50%
- 3- Prevalence Index is =< 3.0
- 4- Morphological Adaptations
- 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **02-20200713-WL-13-13U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-6	10YR 3/2	100					Silt Loam	
6-12	10YR 3/2	95	10YR 5/6	5	C	PL	Silty Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/8/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02_20200708-WL-02-2W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.107801 Long: -78.184616 Datum: NAD83

Soil Map Unit Name: OvA NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL58
Wetland Hydrology Present?	Yes X 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)

X	Surface Water (A1)		Water-Stained Leaves (B9)	X	Drainage Patterns (B10)
	High Water Table (A2)	X	Aquatic Fauna (B13)		Moss Trim Lines (B16)
	Saturation (A3)		Marl Deposits (B15)		Dry-Season Water Table (C2)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)
	Sediment Deposits (B2)	X	Oxidized Rhizospheres on Living Roots (C3)		Saturation Visible in Aerial Imagery (C9)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Stunted or Stressed Plants (D1)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Geomorphic Position (D2)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Shallow Aquitard (D3)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Microtopographic Relief (D4)
	Sparsley Vegetated Concave Surface (B8)				FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

	Surface Soil Cracks (B6)

Surface Water Present?	Yes X No ____	Depth (inches)	2
Water Table Present?	Yes ____ No X	Depth (inches)	____
Saturation Present?	Yes ____ No X	Depth (inches)	____

Wetland Hydrology Present? Yes X No ____

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: 02_20200708-WL-02-2W

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Typha angustifolia	40	X	OBL
Leersia oryzoides	30	X	OBL
Phleum pratense	20	X	FACU
Phalaris arundinacea	20	X	FACW
Xanthium strumarium	20	X	FAC
Carex alopecoidea	20	X	FACW
Agrostis gigantea	10		FACW
Abutilon theophrasti	5		FACU
Dipsacus fullonum	5		FACU
Eleocharis obtusa	5		OBL
	175	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83.3% (A/B)

Prevalence Index Worksheet:

OBL species	75	x 1	75	
FACW species	50	x 2	100	
FAC species	20	x 3	60	
FACU species	30	x 4	120	
UPL species	0	x 5	0	
Column Totals	175	(A)	355	(B)

Prevalence Index = B/A = 2.03

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **02_20200708-WL-02-2W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 2/2	95	7.5YR 5/8	5	C	PL	Clay Loam	
12-24	10YR 4/2	75	7.5YR 7/1	25	D	M	Clay	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/8/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200708-WL-02-2U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.107831 Long: -78.185015 Datum: NAD83

Soil Map Unit Name: HlB NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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

disturbed, adjacent to cultivated corn field

HYDROLOGY

Wetland Hydrology Indicators:

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

____ Surface Water (A1)	____ Water-Stained Leaves (B9)	____ Surface Soil Cracks (B6)
____ High Water Table (A2)	____ Aquatic Fauna (B13)	____ Drainage Patterns (B10)
____ Saturation (A3)	____ Marl Deposits (B15)	____ Moss Trim Lines (B16)
____ Water Marks (B1)	____ Hydrogen Sulfide Odor (C1)	____ Dry-Season Water Table (C2)
____ Sediment Deposits (B2)	____ Oxidized Rhizospheres on Living Roots (C3)	____ Crayfish Burrows (C8)
____ Drift Deposits (B3)	____ Presence of Reduced Iron (C4)	____ Saturation Visible in Aerial Imagery (C9)
____ Algal Mat or Crust (B4)	____ Recent Iron Reduction in Tilled Soils (C6)	____ Stunted or Stressed Plants (D1)
____ Iron Deposits (B5)	____ Thin Muck Surface (C7)	____ Geomorphic Position (D2)
____ Inundation Visible on Aerial Imagery (B7)	____ Other (Explain in Remarks)	____ Shallow Aquitard (D3)
____ Sparsley Vegetated Concave Surface (B8)		____ Microtopographic Relief (D4)
		____ FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200708-WL-02-2U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Daucus carota	60	X	UPL
Phleum pratense	30	X	FACU
Agrostis gigantea	20		FACW
Abutilon theophrasti	10		FACU
	120	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

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

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

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

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	20	x 2	40	
FAC species	0	x 3	0	
FACU species	40	x 4	160	
UPL species	60	x 5	300	
Column Totals	120	(A)	500	(B)

Prevalence Index = B/A = 4.17

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **02-20200708-WL-02-2U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-6	10YR 3/4	95	7.5YR 6/8	5	C	PL	Silt Loam	
6-12	10YR 3/4	60	7.5YR 6/8	40	C	M	Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/8/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200708-WL-03-3W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.111208 Long: -78.186188 Datum: NAD83

Soil Map Unit Name: ApA NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL59
Wetland Hydrology Present?	Yes X 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)		Water-Stained Leaves (B9)		Drainage Patterns (B10)
	High Water Table (A2)		Aquatic Fauna (B13)		Moss Trim Lines (B16)
	Saturation (A3)		Marl Deposits (B15)		Dry-Season Water Table (C2)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Saturation Visible in Aerial Imagery (C9)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Stunted or Stressed Plants (D1)
X	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)	X	Geomorphic Position (D2)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Shallow Aquitard (D3)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Microtopographic Relief (D4)
X	Sparsley Vegetated Concave Surface (B8)				FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

X	Surface Soil Cracks (B6)

Surface Water Present?	Yes ____	No X	Depth (inches) ____	
Water Table Present?	Yes ____	No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____	No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200708-WL-03-3W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Leersia oryzoides	40	X	OBL
Equisetum arvense	30	X	FAC
Carex lupuliformis	20	X	OBL
Typha angustifolia	10		OBL
	100 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	70	x 1	70	
FACW species	0	x 2	0	
FAC species	30	x 3	90	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	100	(A)	160	(B)

Prevalence Index = B/A = 1.6

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)
disturbed, adjacent to corn field

SOIL Sampling Point: **02-20200708-WL-03-3W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-6	10YR 4/1	90	7.5YR 6/6	10	C	PL	Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 6

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/8/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200708-WL-03-3U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Convex Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.111197 Long: -78.186072 Datum: NAD83

Soil Map Unit Name: ApA NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200708-WL-03-3U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Daucus carota	40	X	UPL
Toxicodendron radicans	30	X	FAC
Eclipta prostrata	10		FACW
Phragmites australis	10		FACW
Solidago altissima	5		FACU
	95	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus quinquefolia	5	X	FACU
	5	= Total Cover	

Dominance Test Worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	20	x 2	40	
FAC species	30	x 3	90	
FACU species	10	x 4	40	
UPL species	40	x 5	200	
Column Totals	100	(A)	370	(B)

Prevalence Index = B/A = 3.7

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **02-20200708-WL-03-3U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-6	10YR 3/3	100					Silt Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: Dense

Depth (inches): 6

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesse Sampling Date: 7/9/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200709-WL-04-4W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 0

Subregion (LRR or MLRA): LRR L Lat: 43.115088 Long: -78.177836 Datum: NAD83

Soil Map Unit Name: LoA NWI Classification: PSS

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL60
Wetland Hydrology Present?	Yes X 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)

X	Surface Water (A1)	____	Water-Stained Leaves (B9)	____	Surface Soil Cracks (B6)
____	High Water Table (A2)	____	Aquatic Fauna (B13)	____	Drainage Patterns (B10)
____	Saturation (A3)	____	Marl Deposits (B15)	____	Moss Trim Lines (B16)
____	Water Marks (B1)	____	Hydrogen Sulfide Odor (C1)	____	Dry-Season Water Table (C2)
____	Sediment Deposits (B2)	____	Oxidized Rhizospheres on Living Roots (C3)	____	Crayfish Burrows (C8)
____	Drift Deposits (B3)	____	Presence of Reduced Iron (C4)	____	Saturation Visible in Aerial Imagery (C9)
____	Algal Mat or Crust (B4)	____	Recent Iron Reduction in Tilled Soils (C6)	____	Stunted or Stressed Plants (D1)
____	Iron Deposits (B5)	____	Thin Muck Surface (C7)	____	Geomorphic Position (D2)
____	Inundation Visible on Aerial Imagery (B7)	____	Other (Explain in Remarks)	____	Shallow Aquitard (D3)
____	Sparsley Vegetated Concave Surface (B8)			____	Microtopographic Relief (D4)
				____	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes X No ____	Depth (inches) 2	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200709-WL-04-4W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Symphyotrichum pilosum	5	X	FACU
	5 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Solidago gigantea	50	X	FACW
Xanthium strumarium	15		FAC
Asclepias syriaca	15		UPL
Scirpus atrovirens	10		OBL
Phalaris arundinacea	10		FACW
	100 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

OBL species	10	x 1	10	
FACW species	60	x 2	120	
FAC species	15	x 3	45	
FACU species	5	x 4	20	
UPL species	15	x 5	75	
Column Totals	105	(A)	270	(B)

Prevalence Index = B/A = 2.57

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ____

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

SOIL Sampling Point: **02-20200709-WL-04-4W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-14	10YR 3/1	95	10YR 3/3	5	C	PL	Silt Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Gennessee Sampling Date: 7/9/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200709-WL-04-4U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Convex Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.114920 Long: -78.177955 Datum: NAD83

Soil Map Unit Name: HlB NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200709-WL-04-4U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lonicera tatarica	20	X	FACU
	20 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Daucus carota	40	X	UPL
Apocynum cannabinum	15	X	FAC
Solidago gigantea	10		FACW
Phytolacca americana	5		FACU
	70 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	10	x 2	20	
FAC species	15	x 3	45	
FACU species	25	x 4	100	
UPL species	40	x 5	200	
Column Totals	90	(A)	365	(B)

Prevalence Index = B/A = 4.06

Hydrophytic Vegetation Indicators:

- 1- Rapid Test For Hydrophytic Vegetation
- 2- Dominance Test is > 50%
- 3- Prevalence Index is =< 3.0
- 4- Morphological Adaptations
- 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **02-20200709-WL-04-4U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-8	10YR 3/4	100					Silt Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 8

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Gennessee Sampling Date: 7/9/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200709-WL-05-5W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.115404 Long: -78.174823 Datum: NAD83

Soil Map Unit Name: HlB NWI Classification: PSS

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL61
Wetland Hydrology Present?	Yes X 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)	____	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)
____	Sparsley Vegetated Concave Surface (B8)		

Secondary Indicators (minimum of two required)

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

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200709-WL-05-5W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Salix nigra	30	X	OBL
	30	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Carex alopecoidea	20	X	FACW
Juncus effusus	20	X	OBL
Scirpus atrovirens	15	X	OBL
Carex lupuliformis	15	X	OBL
Solidago gigantea	10		FACW
Impatiens capensis	10		FACW
Typha angustifolia	5		OBL
Leucanthemum vulgare	5		UPL
	100	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= 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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	85	x 1	85	
FACW species	40	x 2	80	
FAC species	0	x 3	0	
FACU species	0	x 4	0	
UPL species	5	x 5	25	
Column Totals	130	(A)	190	(B)

Prevalence Index = B/A = 1.46

Hydrophytic Vegetation Indicators:

X 1- Rapid Test For Hydrophytic Vegetation

X 2- Dominance Test is > 50%

X 3- Prevalence Index is =< 3.0

4- Morphological Adaptations

5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

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

SOIL Sampling Point: **02-20200709-WL-05-5W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-6	10YR 3/2	100					Silt Loam	
6-18	10YR 4/1	60	10YR 4/6	40	C	M	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/9/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200709-WL-05-5U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.115337 Long: -78.174780 Datum: NAD83

Soil Map Unit Name: HlB NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200709-WL-05-5U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Populus deltoides	40	X	FAC
Juglans nigra	30	X	FACU
	70	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Oxalis stricta	20	X	FACU
Leucanthemum vulgare	15	X	UPL
Sonchus asper	10		FACU
Solidago canadensis	10		FACU
Phalaris arundinacea	5		FACW
Phleum pratense	5		FACU
Boehmeria cylindrica	2		OBL
	67	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	10	X	FAC
	10	= 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: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40% (A/B)

Prevalence Index Worksheet:

OBL species	2	x 1	2	
FACW species	5	x 2	10	
FAC species	50	x 3	150	
FACU species	75	x 4	300	
UPL species	15	x 5	75	
Column Totals	147	(A)	537	(B)

Prevalence Index = B/A = 3.65

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **02-20200709-WL-05-5U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-6	10YR 3/3	100					Silt Loam	
6-12	10YR 5/6	70	10YR 3/3	30	C	M	Silt Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/9/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200709-WL-06-6W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.115603 Long: -78.174301 Datum: NAD83

Soil Map Unit Name: HlB NWI Classification: PSS

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL62
Wetland Hydrology Present?	Yes X 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)	____	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)
X	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)
____	Sparsley Vegetated Concave Surface (B8)		

Secondary Indicators (minimum of two required)

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

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Wetland-WL62**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	40	X	FACW
Populus deltoides	30	X	FAC
	70	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lonicera tatarica	5	X	FACU
	5	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Impatiens capensis	20	X	FACW
Reynoutria japonica	5		FACU
Toxicodendron radicans	5		FAC
Persicaria virginiana	5		FAC
Leucanthemum vulgare	2		UPL
	37	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	25	X	FAC
Parthenocissus quinquefolia	20	X	FACU
	45	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	60	x 2	120	
FAC species	65	x 3	195	
FACU species	30	x 4	120	
UPL species	2	x 5	10	
Column Totals	157	(A)	445	(B)

Prevalence Index = B/A = 2.83

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **Wetland-WL62**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-8	10YR 2/2	100					Clay	
8-14	10YR 4/2	90	2.5YR 5/6	10	C	PL	Sandy Loam	

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- X 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)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/9/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200709-WL-06-6U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.115720 Long: -78.173633 Datum: NAD83

Soil Map Unit Name: HlB NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200709-WL-06-6U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer rubrum	40	X	FAC
	40	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lonicera tatarica	10	X	FACU
	10	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Cirsium arvense	20	X	FACU
Solidago gigantea	15	X	FACW
Alliaria petiolata	15	X	FACU
Phytolacca americana	5		FACU
	55	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= 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: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	15	x 2	30	
FAC species	40	x 3	120	
FACU species	50	x 4	200	
UPL species	0	x 5	0	
Column Totals	105	(A)	350	(B)

Prevalence Index = B/A = 3.33

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **02-20200709-WL-06-6U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-6	10YR 4/4	100					Silt Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: Dense

Depth (inches): 6

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/10/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200710-WL-07-7W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.116131 Long: -78.173112 Datum: NAD83

Soil Map Unit Name: LoA NWI Classification: PSS

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL63
Wetland Hydrology Present?	Yes X 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)
- X Sparsley 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)

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

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Wetland-WL63**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phalaris arundinacea	50	X	FACW
Leersia oryzoides	30	X	OBL
Cyperus esculentus	20		FACW
Asclepias syriaca	10		UPL
Asclepias incarnata	10		OBL
Acer rubrum	5		FAC
	125	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	40	x 1	40	
FACW species	70	x 2	140	
FAC species	5	x 3	15	
FACU species	0	x 4	0	
UPL species	10	x 5	50	
Column Totals	125	(A)	245	(B)

Prevalence Index = B/A = 1.96

Hydrophytic Vegetation Indicators:

X 1- Rapid Test For Hydrophytic Vegetation

X 2- Dominance Test is > 50%

X 3- Prevalence Index is =< 3.0

4- Morphological Adaptations

5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

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

Sisymbrium officinale was also on notes, herb, 5% cover, not listed in drop down

SOIL Sampling Point: **Wetland-WL63**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
4-14	2.5Y 3/2	60	10YR 2/1	40	C	M	Silt Loam	
0-4	2.5Y 3/3	100					Silt Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/10/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200710-WL-07-7U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.116116 Long: -78.173009 Datum: NAD83

Soil Map Unit Name: LoA NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200710-WL-07-7U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Zea mays	60	X	UPL
Leersia oryzoides	5		OBL
	65 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 0% (A/B)

Prevalence Index Worksheet:

OBL species	5	x 1	5	
FACW species	0	x 2	0	
FAC species	0	x 3	0	
FACU species	0	x 4	0	
UPL species	60	x 5	300	
Column Totals	65	(A)	305	(B)

Prevalence Index = B/A = 4.69

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **02-20200710-WL-07-7U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 3/3	90	10YR 3/6	10	C	PL	Clay	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/10/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200710-08-8W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.164066 Long: -78.164066 Datum: NAD83

Soil Map Unit Name: Ld NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL64
Wetland Hydrology Present?	Yes X 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)	X	Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required)
	High Water Table (A2)		Aquatic Fauna (B13)		Surface Soil Cracks (B6)
	Saturation (A3)		Marl Deposits (B15)	X	Drainage Patterns (B10)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)	X	Moss Trim Lines (B16)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Dry-Season Water Table (C2)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Crayfish Burrows (C8)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Saturation Visible in Aerial Imagery (C9)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Stunted or Stressed Plants (D1)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Geomorphic Position (D2)
	Sparsley Vegetated Concave Surface (B8)				Shallow Aquitard (D3)
					Microtopographic Relief (D4)
					FAC-Neutral Test (D5)

Surface Water Present?	Yes ____	No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Water Table Present?	Yes ____	No X	Depth (inches) ____	
Saturation Present?	Yes ____	No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Wetland-WL64**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Tilia americana	60	X	FACU
Fraxinus pennsylvanica	40	X	FACW
	100 = Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Tilia americana	30	X	FACU
Fraxinus pennsylvanica	20	X	FACW
Lindera benzoin	10		FACW
Alnus glutinosa	10		FACW
	70 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lindera benzoin	30	X	FACW
Carex disperma	20	X	OBL
Carex grayi	15		FACW
Alliaria petiolata	10		FACU
Geranium robertianum	10		FACU
Geum canadense	5		FAC
Polystichum acrostichoides	2		FACU
Oxalis corniculata	2		FACU
	94 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index Worksheet:

OBL species	20	x 1	20	
FACW species	125	x 2	250	
FAC species	5	x 3	15	
FACU species	114	x 4	456	
UPL species	0	x 5	0	
Column Totals	264	(A)	741	(B)

Prevalence Index = B/A = 2.81

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **Wetland-WL64**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-4	10YR 4/2	100					Sandy Loam	
4-16	2.5Y 6/2	95	2.5Y 6/8	5	C	PL	Silt Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/10/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200710-WL-08-8U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.109463 Long: -78.163958 Datum: NAD83

Soil Map Unit Name: Ld NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200710-WL-08-8U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	30	X	FACW
	30	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Daucus carota	30	X	UPL
Lindera benzoin	20	X	FACW
Solidago canadensis	20	X	FACU
Phragmites australis	10		FACW
Oxalis corniculata	10		FACU
Toxicodendron radicans	5		FAC
	95	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= 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: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	60	x 2	120	
FAC species	5	x 3	15	
FACU species	30	x 4	120	
UPL species	30	x 5	150	
Column Totals	125	(A)	405	(B)

Prevalence Index = B/A = 3.24

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

Daucus carota = Glycine max, Glycine max not included on list

SOIL Sampling Point: **02-20200710-WL-08-8U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 4/2	98	10YR 5/6	2	C	PL	Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/10/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200710-WL-09-9W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.105503 Long: -78.175703 Datum: NAD83

Soil Map Unit Name: Wk NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL65
Wetland Hydrology Present?	Yes X 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)

X	Surface Water (A1)		Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
X	High Water Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)
X	Saturation (A3)		Marl Deposits (B15)		Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
					FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes X No ____	Depth (inches)	2
Water Table Present?	Yes X No ____	Depth (inches)	0
Saturation Present?	Yes X No ____	Depth (inches)	0

Wetland Hydrology Present? Yes X No ____

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Wetland-WL65**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Typha angustifolia	80	X	OBL
Leersia oryzoides	30	X	OBL
Euthamia graminifolia	15		FAC
Cirsium arvense	10		FACU
Leucanthemum vulgare	2		UPL
	137	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	15	X	FAC
	15	= Total Cover	

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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	110	x 1	110	
FACW species	0	x 2	0	
FAC species	30	x 3	90	
FACU species	10	x 4	40	
UPL species	2	x 5	10	
Column Totals	152	(A)	250	(B)

Prevalence Index = B/A = 1.64

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **Wetland-WL65**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-10	10YR 4/1	90	5YR 4/6	10	C	PL	Clay	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/10/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200710-WL-09-9U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.105519 Long: -78.175663 Datum: NAD83

Soil Map Unit Name: Wk NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200710-WL-09-9U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lotus corniculatus	30	X	FACU
Melilotus officinalis	20	X	FACU
Trifolium pratense	15	X	FACU
Ambrosia artemisiifolia	10		FACU
	75	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	0	x 3	0	
FACU species	75	x 4	300	
UPL species	0	x 5	0	
Column Totals	75	(A)	300	(B)

Prevalence Index = B/A = 4

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **02-20200710-WL-09-9U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-3	10YR 3/3	95	5YR 5/6	5	C	PL	Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: Dense

Depth (inches): 3

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/10/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200710-WL-10-10W

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.105086 Long: -78.166815 Datum: NAD83

Soil Map Unit Name: ApA NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL66
Wetland Hydrology Present?	Yes X 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)	X	Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required)
	High Water Table (A2)		Aquatic Fauna (B13)		Surface Soil Cracks (B6)
	Saturation (A3)		Marl Deposits (B15)	X	Drainage Patterns (B10)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)	X	Moss Trim Lines (B16)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Dry-Season Water Table (C2)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Crayfish Burrows (C8)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Saturation Visible in Aerial Imagery (C9)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Stunted or Stressed Plants (D1)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Geomorphic Position (D2)
	Sparsley Vegetated Concave Surface (B8)				Shallow Aquitard (D3)
					Microtopographic Relief (D4)
					FAC-Neutral Test (D5)

Surface Water Present?	Yes ____	No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Water Table Present?	Yes ____	No X	Depth (inches) ____	
Saturation Present?	Yes ____	No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Wetland-WL66**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	50	X	FACW
Acer saccharinum	30	X	FACW
	80	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer saccharinum	20	X	FACW
	20	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Carex alopecoidea	40	X	FACW
Glyceria striata	30	X	OBL
Phalaris arundinacea	20		FACW
Arisaema triphyllum	15		FAC
Leucanthemum vulgare	5		UPL
Lindera benzoin	5		FACW
Toxicodendron radicans	5		FAC
Persicaria virginiana	5		FAC
Euthamia graminifolia	2		FAC
Oxalis corniculata	2		FACU
	129	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= 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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	30	x 1	30	
FACW species	165	x 2	330	
FAC species	27	x 3	81	
FACU species	2	x 4	8	
UPL species	5	x 5	25	
Column Totals	229	(A)	474	(B)

Prevalence Index = B/A = 2.07

Hydrophytic Vegetation Indicators:

- X 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- 4- Morphological Adaptations
- 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

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

SOIL Sampling Point: **Wetland-WL66**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-10	10YR 5/2	95	5YR 5/6	5	C	PL	Silt Loam	
10-18	10YR 7/4	70	10YR 6/8	30	C	M	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/10/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200710-WL-10-11W

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.104958 Long: -78.166816 Datum: NAD83

Soil Map Unit Name: ApA NWI Classification: PSS

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL66
Wetland Hydrology Present?	Yes X 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)	____	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)
____	Sparsley Vegetated Concave Surface (B8)		

Secondary Indicators (minimum of two required)

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

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200710-WL-10-11W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lonicera tatarica	15	X	FACU
	15 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Carex disperma	40	X	OBL
Phalaris arundinacea	30	X	FACW
Apocynum cannabinum	30	X	FAC
Carex alopecoidea	20		FACW
Toxicodendron radicans	10		FAC
	130 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

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

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index Worksheet:

OBL species	40	x 1	40	
FACW species	50	x 2	100	
FAC species	40	x 3	120	
FACU species	15	x 4	60	
UPL species	0	x 5	0	
Column Totals	145	(A)	320	(B)

Prevalence Index = B/A = 2.21

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **02-20200710-WL-10-11W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 3/1	90	10YR 3/6	10	C	PL	Silt Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/10/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200710-WL-10-10U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.105308 Long: -78.167014 Datum: NAD83

Soil Map Unit Name: HlB NWI Classification: UPL

Are climatic / hyrologic 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 X	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	if yes, optional Wetland Site ID: _____
Wetland Hydrology Present?	Yes _____	No X	

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)	____ Water-Stained Leaves (B9)	____ Surface Soil Cracks (B6)
____ High Water Table (A2)	____ Aquatic Fauna (B13)	____ Drainage Patterns (B10)
____ Saturation (A3)	____ Marl Deposits (B15)	____ Moss Trim Lines (B16)
____ Water Marks (B1)	____ Hydrogen Sulfide Odor (C1)	____ Dry-Season Water Table (C2)
____ Sediment Deposits (B2)	____ Oxidized Rhizospheres on Living Roots (C3)	____ Crayfish Burrows (C8)
____ Drift Deposits (B3)	____ Presence of Reduced Iron (C4)	____ Saturation Visible in Aerial Imagery (C9)
____ Algal Mat or Crust (B4)	____ Recent Iron Reduction in Tilled Soils (C6)	____ Stunted or Stressed Plants (D1)
____ Iron Deposits (B5)	____ Thin Muck Surface (C7)	____ Geomorphic Position (D2)
____ Inundation Visible on Aerial Imagery (B7)	____ Other (Explain in Remarks)	____ Shallow Aquitard (D3)
____ Sparsley Vegetated Concave Surface (B8)		____ Microtopographic Relief (D4)
		____ FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes _____	No X	Depth (inches) _____
Water Table Present?	Yes _____	No X	Depth (inches) _____
Saturation Present?	Yes _____	No X	Depth (inches) _____

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200710-WL-10-10U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer saccharinum	60	X	FACW
	60	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	20	X	FACW
	20	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Euthamia graminifolia	50	X	FAC
Leucanthemum vulgare	40	X	UPL
Toxicodendron radicans	20		FAC
Phalaris arundinacea	10		FACW
	120	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

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

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	90	x 2	180	
FAC species	70	x 3	210	
FACU species	0	x 4	0	
UPL species	40	x 5	200	
Column Totals	200	(A)	590	(B)

Prevalence Index = B/A = 2.95

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **02-20200710-WL-10-10U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-6	2.5Y 5/4	100					Silt Loam	
6-12	2.5Y 5/4	60	2.5Y 6/4	40	C	M	Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/10/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200710-WL-10-11U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.104977 Long: -78.167117 Datum: NAD83

Soil Map Unit Name: HlB NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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

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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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200710-WL-10-11U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lonicera tatarica	10	X	FACU
	10 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Apocynum cannabinum	50	X	FAC
Phalaris arundinacea	10		FACW
Leucanthemum vulgare	5		UPL
Toxicodendron radicans	5		FAC
Asclepias syriaca	2		UPL
	72 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	10	x 2	20	
FAC species	55	x 3	165	
FACU species	10	x 4	40	
UPL species	7	x 5	35	
Column Totals	82	(A)	260	(B)

Prevalence Index = B/A = 3.17

Hydrophytic Vegetation Indicators:

- 1- Rapid Test For Hydrophytic Vegetation
- 2- Dominance Test is > 50%
- 3- Prevalence Index is =< 3.0
- 4- Morphological Adaptations
- 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **02-20200710-WL-10-11U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 3/2	100					Silt Loam	
12-16	10YR 3/2	60	10YR 5/6	40	C	M	Silt Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/13/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200713-WL-12-12W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.106931 Long: -78.184104 Datum: NAD83

Soil Map Unit Name: OvA NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL67
Wetland Hydrology Present?	Yes X 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)		Water-Stained Leaves (B9)		Drainage Patterns (B10)
	High Water Table (A2)		Aquatic Fauna (B13)		Moss Trim Lines (B16)
	Saturation (A3)		Marl Deposits (B15)		Dry-Season Water Table (C2)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Saturation Visible in Aerial Imagery (C9)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Stunted or Stressed Plants (D1)
X	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)	X	Geomorphic Position (D2)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Shallow Aquitard (D3)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Microtopographic Relief (D4)
	Sparsley Vegetated Concave Surface (B8)				FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

X	Surface Soil Cracks (B6)

Surface Water Present?	Yes ____	No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Water Table Present?	Yes ____	No X	Depth (inches) ____	
Saturation Present?	Yes ____	No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200713-WL-12-12W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Cyperus esculentus	50	X	FACW
Cyperus odoratus	40	X	OBL
Carex intumescens	40	X	FACW
Abutilon theophrasti	30		FACU
Amaranthus retroflexus	10		FACU
	170	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	40	x 1	40	
FACW species	90	x 2	180	
FAC species	0	x 3	0	
FACU species	40	x 4	160	
UPL species	0	x 5	0	
Column Totals	170	(A)	380	(B)

Prevalence Index = B/A = 2.24

Hydrophytic Vegetation Indicators:

- X 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- 4- Morphological Adaptations
- 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

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

SOIL Sampling Point: **02-20200713-WL-12-12W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-6	10YR 3/1	100					Clay	
6-16	10YR 5/2	80	7.5YR 5/6	20	C	M	Clay	

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- X 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)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/13/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200713-WL-12-12U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.106779 Long: -78.184255 Datum: NAD83

Soil Map Unit Name: La NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200713-WL-12-12U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Rhamnus cathartica	30	X	FAC
Rubus allegheniensis	30	X	FACU
	60 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Solidago canadensis	40	X	FACU
Polypogon viridis	15	X	FACW
Toxicodendron radicans	5		FAC
	60 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus quinquefolia	35	X	FACU
Vitis riparia	10	X	FAC
	45 = Total Cover		

Dominance Test Worksheet:

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

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	15	x 2	30	
FAC species	45	x 3	135	
FACU species	105	x 4	420	
UPL species	0	x 5	0	
Column Totals	165	(A)	585	(B)

Prevalence Index = B/A = 3.55

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **02-20200713-WL-12-12U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-4	10YR 3/2	100					Silty Clay Loam	
4-16	10YR 5/3	90	10YR 6/4	10	C	PL	Sandy Clay Loam	
16-20	10YR 5/1	90	7.5YR 5/6	10	C	PL	Sandy Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/16/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200716-WL-26-26W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.098775 Long: -78.179059 Datum: NAD83

Soil Map Unit Name: ApA NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL68
Wetland Hydrology Present?	Yes X 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)

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

Surface Water Present?	Yes X	No ____	Depth (inches)	2
Water Table Present?	Yes ____	No X	Depth (inches)	____
Saturation Present?	Yes ____	No X	Depth (inches)	____

Wetland Hydrology Present? Yes X No ____

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200716-WL-26-26W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Solidago gigantea	50	X	FACW
Carex cristatella	30	X	FACW
Scirpus atrovirens	10		OBL
Geum aleppicum	10		FAC
Phytolacca americana	5		FACU
Typha angustifolia	2		OBL
	107	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	5	X	FAC
	5	= Total Cover	

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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	12	x 1	12	
FACW species	80	x 2	160	
FAC species	15	x 3	45	
FACU species	5	x 4	20	
UPL species	0	x 5	0	
Column Totals	112	(A)	237	(B)

Prevalence Index = B/A = 2.12

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **02-20200716-WL-26-26W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-14	10YR 4/2	90	7.5YR 4/6	10	C	PL	Silt Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/17/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200717-WL-26-26U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.098786 Long: -78.178993 Datum: NAD83

Soil Map Unit Name: ApA NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200717-WL-26-26U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Ambrosia artemisiifolia	30	X	FACU
Apocynum cannabinum	20	X	FAC
Euthamia graminifolia	10		FAC
Daucus carota	10		UPL
Geum aleppicum	5		FAC
Agrostis gigantea	5		FACW
	80 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	5	x 2	10	
FAC species	35	x 3	105	
FACU species	30	x 4	120	
UPL species	10	x 5	50	
Column Totals	80	(A)	285	(B)

Prevalence Index = B/A = 3.56

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **02-20200717-WL-26-26U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-14	10YR 3/3	98	7.5YR 4/6	2	C	PL	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/13/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200713-WL-14-14W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.103305 Long: -78.188157 Datum: NAD83

Soil Map Unit Name: OnB NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL69
Wetland Hydrology Present?	Yes X 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)		Water-Stained Leaves (B9)		Drainage Patterns (B10)
	High Water Table (A2)		Aquatic Fauna (B13)	X	Moss Trim Lines (B16)
	Saturation (A3)		Marl Deposits (B15)		Dry-Season Water Table (C2)
X	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Saturation Visible in Aerial Imagery (C9)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Stunted or Stressed Plants (D1)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Geomorphic Position (D2)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Shallow Aquitard (D3)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Microtopographic Relief (D4)
	Sparsley Vegetated Concave Surface (B8)				FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

X	Surface Soil Cracks (B6)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200713-WL-14-14W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Populus deltoides	30	X	FAC
Fraxinus pennsylvanica	20	X	FACW
	50	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	40	X	FACW
Rhamnus cathartica	20	X	FAC
	60	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Microstegium vimineum	50	X	FAC
Fraxinus pennsylvanica	40	X	FACW
Phalaris arundinacea	15		FACW
Ambrosia artemisiifolia	10		FACU
	115	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	10	X	FAC
Parthenocissus quinquefolia	5	X	FACU
	15	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 87.5% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	115	x 2	230	
FAC species	110	x 3	330	
FACU species	15	x 4	60	
UPL species	0	x 5	0	
Column Totals	240	(A)	620	(B)

Prevalence Index = B/A = 2.58

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **02-20200713-WL-14-14W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-6	10YR 3/2	90	7.5YR 5/8	10	C	PL	Silt Loam	
6-18	10YR 4/3	60	10YR 6/8	40	C	M	Silt Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/13/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200713-WL-14-14U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.103208 Long: -78.188256 Datum: NAD83

Soil Map Unit Name: OnB NWI Classification: UPL

Are climatic / hyrologic 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 X	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	if yes, optional Wetland Site ID: _____
Wetland Hydrology Present?	Yes _____	No X	

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes _____	No X	Depth (inches) _____
Water Table Present?	Yes _____	No X	Depth (inches) _____
Saturation Present?	Yes _____	No X	Depth (inches) _____

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200713-WL-14-14U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Populus deltoides	40	X	FAC
	40	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Rubus argutus	30	X	FACU
Fraxinus pennsylvanica	20	X	FACW
	50	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Solidago canadensis	10	X	FACU
Fraxinus pennsylvanica	10	X	FACW
	20	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus quinquefolia	30	X	FACU
Vitis riparia	15	X	FAC
	45	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 57.1% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	30	x 2	60	
FAC species	55	x 3	165	
FACU species	70	x 4	280	
UPL species	0	x 5	0	
Column Totals	155	(A)	505	(B)

Prevalence Index = B/A = 3.26

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ____

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

SOIL Sampling Point: **02-20200713-WL-14-14U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-6	10YR 3/3	95	10YR 4/6	5	C	PL	Sandy Loam	
6-16	10YR 5/3	95	10YR 4/6	5	C	PL	Sand	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/14/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200714-WL-15-15W

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.103305 Long: -78.188146 Datum: NAD83

Soil Map Unit Name: Wk NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL70
Wetland Hydrology Present?	Yes X 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)	____	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)
____	Sparsley Vegetated Concave Surface (B8)		

Secondary Indicators (minimum of two required)

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

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200714-WL-15-15W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Mentha spicata	30	X	FACW
Asclepias incarnata	30	X	OBL
Leucanthemum vulgare	20	X	UPL
Alliaria petiolata	20	X	FACU
Solidago gigantea	20	X	FACW
Dactylis glomerata	15		FACU
Cichorium intybus	15		FACU
Cirsium arvense	5		FACU
Cirsium vulgare	5		FACU
Artemisia vulgaris	5		UPL
Daucus carota	5		UPL
Rumex crispus	5		FAC
	175	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 60% (A/B)

Prevalence Index Worksheet:

OBL species	30	x 1	30	
FACW species	50	x 2	100	
FAC species	5	x 3	15	
FACU species	60	x 4	240	
UPL species	30	x 5	150	
Column Totals	175	(A)	535	(B)

Prevalence Index = B/A = 3.06

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- ___ 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **02-20200714-WL-15-15W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-4	2.5Y 4/3	90	7.5YR 4/6	10	C	PL	Silty Clay Loam	
4-20	2.5Y 4/2	60	10YR 5/4	40	C	M	Silty Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/14/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200714-WL-15-15U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.095836 Long: -78.185447 Datum: NAD83

Soil Map Unit Name: Wk NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200714-WL-15-15U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Zea mays	60	X	UPL
Abutilon theophrasti	25	X	FACU
Alliaria petiolata	20		FACU
Daucus carota	10		UPL
Asclepias syriaca	10		UPL
Leucanthemum vulgare	10		UPL
Rumex crispus	5		FAC
	140	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

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

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

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

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	5	x 3	15	
FACU species	45	x 4	180	
UPL species	90	x 5	450	
Column Totals	140	(A)	645	(B)

Prevalence Index = B/A = 4.61

Hydrophytic Vegetation Indicators:

- 1- Rapid Test For Hydrophytic Vegetation
- 2- Dominance Test is > 50%
- 3- Prevalence Index is =< 3.0
- 4- Morphological Adaptations
- 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **02-20200714-WL-15-15U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-10	10YR 4/2	95	7.5YR 5/8	5	C	PL	Silty Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 10

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/14/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200714-WL-16-16W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.103576 Long: -78.164104 Datum: NAD83

Soil Map Unit Name: ApA NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL71
Wetland Hydrology Present?	Yes X 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)

X	Surface Water (A1)	X	Water-Stained Leaves (B9)	X	Surface Soil Cracks (B6)
____	High Water Table (A2)	____	Aquatic Fauna (B13)	X	Drainage Patterns (B10)
____	Saturation (A3)	____	Marl Deposits (B15)	X	Moss Trim Lines (B16)
____	Water Marks (B1)	____	Hydrogen Sulfide Odor (C1)	____	Dry-Season Water Table (C2)
____	Sediment Deposits (B2)	____	Oxidized Rhizospheres on Living Roots (C3)	____	Crayfish Burrows (C8)
____	Drift Deposits (B3)	____	Presence of Reduced Iron (C4)	____	Saturation Visible in Aerial Imagery (C9)
____	Algal Mat or Crust (B4)	____	Recent Iron Reduction in Tilled Soils (C6)	____	Stunted or Stressed Plants (D1)
____	Iron Deposits (B5)	____	Thin Muck Surface (C7)	____	Geomorphic Position (D2)
____	Inundation Visible on Aerial Imagery (B7)	____	Other (Explain in Remarks)	____	Shallow Aquitard (D3)
____	Sparsley Vegetated Concave Surface (B8)			____	Microtopographic Relief (D4)
				____	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes X No ____	Depth (inches) 5	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200714-WL-16-16W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer rubrum	40	X	FAC
Fagus grandifolia	30	X	FACU
	70	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Boehmeria cylindrica	10	X	OBL
Persicaria virginiana	10	X	FAC
Alliaria petiolata	10	X	FACU
Leersia virginica	10	X	FACW
Toxicodendron radicans	5		FAC
Arisaema triphyllum	5		FAC
Acer rubrum	5		FAC
Impatiens capensis	5		FACW
Fagus grandifolia	5		FACU
Onoclea sensibilis	2		FACW
	67	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus quinquefolia	10	X	FACU
	10	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 57.1% (A/B)

Prevalence Index Worksheet:

OBL species	10	x 1	10	
FACW species	17	x 2	34	
FAC species	65	x 3	195	
FACU species	55	x 4	220	
UPL species	0	x 5	0	
Column Totals	147	(A)	459	(B)

Prevalence Index = B/A = 3.12

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- ___ 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **02-20200714-WL-16-16W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-14	10YR 2/1	95	7.5YR 4/6	5	C	PL	Silty Clay Loam	
14-20	10YR 5/4	100					Silty Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/14/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200714-WL-16-16U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.103463 Long: -78.164127 Datum: NAD83

Soil Map Unit Name: ApA NWI Classification: UPL

Are climatic / hyrologic 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 X	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	if yes, optional Wetland Site ID: _____
Wetland Hydrology Present?	Yes _____	No X	

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes _____	No X	Depth (inches) _____
Water Table Present?	Yes _____	No X	Depth (inches) _____
Saturation Present?	Yes _____	No X	Depth (inches) _____

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200714-WL-16-16U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer rubrum	40	X	FAC
Fagus grandifolia	30	X	FACU
	70	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Alliaria petiolata	40	X	FACU
Menispermum canadense	30	X	FAC
Phalaris arundinacea	10		FACW
Oxalis corniculata	5		FACU
	85	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	15	X	FAC
	15	= Total Cover	

Dominance Test Worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 60% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	10	x 2	20	
FAC species	85	x 3	255	
FACU species	75	x 4	300	
UPL species	0	x 5	0	
Column Totals	170	(A)	575	(B)

Prevalence Index = B/A = 3.38

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- ___ 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **Upland-WL71**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-10	10YR 4/3	100					Silt Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 10

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/14/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200714-WL-17-17W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.100398 Long: -78.157093 Datum: NAD83

Soil Map Unit Name: OnB NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL72
Wetland Hydrology Present?	Yes X 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)

X	Surface Water (A1)		Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
	High Water Table (A2)	X	Aquatic Fauna (B13)		Drainage Patterns (B10)
	Saturation (A3)		Marl Deposits (B15)		Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)	X	Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
					FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes X No ____	Depth (inches) 2	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200714-WL-17-17W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	40	X	FACW
	40	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Rhamnus cathartica	30	X	FAC
Lonicera tatarica	20	X	FACU
	50	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Polygonum aviculare	30	X	FACU
Typha angustifolia	20	X	OBL
Alisma subcordatum	20	X	OBL
Carex intumescens	10		FACW
Iris versicolor	10		OBL
Symphyotrichum lanceolatum	10		FACW
Impatiens capensis	5		FACW
	105	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index Worksheet:

OBL species	50	x 1	50	
FACW species	65	x 2	130	
FAC species	30	x 3	90	
FACU species	50	x 4	200	
UPL species	0	x 5	0	
Column Totals	195	(A)	470	(B)

Prevalence Index = B/A = 2.41

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **02-20200714-WL-17-17W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-4	10YR 4/2	100					Silty Clay Loam	
4-20	10YR 4/2	80	2.5Y 3/6	20	C	M	Silty Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/14/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200714-WL-17-17U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.100520 Long: -78.157136 Datum: NAD83

Soil Map Unit Name: OnB NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200714-WL-17-17U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Juglans nigra	40	X	FACU
Fraxinus pennsylvanica	20	X	FACW
	60	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lonicera tatarica	25	X	FACU
	25	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Zea mays	30	X	UPL
Symphoricarpos orbiculatus	30	X	FACU
Toxicodendron radicans	20	X	FAC
Allium vineale	15		FACU
Polygonum aviculare	5		FACU
	100	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	10	X	FAC
	10	= Total Cover	

Dominance Test Worksheet:

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

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 42.9% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	20	x 2	40	
FAC species	30	x 3	90	
FACU species	115	x 4	460	
UPL species	30	x 5	150	
Column Totals	195	(A)	740	(B)

Prevalence Index = B/A = 3.79

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **02-20200714-WL-17-17U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-8	10YR 4/3	100					Silty Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: Gravel Fill

Depth (inches): 8

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/15/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200715-WL-18-18W

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.100407 Long: -78.157104 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL73
Wetland Hydrology Present?	Yes X 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)	____	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)
____	Sparsley Vegetated Concave Surface (B8)		

Secondary Indicators (minimum of two required)

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

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200715-WL-18-18W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer saccharinum	40	X	FACW
Fraxinus pennsylvanica	40	X	FACW
Populus deltoides	20	X	FAC
	100 = Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	30	X	FACW
Rosa multiflora	10	X	FACU
Lonicera tatarica	10	X	FACU
	50 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Alliaria petiolata	30	X	FACU
Reynoutria japonica	25	X	FACU
Impatiens capensis	20	X	FACW
Juncus tenuis	20	X	FAC
Fraxinus pennsylvanica	15		FACW
Geum canadense	15		FAC
Toxicodendron radicans	10		FAC
Woodwardia areolata	5		OBL
	140 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus quinquefolia	30	X	FACU
	30 = Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 11 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 54.5% (A/B)

Prevalence Index Worksheet:

OBL species	5	x 1	5	
FACW species	145	x 2	290	
FAC species	65	x 3	195	
FACU species	105	x 4	420	
UPL species	0	x 5	0	
Column Totals	320	(A)	910	(B)

Prevalence Index = B/A = 2.84

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **02-20200715-WL-18-18W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 3/2	90	7.5YR 4/6	10	C	PL	Silt Loam	
12-20	2.5Y 6/4	80	2.5Y 6/8	20	C	M	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/15/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200715-WL-19-19W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.094959 Long: -78.175383 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL73
Wetland Hydrology Present?	Yes X 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)

X	Surface Water (A1)	X	Water-Stained Leaves (B9)	X	Drainage Patterns (B10)
X	High Water Table (A2)	X	Aquatic Fauna (B13)		Moss Trim Lines (B16)
	Saturation (A3)		Marl Deposits (B15)		Dry-Season Water Table (C2)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Saturation Visible in Aerial Imagery (C9)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Stunted or Stressed Plants (D1)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Geomorphic Position (D2)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Shallow Aquitard (D3)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Microtopographic Relief (D4)
	Sparsley Vegetated Concave Surface (B8)				FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Soil Cracks (B6)

Surface Water Present?	Yes X No ____	Depth (inches)	2
Water Table Present?	Yes X No ____	Depth (inches)	18
Saturation Present?	Yes ____ No X	Depth (inches)	____

Wetland Hydrology Present? Yes X No ____

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200715-WL-19-19W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer saccharinum	50	X	FACW
Fraxinus pennsylvanica	30	X	FACW
	80	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	20	X	FACW
	20	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Leersia oryzoides	30	X	OBL
Glyceria striata	20	X	OBL
Persicaria maculosa	15		FAC
Eleocharis obtusa	15		OBL
Phragmites australis	10		FACW
Oxalis stricta	5		FACU
	95	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= 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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	65	x 1	65	
FACW species	110	x 2	220	
FAC species	15	x 3	45	
FACU species	5	x 4	20	
UPL species	0	x 5	0	
Column Totals	195	(A)	350	(B)

Prevalence Index = B/A = 1.79

Hydrophytic Vegetation Indicators:

- X 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- 4- Morphological Adaptations
- 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

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

SOIL Sampling Point: **02-20200715-WL-19-19W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-10	10YR 4/2	90	5YR 4/6	10	C	PL	Clay	
10-20	7.5YR 7/4	60	7.5YR 6/8	40	C	M	Clay	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/16/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200716-WL-22-22W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.089952 Long: -78.176469 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL73
Wetland Hydrology Present?	Yes X 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)

X	Surface Water (A1)	____	Water-Stained Leaves (B9)	____	Surface Soil Cracks (B6)
____	High Water Table (A2)	____	Aquatic Fauna (B13)	____	Drainage Patterns (B10)
____	Saturation (A3)	____	Marl Deposits (B15)	____	Moss Trim Lines (B16)
____	Water Marks (B1)	____	Hydrogen Sulfide Odor (C1)	____	Dry-Season Water Table (C2)
____	Sediment Deposits (B2)	____	Oxidized Rhizospheres on Living Roots (C3)	____	Crayfish Burrows (C8)
____	Drift Deposits (B3)	____	Presence of Reduced Iron (C4)	____	Saturation Visible in Aerial Imagery (C9)
____	Algal Mat or Crust (B4)	____	Recent Iron Reduction in Tilled Soils (C6)	____	Stunted or Stressed Plants (D1)
____	Iron Deposits (B5)	____	Thin Muck Surface (C7)	____	Geomorphic Position (D2)
____	Inundation Visible on Aerial Imagery (B7)	____	Other (Explain in Remarks)	____	Shallow Aquitard (D3)
X	Sparsley Vegetated Concave Surface (B8)			____	Microtopographic Relief (D4)
				____	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes X No ____	Depth (inches) 2	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200716-WL-22-22W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phalaris arundinacea	30	X	FACW
Leersia oryzoides	20	X	OBL
Solidago gigantea	20	X	FACW
Alisma subcordatum	5		OBL
Typha angustifolia	5		OBL
	80	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	30	x 1	30	
FACW species	50	x 2	100	
FAC species	0	x 3	0	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	80	(A)	130	(B)

Prevalence Index = B/A = 1.62

Hydrophytic Vegetation Indicators:

- X 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- 4- Morphological Adaptations
- 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

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

SOIL Sampling Point: **02-20200716-WL-22-22W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-10	10YR 3/2	90	7.5YR 5/6	10	C	PL	Clay	
10-20	2.5Y 5/2	90	7.5YR 7/4	10	C	PL	Clay	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/15/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200715-WL-18-18U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.094888 Long: -78.175702 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200715-WL-18-18U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Quercus alba	40	X	FACU
	40	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Rubus allegheniensis	20	X	FACU
Cornus racemosa	20	X	FAC
	40	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Toxicodendron radicans	20	X	FAC
Oxalis corniculata	5		FACU
Impatiens capensis	5		FACW
	30	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	20	X	FAC
Parthenocissus quinquefolia	15	X	FACU
	35	= Total Cover	

Dominance Test Worksheet:

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

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	5	x 2	10	
FAC species	60	x 3	180	
FACU species	80	x 4	320	
UPL species	0	x 5	0	
Column Totals	145	(A)	510	(B)

Prevalence Index = B/A = 3.52

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **02-20200715-WL-18-18U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-16	10YR 4/3	100					Clay	
16-20	2.5Y 7/3	85	2.5Y 6/8	15	C	PL	Silty Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/16/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200715-WL-19-19U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.094884 Long: -78.175711 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200715-WL-19-19U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Zea mays	60	X	UPL
	60 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 0% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	0	x 3	0	
FACU species	0	x 4	0	
UPL species	60	x 5	300	
Column Totals	60	(A)	300	(B)

Prevalence Index = B/A = 5

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL Sampling Point: **02-20200715-WL-19-19U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-14	10YR 4/3	95	7.5YR 5/6	5	C	PL	Sandy Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/15/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200716-WL-22-22U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.100398 Long: -78.157093 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: UPL

Are climatic / hyrologic 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 X	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	if yes, optional Wetland Site ID: _____
Wetland Hydrology Present?	Yes _____	No X	

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes _____	No X	Depth (inches) _____
Water Table Present?	Yes _____	No X	Depth (inches) _____
Saturation Present?	Yes _____	No X	Depth (inches) _____

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200716-WL-22-22U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer saccharinum	50	X	FACW
Fraxinus pennsylvanica	20	X	FACW
	70	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lonicera tatarica	20	X	FACU
	20	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Toxicodendron radicans	30	X	FAC
Solidago canadensis	15	X	FACU
Persicaria virginiana	15	X	FAC
Prunella vulgaris	5		FAC
	65	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus quinquefolia	20	X	FACU
	20	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 57.1% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	70	x 2	140	
FAC species	50	x 3	150	
FACU species	55	x 4	220	
UPL species	0	x 5	0	
Column Totals	175	(A)	510	(B)

Prevalence Index = B/A = 2.91

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **02-20200716-WL-22-22U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-18	10YR 3/6	100					Silty Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/15/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200715-WL-20-20W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.094042 Long: -78.177959 Datum: NAD83

Soil Map Unit Name: OvB NWI Classification: PSS

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL74
Wetland Hydrology Present?	Yes X 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)	X	Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
	High Water Table (A2)	X	Aquatic Fauna (B13)		Drainage Patterns (B10)
	Saturation (A3)		Marl Deposits (B15)	X	Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
					FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X Depth (inches) ____	Wetland Hydrology Present?	Yes X No ____
Water Table Present?	Yes ____ No X Depth (inches) ____		
Saturation Present?	Yes ____ No X Depth (inches) ____		

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200715-WL-20-20W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Salix alba	50	X	FACW
	50	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	20	X	FACW
Salix alba	10	X	FACW
	30	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phragmites australis	30	X	FACW
Reynoutria japonica	25	X	FACU
Typha angustifolia	15	X	OBL
	70	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus quinquefolia	30	X	FACU
Vitis riparia	10	X	FAC
	40	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index Worksheet:

OBL species	15	x 1	15	
FACW species	110	x 2	220	
FAC species	10	x 3	30	
FACU species	55	x 4	220	
UPL species	0	x 5	0	
Column Totals	190	(A)	485	(B)

Prevalence Index = B/A = 2.55

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **02-20200715-WL-20-20W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-4	10YR 3/2	90	5YR 4/6	10	C	PL	Silty Clay Loam	
4-20	10YR 5/4	90	7.5YR 6/8	10	C	PL	Clay	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/15/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200715-WL-20-20U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.094105 Long: -78.177897 Datum: NAD83

Soil Map Unit Name: OvB NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200715-WL-20-20U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Zea mays	40	X	UPL
Alliaria petiolata	15	X	FACU
Daucus carota	5		UPL
Solidago canadensis	5		FACU
	65	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	30	X	FAC
Parthenocissus quinquefolia	20	X	FACU
	50	= Total Cover	

Dominance Test Worksheet:

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

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	30	x 3	90	
FACU species	40	x 4	160	
UPL species	45	x 5	225	
Column Totals	115	(A)	475	(B)

Prevalence Index = B/A = 4.13

Hydrophytic Vegetation Indicators:

- 1- Rapid Test For Hydrophytic Vegetation
- 2- Dominance Test is > 50%
- 3- Prevalence Index is =< 3.0
- 4- Morphological Adaptations
- 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200715-WL-20-20U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 4/3	100					Silt Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/15/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200715-WL-21-21W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.094368 Long: -78.179752 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: PFO

Are climatic / hyrologic conditions on the site typical for this time of year? Yes X No ____ (if no, explain in Remarks.)

Are Vegetation ____, Soil X, 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL75
Wetland Hydrology Present?	Yes X 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)	X	Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Fauna (B13)	X	Drainage Patterns (B10)
	Saturation (A3)		Marl Deposits (B15)	X	Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
					FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X Depth (inches) ____	Wetland Hydrology Present?	Yes X No ____
Water Table Present?	Yes ____ No X Depth (inches) ____		
Saturation Present?	Yes ____ No X Depth (inches) ____		

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200715-WL-21-21W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Populus deltoides	40	X	FAC
Fraxinus pennsylvanica	30	X	FACW
	70	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	30	X	FACW
Lonicera tatarica	5		FACU
	35	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Cyperus esculentus	30	X	FACW
Persicaria virginiana	20	X	FAC
Phalaris arundinacea	15		FACW
Solidago gigantea	10		FACW
Fraxinus pennsylvanica	10		FACW
Toxicodendron radicans	10		FAC
Phragmites australis	2		FACW
	97	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	10	X	FAC
	10	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	127	x 2	254	
FAC species	80	x 3	240	
FACU species	5	x 4	20	
UPL species	0	x 5	0	
Column Totals	212	(A)	514	(B)

Prevalence Index = B/A = 2.42

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200715-WL-21-21W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-16	10YR 5/4	90	7.5YR 6/8	10	C	PL	Silt Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- X Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/15/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200715-WL-21-21U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.094302 Long: -78.179652 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: UPL

Are climatic / hyrologic 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 X	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	if yes, optional Wetland Site ID: _____
Wetland Hydrology Present?	Yes _____	No X	

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes _____	No X	Depth (inches) _____
Water Table Present?	Yes _____	No X	Depth (inches) _____
Saturation Present?	Yes _____	No X	Depth (inches) _____

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200715-WL-21-21U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	20	X	FACW
	20 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Zea mays	30	X	UPL
Toxicodendron radicans	15	X	FAC
Fraxinus pennsylvanica	15	X	FACW
Persicaria virginiana	15	X	FAC
Impatiens capensis	10		FACW
	85 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	15	X	FAC
	15 = 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: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83.3% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	45	x 2	90	
FAC species	45	x 3	135	
FACU species	0	x 4	0	
UPL species	30	x 5	150	
Column Totals	120	(A)	375	(B)

Prevalence Index = B/A = 3.12

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- ___ 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200715-WL-21-21U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-16	10YR 5/4	95	7.5YR 6/8	5	C	PL	Silt Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/16/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200716-WL-23-23W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.091781 Long: -78.179274 Datum: NAD83

Soil Map Unit Name: HlA NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL76
Wetland Hydrology Present?	Yes X 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)	X	Water-Stained Leaves (B9)	____	Surface Soil Cracks (B6)
____	High Water Table (A2)	____	Aquatic Fauna (B13)	____	Drainage Patterns (B10)
____	Saturation (A3)	____	Marl Deposits (B15)	____	Moss Trim Lines (B16)
____	Water Marks (B1)	____	Hydrogen Sulfide Odor (C1)	____	Dry-Season Water Table (C2)
____	Sediment Deposits (B2)	X	Oxidized Rhizospheres on Living Roots (C3)	____	Crayfish Burrows (C8)
____	Drift Deposits (B3)	____	Presence of Reduced Iron (C4)	____	Saturation Visible in Aerial Imagery (C9)
____	Algal Mat or Crust (B4)	____	Recent Iron Reduction in Tilled Soils (C6)	____	Stunted or Stressed Plants (D1)
____	Iron Deposits (B5)	____	Thin Muck Surface (C7)	____	Geomorphic Position (D2)
____	Inundation Visible on Aerial Imagery (B7)	____	Other (Explain in Remarks)	____	Shallow Aquitard (D3)
____	Sparsley Vegetated Concave Surface (B8)			____	Microtopographic Relief (D4)
				____	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200716-WL-23-23W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Asclepias incarnata	10	X	OBL
	10 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Typha angustifolia	30	X	OBL
Leersia oryzoides	30	X	OBL
Ambrosia artemisiifolia	15		FACU
Solidago gigantea	15		FACW
Alliaria petiolata	5		FACU
Rumex crispus	5		FAC
Daucus carota	2		UPL
Cirsium vulgare	2		FACU
	104 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	5	X	FAC
	5 = Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

OBL species	70	x 1	70	
FACW species	15	x 2	30	
FAC species	10	x 3	30	
FACU species	22	x 4	88	
UPL species	2	x 5	10	
Column Totals	119	(A)	228	(B)

Prevalence Index = B/A = 1.92

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200716-WL-23-23W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-6	10YR 4/4	95	7.5YR 6/8	5	C	PL	Silty Clay Loam	
6-18	10YR 5/1	60	7.5YR 6/8	40	C	M	Silty Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/23/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200716-WL-23-23U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.091797 Long: -78.179326 Datum: NAD83

Soil Map Unit Name: HlA NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200716-WL-23-23U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Ambrosia artemisiifolia	30	X	FACU
Alliaria petiolata	25	X	FACU
Plantago lanceolata	15		FACU
Medicago lupulina	10		FACU
Bidens frondosa	10		FACW
	90	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	10	x 2	20	
FAC species	0	x 3	0	
FACU species	80	x 4	320	
UPL species	0	x 5	0	
Column Totals	90	(A)	340	(B)

Prevalence Index = B/A = 3.78

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200716-WL-23-23U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 3/3	100					Silt Loam	
12-18	10YR 6/3	100					Silt Loam	
18-24	10YR 7/2	90	7.5YR 5/8	10	C	PL	Silt Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/16/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200716-WL-24-24W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.094694 Long: -78.169038 Datum: NAD83

Soil Map Unit Name: ArB NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL77
Wetland Hydrology Present?	Yes X 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)	X	Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)
	Saturation (A3)		Marl Deposits (B15)	X	Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
					FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X Depth (inches) ____	Wetland Hydrology Present?	Yes X No ____
Water Table Present?	Yes ____ No X Depth (inches) ____		
Saturation Present?	Yes ____ No X Depth (inches) ____		

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200716-WL-24-24W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Tilia americana	40	X	FACU
Fraxinus pennsylvanica	30	X	FACW
	70	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	40	X	FACW
Lonicera tatarica	15	X	FACU
	55	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Onoclea sensibilis	50	X	FACW
Fraxinus pennsylvanica	15		FACW
Geum canadense	10		FAC
Solidago gigantea	10		FACW
Toxicodendron radicans	5		FAC
	90	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus quinquefolia	15	X	FACU
Vitis riparia	5	X	FAC
	20	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 57.1% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	145	x 2	290	
FAC species	20	x 3	60	
FACU species	70	x 4	280	
UPL species	0	x 5	0	
Column Totals	235	(A)	630	(B)

Prevalence Index = B/A = 2.68

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200716-WL-24-24W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-20	10YR 4/2	80	7.5YR 6/8	20	C	M	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/16/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200716-WL-24-24U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.094635 Long: -78.169169 Datum: NAD83

Soil Map Unit Name: ClB NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200716-WL-24-24U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Beta vulgaris	30	X	UPL
Erigeron canadensis	20	X	FACU
Chenopodium album	10		FACU
Portulaca oleracea	5		FACU
Digitaria sanguinalis	5		FACU
	70	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	0	x 3	0	
FACU species	40	x 4	160	
UPL species	30	x 5	150	
Column Totals	70	(A)	310	(B)

Prevalence Index = B/A = 4.43

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200716-WL-24-24U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-20	10YR 4/6	100					Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/16/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200716-WL-25-25W

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.092095 Long: -78.169055 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: PFO

Are climatic / hyrologic 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 X No _____	**Is the Sampled Area within a Wetland?**	Yes X No _____
Hydric Soil Present?	Yes X No _____	if yes, optional Wetland Site ID:	WL78
Wetland Hydrology Present?	Yes X 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)	X	Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Fauna (B13)	X	Drainage Patterns (B10)
	Saturation (A3)		Marl Deposits (B15)	X	Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible in Aerial Imagery (C9)
X	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
					FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes _____ No X Depth (inches) _____	Wetland Hydrology Present?	Yes X No _____
Water Table Present?	Yes _____ No X Depth (inches) _____		
Saturation Present?	Yes _____ No X Depth (inches) _____		

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200716-WL-25-25W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer saccharinum	50	X	FACW
	50	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer saccharinum	30	X	FACW
Fraxinus pennsylvanica	30	X	FACW
	60	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Allium tricoccum	20	X	FACU
Arisaema triphyllum	10	X	FAC
Alliaria petiolata	10	X	FACU
Carex pedunculata	5		FAC
Persicaria virginiana	5		FAC
Toxicodendron radicans	5		FAC
	55	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	110	x 2	220	
FAC species	25	x 3	75	
FACU species	30	x 4	120	
UPL species	0	x 5	0	
Column Totals	165	(A)	415	(B)

Prevalence Index = B/A = 2.52

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200716-WL-25-25W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-6	10YR 2/2	100					Silt Loam	
6-18	2.5Y 6/2	80	7.5YR 6/8	20	C	M	Sand	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/16/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200716-WL-25-25U

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.092223 Long: -78.169096 Datum: NAD83

Soil Map Unit Name: GnB NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200716-WL-25-25U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer saccharum	50	X	FACU
	50	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer saccharum	30	X	FACU
	30	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Alliaria petiolata	30	X	FACU
Menispermum canadense	20	X	FAC
Allium tricoccum	20	X	FACU
Toxicodendron radicans	5		FAC
	75	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 20% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	25	x 3	75	
FACU species	130	x 4	520	
UPL species	0	x 5	0	
Column Totals	155	(A)	595	(B)

Prevalence Index = B/A = 3.84

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200716-WL-25-25U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 4/6	100					Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennesee Sampling Date: 9/30/2020

Applicant/Owner: Hecate State: NY Sampling Point: 01_20200930_WL112_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Dip Local relief (concave, convex, none): None Slope (%) 3 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.109673 Long: -78.227402 Datum: NAD83

Soil Map Unit Name: _____ NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL79
Wetland Hydrology Present?	Yes X 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)	____	Water-Stained Leaves (B9)	____	Surface Soil Cracks (B6)
____	High Water Table (A2)	____	Aquatic Fauna (B13)	____	Drainage Patterns (B10)
____	Saturation (A3)	____	Marl Deposits (B15)	____	Moss Trim Lines (B16)
____	Water Marks (B1)	____	Hydrogen Sulfide Odor (C1)	____	Dry-Season Water Table (C2)
____	Sediment Deposits (B2)	X	Oxidized Rhizospheres on Living Roots (C3)	____	Crayfish Burrows (C8)
____	Drift Deposits (B3)	____	Presence of Reduced Iron (C4)	____	Saturation Visible in Aerial Imagery (C9)
____	Algal Mat or Crust (B4)	____	Recent Iron Reduction in Tilled Soils (C6)	____	Stunted or Stressed Plants (D1)
____	Iron Deposits (B5)	____	Thin Muck Surface (C7)	____	Geomorphic Position (D2)
____	Inundation Visible on Aerial Imagery (B7)	____	Other (Explain in Remarks)	____	Shallow Aquitard (D3)
____	Sparsley Vegetated Concave Surface (B8)			____	Microtopographic Relief (D4)
				X	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X Depth (inches) ____	Wetland Hydrology Present?	Yes X No ____
Water Table Present?	Yes ____ No X Depth (inches) ____		
Saturation Present?	Yes ____ No X Depth (inches) ____		

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **01_20200930_WL112_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer saccharinum	60	X	FACW
Ulmus americana	20	X	FACW
Fraxinus pennsylvanica	15		FACW
	95	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Symphyotrichum lanceolatum	10	X	FACW
Cinna arundinacea	10	X	FACW
Glyceria striata	10	X	OBL
Mentha arvensis	5		FACW
Ranunculus hispidus	5		FAC
Phragmites australis	5		FACW
Symphyotrichum lateriflorum	5		FAC
Taraxacum officinale	3		FACU
	53	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Toxicodendron radicans	5	X	FAC
	5	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

OBL species	10	x 1	10	
FACW species	125	x 2	250	
FAC species	15	x 3	45	
FACU species	3	x 4	12	
UPL species	0	x 5	0	
Column Totals	153	(A)	317	(B)

Prevalence Index = B/A = 2.07

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **Wetland-WL79**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-5	10YR 2/1	95	10Y 3/6	5	C	PL	Silty Clay Loam	
5-8	10YR 3/1	90	10YR 4/6	10	C	M	Silty Clay Loam	
8-16	10YR 5/1	70	10YR 4/6	30	C	M	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennesee Sampling Date: 9/30/2020

Applicant/Owner: Hecate State: NY Sampling Point: 01_20200930_WL112_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): Convex Slope (%) 5 - 10

Subregion (LRR or MLRA): LRR L Lat: 43.109684 Long: -78.227432 Datum: NAD83

Soil Map Unit Name: Ma NWI Classification: UPL

Are climatic / hyrologic 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 X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	if yes, optional Wetland Site ID: _____
Wetland Hydrology Present?	Yes ____	No X	

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____	No X	Depth (inches) ____
Water Table Present?	Yes ____	No X	Depth (inches) ____
Saturation Present?	Yes ____	No X	Depth (inches) ____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **01_20200930_WL112_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer saccharinum	50	X	FACW
Ulmus americana	20	X	FACW
	70	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lonicera morrowii	40	X	FACU
Tilia americana	15	X	FACU
	55	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Solidago canadensis	10	X	FACU
Symphyotrichum lanceolatum	10	X	FACW
Symphyotrichum lateriflorum	10	X	FAC
Circaea canadensis	5		FACU
	35	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Toxicodendron radicans	10	X	FAC
	10	= 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: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 62.5% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	80	x 2	160	
FAC species	20	x 3	60	
FACU species	70	x 4	280	
UPL species	0	x 5	0	
Column Totals	170	(A)	500	(B)

Prevalence Index = B/A = 2.94

Hydrophytic Vegetation Indicators:

- [ ] 1- Rapid Test For Hydrophytic Vegetation
- [x] 2- Dominance Test is > 50%
- [x] 3- Prevalence Index is =< 3.0
- [ ] 4- Morphological Adaptations
- [ ] 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **01_20200930_WL112_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-5	10YR 3/1	100					Sandy Loam	
5-16	10YR 3/2	100					Sand	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: Dense

Depth (inches): 16

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/17/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200717-WL-27-27W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.092468 Long: -78.166319 Datum: NAD83

Soil Map Unit Name: ArB NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL80
Wetland Hydrology Present?	Yes X 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)

X	Surface Water (A1)		Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required)
	High Water Table (A2)		Aquatic Fauna (B13)		Surface Soil Cracks (B6)
	Saturation (A3)		Marl Deposits (B15)		Drainage Patterns (B10)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Moss Trim Lines (B16)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Dry-Season Water Table (C2)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Crayfish Burrows (C8)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Saturation Visible in Aerial Imagery (C9)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Stunted or Stressed Plants (D1)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)	X	Geomorphic Position (D2)
	Sparsley Vegetated Concave Surface (B8)				Shallow Aquitard (D3)
					Microtopographic Relief (D4)
					FAC-Neutral Test (D5)

Surface Water Present?	Yes X	No ____	Depth (inches)	2
Water Table Present?	Yes ____	No X	Depth (inches)	____
Saturation Present?	Yes ____	No X	Depth (inches)	____

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200717-WL-27-27W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Leersia oryzoides	60	X	OBL
Cyperus strigosus	30	X	FACW
Typha angustifolia	20		OBL
Galinsoga quadriradiata	10		FACU
Ambrosia artemisiifolia	10		FACU
Persicaria lapathifolia	5		FACW
Chenopodium album	5		FACU
Agrostis gigantea	5		FACW
Lepidium virginicum	5		FACU
	150	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	80	x 1	80	
FACW species	40	x 2	80	
FAC species	0	x 3	0	
FACU species	30	x 4	120	
UPL species	0	x 5	0	
Column Totals	150	(A)	280	(B)

Prevalence Index = B/A = 1.87

Hydrophytic Vegetation Indicators:

X 1- Rapid Test For Hydrophytic Vegetation

X 2- Dominance Test is > 50%

X 3- Prevalence Index is =< 3.0

4- Morphological Adaptations

5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200717-WL-27-27W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-14	10YR 4/2	95	5YR 5/8	5	C	PL	Silty Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/17/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200717-WL-27-27U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.092354 Long: -78.16657 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200717-WL-27-27U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Ambrosia artemisiifolia	40	X	FACU
Leersia oryzoides	30	X	OBL
Galinsoga quadriradiata	10		FACU
Agrostis gigantea	5		FACW
Chenopodium album	5		FACU
	90	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

OBL species	30	x 1	30	
FACW species	5	x 2	10	
FAC species	0	x 3	0	
FACU species	55	x 4	220	
UPL species	0	x 5	0	
Column Totals	90	(A)	260	(B)

Prevalence Index = B/A = 2.89

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
disturbed, farm land

SOIL Sampling Point: **02-20200717-WL-27-27U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-24	7.5YR 4/2	100					Sandy Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/17/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200717-WL-28-28W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.099292 Long: -78.205322 Datum: NAD83

Soil Map Unit Name: HlB NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL81
Wetland Hydrology Present?	Yes X 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)	____	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)
____	Sparsley Vegetated Concave Surface (B8)		

Secondary Indicators (minimum of two required)

____	Surface Soil Cracks (B6)
X	Drainage Patterns (B10)
____	Moss Trim Lines (B16)
____	Dry-Season Water Table (C2)
____	Crayfish Burrows (C8)
____	Saturation Visible in Aerial Imagery (C9)
____	Stunted or Stressed Plants (D1)
X	Geomorphic Position (D2)
____	Shallow Aquitard (D3)
____	Microtopographic Relief (D4)
____	FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200717-WL-28-28W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Cornus racemosa	40	X	FAC
	40	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Cornus racemosa	40	X	FAC
Fraxinus pennsylvanica	40	X	FACW
	80	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Persicaria virginiana	30	X	FAC
Solidago gigantea	15	X	FACW
Circaea alpina	10		FACW
Toxicodendron radicans	5		FAC
Ranunculus acris	5		FAC
Geum canadense	5		FAC
Allium vineale	2		FACU
	72	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus quinquefolia	20	X	FACU
	20	= 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: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83.3% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	65	x 2	130	
FAC species	125	x 3	375	
FACU species	22	x 4	88	
UPL species	0	x 5	0	
Column Totals	212	(A)	593	(B)

Prevalence Index = B/A = 2.8

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200717-WL-28-28W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-10	10YR 4/2	95	5YR 4/6	5	C	PL	Silty Clay Loam	
10-20	5YR 4/2	60	10YR 6/3	40	C	M	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/17/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200717-WL-28-28U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.099533 Long: -78.205405 Datum: NAD83

Soil Map Unit Name: HlB NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200717-WL-28-28U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Cornus racemosa	50	X	FAC
	50	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	30	X	FACW
	30	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Alliaria petiolata	40	X	FACU
Hesperis matronalis	40	X	FACU
Toxicodendron radicans	20		FAC
Geum canadense	5		FAC
	105	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= 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: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	30	x 2	60	
FAC species	75	x 3	225	
FACU species	80	x 4	320	
UPL species	0	x 5	0	
Column Totals	185	(A)	605	(B)

Prevalence Index = B/A = 3.27

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200717-WL-28-28U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-14	10YR 4/4	95	10YR 5/8	5	C	PL	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 14

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/17/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200717-WL-29-29U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.099763 Long: -78.204734 Datum: NAD83

Soil Map Unit Name: Ld NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200717-WL-29-29U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Cornus racemosa	40	X	FAC
	40	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Ambrosia artemisiifolia	30	X	FACU
Medicago lupulina	20	X	FACU
Ranunculus sceleratus	20	X	OBL
Trifolium hybridum	15		FACU
Solidago canadensis	10		FACU
Persicaria maculosa	10		FAC
Daucus carota	10		UPL
	115	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= 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: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

OBL species	20	x 1	20	
FACW species	0	x 2	0	
FAC species	50	x 3	150	
FACU species	75	x 4	300	
UPL species	10	x 5	50	
Column Totals	155	(A)	520	(B)

Prevalence Index = B/A = 3.35

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200717-WL-29-29U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-14	10YR 4/3	100					Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/17/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200717-WL-29-29W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.099485 Long: -78.204781 Datum: NAD83

Soil Map Unit Name: Ld NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL81
Wetland Hydrology Present?	Yes X 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)

X	Surface Water (A1)		Water-Stained Leaves (B9)	X	Drainage Patterns (B10)
	High Water Table (A2)	X	Aquatic Fauna (B13)		Moss Trim Lines (B16)
	Saturation (A3)		Marl Deposits (B15)		Dry-Season Water Table (C2)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Saturation Visible in Aerial Imagery (C9)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Stunted or Stressed Plants (D1)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Geomorphic Position (D2)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Shallow Aquitard (D3)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Microtopographic Relief (D4)
	Sparsley Vegetated Concave Surface (B8)				FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

	Surface Soil Cracks (B6)

Surface Water Present?	Yes X No ____	Depth (inches)	2
Water Table Present?	Yes ____ No X	Depth (inches)	____
Saturation Present?	Yes ____ No X	Depth (inches)	____

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200717-WL-29-29W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	40	X	FACW
	40 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	30	X	FACW
Symphyotrichum puniceum	30	X	OBL
Scirpus atrovirens	30	X	OBL
Carex alopecoidea	20	X	FACW
Juncus tenuis	20	X	FAC
Euthamia graminifolia	20	X	FAC
Solidago gigantea	20	X	FACW
Trifolium hybridum	15		FACU
Phalaris arundinacea	10		FACW
Ranunculus sceleratus	10		OBL
Heuchera richardsonii	10		FACU
Anthemis cotula	10		FACU
	225 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

OBL species	70	x 1	70	
FACW species	120	x 2	240	
FAC species	40	x 3	120	
FACU species	35	x 4	140	
UPL species	0	x 5	0	
Column Totals	265	(A)	570	(B)

Prevalence Index = B/A = 2.15

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200717-WL-29-29W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 3/1	90	2.5Y 4/8	10	C	PL	Sandy Loam	
12-24	10YR 6/4	80	10YR 6/8	20	C	M	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/20/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200720WL-30-30W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.100481 Long: -78.211992 Datum: NAD83

Soil Map Unit Name: LoA NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL82
Wetland Hydrology Present?	Yes X 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)

X	Surface Water (A1)		Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required)
X	High Water Table (A2)		Aquatic Fauna (B13)		Surface Soil Cracks (B6)
X	Saturation (A3)		Marl Deposits (B15)		Drainage Patterns (B10)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Moss Trim Lines (B16)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Dry-Season Water Table (C2)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Crayfish Burrows (C8)
X	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Saturation Visible in Aerial Imagery (C9)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Stunted or Stressed Plants (D1)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Geomorphic Position (D2)
X	Sparsley Vegetated Concave Surface (B8)				Shallow Aquitard (D3)
					Microtopographic Relief (D4)
					FAC-Neutral Test (D5)

Surface Water Present?	Yes X	No ____	Depth (inches)	2
Water Table Present?	Yes X	No ____	Depth (inches)	1
Saturation Present?	Yes X	No ____	Depth (inches)	1

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200720WL-30-30W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Eupatorium perfoliatum	40	X	FACW
Carex alopecoidea	30	X	FACW
Typha angustifolia	30	X	OBL
Epilobium hirsutum	30	X	FACW
Scirpus atrovirens	20		OBL
Cyperus esculentus	20		FACW
	170	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

OBL species	50	x 1	50	
FACW species	120	x 2	240	
FAC species	0	x 3	0	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	170	(A)	290	(B)

Prevalence Index = B/A = 1.71

Hydrophytic Vegetation Indicators:

X 1- Rapid Test For Hydrophytic Vegetation

X 2- Dominance Test is > 50%

X 3- Prevalence Index is =< 3.0

4- Morphological Adaptations

5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200720WL-30-30W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-6	10YR 4/2	95	5YR 4/4	5	C	PL	Clay Loam	
6-16	10YR 3/2	80	7.5YR 5/6	20	C	M	Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/20/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200720-WL-30-30U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.100397 Long: -78.211875 Datum: NAD83

Soil Map Unit Name: HlB NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200720-WL-30-30U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Zea mays	60	X	UPL
Abutilon theophrasti	20	X	FACU
	80 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	0	x 3	0	
FACU species	20	x 4	80	
UPL species	60	x 5	300	
Column Totals	80	(A)	380	(B)

Prevalence Index = B/A = 4.75

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200720-WL-30-30U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-4	10YR 4/2	100					Silt Loam	
4-14	10YR 4/2	95	7.5YR 5/6	5	C	PL	Silty Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/20/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200720-WL-31-31W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.100834 Long: -78.220165 Datum: NAD83

Soil Map Unit Name: HlB NWI Classification: PEM

Are climatic / hyrologic conditions on the site typical for this time of year? Yes X No ____ (if no, explain in Remarks.)

Are Vegetation X , 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 X	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL83
Wetland Hydrology Present?	Yes X 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)

X	Surface Water (A1)		Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required)
	High Water Table (A2)	X	Aquatic Fauna (B13)		Surface Soil Cracks (B6)
	Saturation (A3)		Marl Deposits (B15)		Drainage Patterns (B10)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Moss Trim Lines (B16)
	Sediment Deposits (B2)	X	Oxidized Rhizospheres on Living Roots (C3)		Dry-Season Water Table (C2)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Crayfish Burrows (C8)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Saturation Visible in Aerial Imagery (C9)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Stunted or Stressed Plants (D1)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Geomorphic Position (D2)
	Sparsley Vegetated Concave Surface (B8)				Shallow Aquitard (D3)
					Microtopographic Relief (D4)
					FAC-Neutral Test (D5)

Surface Water Present?	Yes X	No ____	Depth (inches)	2
Water Table Present?	Yes ____	No X	Depth (inches)	____
Saturation Present?	Yes ____	No X	Depth (inches)	____

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200720-WL-31-31W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Elymus glaucus	40	X	FACU
Epilobium hirsutum	30	X	FACW
Trifolium hybridum	25	X	FACU
Sorghum halepense	20		FACU
Carex alopecoidea	20		FACW
Rumex crispus	15		FAC
Cyperus strigosus	10		FACW
Phleum pratense	10		FACU
Ranunculus acris	5		FAC
Typha angustifolia	5		OBL
	180	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index Worksheet:

OBL species	5	x 1	5	
FACW species	60	x 2	120	
FAC species	20	x 3	60	
FACU species	95	x 4	380	
UPL species	0	x 5	0	
Column Totals	180	(A)	565	(B)

Prevalence Index = B/A = 3.14

Hydrophytic Vegetation Indicators:

- 1- Rapid Test For Hydrophytic Vegetation
- 2- Dominance Test is > 50%
- 3- Prevalence Index is =< 3.0
- 4- Morphological Adaptations
- 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
altered, farm land

SOIL Sampling Point: **02-20200720-WL-31-31W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-2	10YR 4/2	100					Clay	
2-24	10YR 4/2	90	7.5YR 5/8	10	C	PL	Clay	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/20/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200720-WL-31-31U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.100847 Long: -78.219878 Datum: NAD83

Soil Map Unit Name: HlB NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200720-WL-31-31U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Juglans nigra	30	X	FACU
	30	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lonicera tatarica	30	X	FACU
Rubus allegheniensis	10	X	FACU
	40	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Solidago canadensis	20	X	FACU
Trifolium repens	15	X	FACU
Alliaria petiolata	10		FACU
Ranunculus acris	5		FAC
Oxalis corniculata	2		FACU
	52	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	10	X	FAC
	10	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 16.7% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	15	x 3	45	
FACU species	117	x 4	468	
UPL species	0	x 5	0	
Column Totals	132	(A)	513	(B)

Prevalence Index = B/A = 3.89

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200720-WL-31-31U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-6	10YR 4/1	100					Clay	
6-20	10YR 4/1	60	7.5YR 5/3	40	C	M	Clay	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/20/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200720-WL-32-32W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.105543 Long: -78.218782 Datum: NAD83

Soil Map Unit Name: RoA NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL84
Wetland Hydrology Present?	Yes X 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)	X	Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Fauna (B13)	X	Drainage Patterns (B10)
	Saturation (A3)		Marl Deposits (B15)	X	Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
					FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X Depth (inches) ____	Wetland Hydrology Present?	Yes X No ____
Water Table Present?	Yes ____ No X Depth (inches) ____		
Saturation Present?	Yes ____ No X Depth (inches) ____		

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200720-WL-32-32W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer rubrum	40	X	FAC
Fraxinus pennsylvanica	30	X	FACW
	70	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	30	X	FACW
Lonicera tatarica	10	X	FACU
	40	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Polygonum aviculare	20	X	FACU
Carex intumescens	15	X	FACW
Carex alopecoidea	15	X	FACW
Typha angustifolia	15	X	OBL
Daucus carota	10		UPL
Toxicodendron radicans	10		FAC
Impatiens capensis	5		FACW
	90	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus quinquefolia	5	X	FACU
	5	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index Worksheet:

OBL species	15	x 1	15	
FACW species	95	x 2	190	
FAC species	50	x 3	150	
FACU species	35	x 4	140	
UPL species	10	x 5	50	
Column Totals	205	(A)	545	(B)

Prevalence Index = B/A = 2.66

Hydrophytic Vegetation Indicators:

- [ ] 1- Rapid Test For Hydrophytic Vegetation
- [x] 2- Dominance Test is > 50%
- [x] 3- Prevalence Index is =< 3.0
- [ ] 4- Morphological Adaptations
- [ ] 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200720-WL-32-32W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-8	10YR 3/2	95	7.5YR 4/6	5	C	PL	Clay	
8-20	7.5YR 6/1	60	7.5YR 5/8	40	C	M	Clay	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/20/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200720-WL-32-32U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.105456 Long: -78.218811 Datum: NAD83

Soil Map Unit Name: RoA NWI Classification: UPL

Are climatic / hyrologic 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 X	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	if yes, optional Wetland Site ID: _____
Wetland Hydrology Present?	Yes _____	No X	

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes _____	No X	Depth (inches) _____
Water Table Present?	Yes _____	No X	Depth (inches) _____
Saturation Present?	Yes _____	No X	Depth (inches) _____

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200720-WL-32-32U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lonicera tatarica	40	X	FACU
Fraxinus pennsylvanica	30	X	FACW
	70 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Reynoutria japonica	30	X	FACU
Toxicodendron radicans	20	X	FAC
Lonicera tatarica	10		FACU
	60 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	10	X	FAC
	10 = Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	30	x 2	60	
FAC species	30	x 3	90	
FACU species	80	x 4	320	
UPL species	0	x 5	0	
Column Totals	140	(A)	470	(B)

Prevalence Index = B/A = 3.36

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- ___ 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200720-WL-32-32U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 3/3	98	7.5YR 5/8	2	C	PL	Clay Loam	
12-24	7.5YR 6/1	50	7.5YR 5/8	50	C	M	Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 9/29/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02_20200929_WL33_W2

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.103147 Long: -78.220561 Datum: NAD83

Soil Map Unit Name: LoA NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL85
Wetland Hydrology Present?	Yes X No ____		

Remarks: (Explain alternative procedures here or in a separate report.)

Vegetated ditch

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

____	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)
____	Sparsley Vegetated Concave Surface (B8)		

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)
X	Saturation Visible in Aerial Imagery (C9)
____	Stunted or Stressed Plants (D1)
X	Geomorphic Position (D2)
____	Shallow Aquitard (D3)
____	Microtopographic Relief (D4)
____	FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02_20200929_WL33_W2**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lonicera morrowii	40	X	FACU
	40 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Typha angustifolia	40	X	OBL
Phalaris arundinacea	25	X	FACW
Solidago canadensis	25	X	FACU
	90 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	10	X	FAC
	10 = Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60% (A/B)

Prevalence Index Worksheet:

OBL species	40	x 1	40	
FACW species	25	x 2	50	
FAC species	10	x 3	30	
FACU species	65	x 4	260	
UPL species	0	x 5	0	
Column Totals	140	(A)	380	(B)

Prevalence Index = B/A = 2.71

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02_20200929_WL33_W2**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-6	10YR 3/1	90	10YR 4/6	10	C	M	Loam	
6-12	10YR 4/1	75	10YR 5/6	25	C	M	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/20/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200720-WL-33-33W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.104771 Long: -78.220513 Datum: NAD83

Soil Map Unit Name: RoA NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL85
Wetland Hydrology Present?	Yes X 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)	X	Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)
	Saturation (A3)		Marl Deposits (B15)	X	Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
X	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
					FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X Depth (inches) ____	Wetland Hydrology Present?	Yes X No ____
Water Table Present?	Yes ____ No X Depth (inches) ____		
Saturation Present?	Yes ____ No X Depth (inches) ____		

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200720-WL-33-33W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer saccharinum	50	X	FACW
Fraxinus pennsylvanica	50	X	FACW
	100	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	20	X	FACW
	20	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Glyceria striata	50	X	OBL
Carex cristatella	30	X	FACW
Carex crinita	20		OBL
Carex gynandra	10		OBL
Toxicodendron radicans	10		FAC
Scutellaria lateriflora	5		OBL
	125	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= 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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	85	x 1	85	
FACW species	150	x 2	300	
FAC species	10	x 3	30	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	245	(A)	415	(B)

Prevalence Index = B/A = 1.69

Hydrophytic Vegetation Indicators:

X 1- Rapid Test For Hydrophytic Vegetation

X 2- Dominance Test is > 50%

X 3- Prevalence Index is =< 3.0

4- Morphological Adaptations

5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200720-WL-33-33W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-10	10YR 3/2	90	7.5YR 6/8	10	C	PL	Clay	
10-20	10YR 3/2	60	7.5YR 6/8	40	C	M	Clay	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/20/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200720-WL-33-33U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.104348 Long: -78.220402 Datum: NAD83

Soil Map Unit Name: RoA NWI Classification: UPL

Are climatic / hyrologic 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 X	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes X	No _____	if yes, optional Wetland Site ID: _____
Wetland Hydrology Present?	Yes _____	No X	

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes _____	No X	Depth (inches) _____
Water Table Present?	Yes _____	No X	Depth (inches) _____
Saturation Present?	Yes _____	No X	Depth (inches) _____

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200720-WL-33-33U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Populus deltoides	40	X	FAC
	40	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lonicera tatarica	30	X	FACU
Fraxinus pennsylvanica	30	X	FACW
	60	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Ambrosia artemisiifolia	10	X	FACU
Toxicodendron radicans	10	X	FAC
Fraxinus pennsylvanica	10	X	FACW
Prunella vulgaris	5		FAC
Daucus carota	5		UPL
	40	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus quinquefolia	10	X	FACU
	10	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 57.1% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	40	x 2	80	
FAC species	55	x 3	165	
FACU species	50	x 4	200	
UPL species	5	x 5	25	
Column Totals	150	(A)	470	(B)

Prevalence Index = B/A = 3.13

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- ___ 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200720-WL-33-33U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 4/2	100					Silty Clay Loam	
12-16	10YR 4/2	95	10YR 5/6	5	C	PL	Silty Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/20/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200720-WL-34-34W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.105619 Long: -78.214711 Datum: NAD83

Soil Map Unit Name: ApA NWI Classification: PSS

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL86
Wetland Hydrology Present?	Yes X 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)
- ____ Sparsley 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)
- X Drainage Patterns (B10)
- ____ Moss Trim Lines (B16)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X Depth (inches) ____	Wetland Hydrology Present?	Yes X No ____
Water Table Present?	Yes ____ No X Depth (inches) ____		
Saturation Present?	Yes ____ No X Depth (inches) ____		

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200720-WL-34-34W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Euthamia graminifolia	50	X	FAC
Juncus tenuis	30	X	FAC
Solidago gigantea	25	X	FACW
Carex alopecoidea	20		FACW
Cyperus esculentus	20		FACW
Symphyotrichum lanceolatum	20		FACW
Juncus effusus	15		OBL
Fraxinus pennsylvanica	10		FACW
	190	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	15	x 1	15	
FACW species	95	x 2	190	
FAC species	80	x 3	240	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	190	(A)	445	(B)

Prevalence Index = B/A = 2.34

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200720-WL-34-34W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 4/2	95	5YR 4/6	5	C	PL	Clay Loam	
12-24	10YR 5/4	80	7.5YR 6/8	20	C	M	Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/20/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200720-WL-34-34U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.105202 Long: -78.21467 Datum: NAD83

Soil Map Unit Name: ApA NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200720-WL-34-34U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phleum pratense	20	X	FACU
Sorghum halepense	20	X	FACU
Trifolium repens	15	X	FACU
Euthamia graminifolia	10		FAC
Fraxinus pennsylvanica	5		FACW
Daucus carota	5		UPL
	75 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	5	x 2	10	
FAC species	10	x 3	30	
FACU species	55	x 4	220	
UPL species	5	x 5	25	
Column Totals	75	(A)	285	(B)

Prevalence Index = B/A = 3.8

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200720-WL-34-34U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 3/4	100					Clay Loam	
12-20	10YR 5/4	90	7.5YR 6/8	10	C	PL	Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/21/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200721-WL-35-35W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.108336 Long: -78.211079 Datum: NAD83

Soil Map Unit Name: LoA NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL87
Wetland Hydrology Present?	Yes X 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)	X	Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)
	Saturation (A3)		Marl Deposits (B15)	X	Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible in Aerial Imagery (C9)
X	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
					FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X Depth (inches) ____	Wetland Hydrology Present?	Yes X No ____
Water Table Present?	Yes ____ No X Depth (inches) ____		
Saturation Present?	Yes ____ No X Depth (inches) ____		

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200721-WL-35-35W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer saccharinum	40	X	FACW
Fraxinus pennsylvanica	40	X	FACW
	80	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	30	X	FACW
Populus deltoides	20	X	FAC
	50	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Carex trisperma	30	X	OBL
Menispermum canadense	30	X	FAC
Circaea alpina	15		FACW
Prunella vulgaris	10		FAC
Glyceria striata	10		OBL
Fraxinus pennsylvanica	10		FACW
Geum canadense	5		FAC
Oxalis corniculata	5		FACU
Toxicodendron radicans	2		FAC
	117	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus quinquefolia	5	X	FACU
	5	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 85.7% (A/B)

Prevalence Index Worksheet:

OBL species	40	x 1	40	
FACW species	135	x 2	270	
FAC species	67	x 3	201	
FACU species	10	x 4	40	
UPL species	0	x 5	0	
Column Totals	252	(A)	551	(B)

Prevalence Index = B/A = 2.19

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200721-WL-35-35W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-4	10YR 4/2	100					Clay Loam	
4-16	10YR 5/1	80	2.5Y 7/3	20	C	M	Clay	
16-24	5YR 4/4	85	10YR 5/1	15	C	PL	Clay	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/21/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200721-WL-35-35U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.108068 Long: -78.211051 Datum: NAD83

Soil Map Unit Name: HlB NWI Classification: UPL

Are climatic / hyrologic 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 X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	if yes, optional Wetland Site ID: _____
Wetland Hydrology Present?	Yes ____	No X	

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____	No X	Depth (inches) ____
Water Table Present?	Yes ____	No X	Depth (inches) ____
Saturation Present?	Yes ____	No X	Depth (inches) ____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200721-WL-35-35U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Populus deltoides	50	X	FAC
	50	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer saccharum	50	X	FACU
	50	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	20	X	FACW
Carex pedunculata	15	X	FAC
Symphyotrichum lateriflorum	10		FAC
Solidago canadensis	10		FACU
Nabalus albus	5		FACU
Carex aquatilis	5		OBL
	65	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index Worksheet:

OBL species	5	x 1	5	
FACW species	20	x 2	40	
FAC species	75	x 3	225	
FACU species	65	x 4	260	
UPL species	0	x 5	0	
Column Totals	165	(A)	530	(B)

Prevalence Index = B/A = 3.21

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- ___ 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200721-WL-35-35U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 3/4	100					Silt Loam	
12-20	10YR 3/2	90	10YR 6/8	10	C	PL	Silt Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/21/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200721-WL-36-36W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.109867 Long: -78.204721 Datum: NAD83

Soil Map Unit Name: OnB NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL88
Wetland Hydrology Present?	Yes X 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)	X	Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)
	Saturation (A3)		Marl Deposits (B15)	X	Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
					FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X Depth (inches) ____	Wetland Hydrology Present?	Yes X No ____
Water Table Present?	Yes ____ No X Depth (inches) ____		
Saturation Present?	Yes ____ No X Depth (inches) ____		

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200721-WL-36-36W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Salix alba	40	X	FACW
Populus deltoides	40	X	FAC
	80	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	20	X	FACW
Populus deltoides	20	X	FAC
Salix alba	20	X	FACW
	60	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Carex alopecoidea	30	X	FACW
Carex cristatella	30	X	FACW
Symphyotrichum lanceolatum	15		FACW
Solidago gigantea	10		FACW
Fraxinus pennsylvanica	5		FACW
Eleocharis obtusa	5		OBL
Ranunculus acris	5		FAC
	100	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

OBL species	5	x 1	5	
FACW species	170	x 2	340	
FAC species	65	x 3	195	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	240	(A)	540	(B)

Prevalence Index = B/A = 2.25

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200721-WL-36-36W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-6	10YR 3/2	95	7.5YR 4/6	5	C	PL	Clay	
6-20	10YR 4/1	80	10YR 6/4	20	C	M	Clay	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/21/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200721-WL-36-36U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.109684 Long: -78.20467 Datum: NAD83

Soil Map Unit Name: OnB NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200721-WL-36-36U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Populus deltoides	40	X	FAC
	40	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Rosa multiflora	30	X	FACU
	30	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Triticum aestivum	30	X	UPL
Ambrosia artemisiifolia	15	X	FACU
Daucus carota	10		UPL
Phleum pratense	5		FACU
	60	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	40	x 3	120	
FACU species	50	x 4	200	
UPL species	40	x 5	200	
Column Totals	130	(A)	520	(B)

Prevalence Index = B/A = 4

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200721-WL-36-36U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 4/3	100					Silt Loam	
12-20	10YR 4/3	95	7.5YR 4/6	5	C	PL	Silt Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/21/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200721-WL-37-37W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.108228 Long: -78.203999 Datum: NAD83

Soil Map Unit Name: LoA NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL89
Wetland Hydrology Present?	Yes X 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)	X	Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
X	High Water Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)
X	Saturation (A3)		Marl Deposits (B15)	X	Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
X	Iron Deposits (B5)		Thin Muck Surface (C7)		Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
					FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes X No ____	Depth (inches) 0	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes X No ____	Depth (inches) 0	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200721-WL-37-37W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Hamamelis virginiana	40	X	FACU
Fraxinus pennsylvanica	30	X	FACW
Prunus virginiana	20	X	FACU
	90	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	30	X	FACW
	30	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phragmites australis	40	X	FACW
Glyceria striata	30	X	OBL
Onoclea sensibilis	30	X	FACW
Cicuta maculata	10		OBL
Lysimachia thyrsiflora	5		OBL
	115	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= 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: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71.4% (A/B)

Prevalence Index Worksheet:

OBL species	45	x 1	45	
FACW species	130	x 2	260	
FAC species	0	x 3	0	
FACU species	60	x 4	240	
UPL species	0	x 5	0	
Column Totals	235	(A)	545	(B)

Prevalence Index = B/A = 2.32

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200721-WL-37-37W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-6	10YR 2/1	100					Silt Loam	
6-24	10YR 7/2	80	10YR 6/8	20	C	M	Silty Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- X Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/21/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200721-WL-38-38W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.107431 Long: -78.206446 Datum: NAD83

Soil Map Unit Name: HlB NWI Classification: PSS

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL89
Wetland Hydrology Present?	Yes X 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)	X	Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required)
	High Water Table (A2)	X	Aquatic Fauna (B13)		Surface Soil Cracks (B6)
	Saturation (A3)		Marl Deposits (B15)	X	Drainage Patterns (B10)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Moss Trim Lines (B16)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Dry-Season Water Table (C2)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Crayfish Burrows (C8)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Saturation Visible in Aerial Imagery (C9)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Stunted or Stressed Plants (D1)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Geomorphic Position (D2)
	Sparsley Vegetated Concave Surface (B8)				Shallow Aquitard (D3)
					Microtopographic Relief (D4)
					FAC-Neutral Test (D5)

Surface Water Present?	Yes ____	No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Water Table Present?	Yes ____	No X	Depth (inches) ____	
Saturation Present?	Yes ____	No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200721-WL-38-38W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Persicaria maculosa	30	X	FAC
Ambrosia artemisiifolia	30	X	FACU
Eleocharis obtusa	25	X	OBL
Apocynum cannabinum	20		FAC
Cyperus esculentus	10		FACW
Glyceria striata	10		OBL
Asclepias incarnata	10		OBL
Juncus effusus	5		OBL
Juncus tenuis	5		FAC
Typha angustifolia	5		OBL
Phragmites australis	5		FACW
	155	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index Worksheet:

OBL species	55	x 1	55	
FACW species	15	x 2	30	
FAC species	55	x 3	165	
FACU species	30	x 4	120	
UPL species	0	x 5	0	
Column Totals	155	(A)	370	(B)

Prevalence Index = B/A = 2.39

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

altered due to tire tracks, low and high spots in elevation, upland plants are on high points

SOIL Sampling Point: **02-20200721-WL-38-38W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-10	10YR 3/2	90	7.5YR 4/6	10	C	PL	Clay Loam	
10-20	7.5YR 6/4	80	7.5YR 4/6	20	C	M	Sandy Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/21/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200721-WL-38-38U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.108362 Long: -78.203976 Datum: NAD83

Soil Map Unit Name: LoA NWI Classification: UPL

Are climatic / hyrologic 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 X No _____	**Is the Sampled Area within a Wetland?**	Yes _____ No X
Hydric Soil Present?	Yes _____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes X 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)		Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)
X	Saturation (A3)		Marl Deposits (B15)		Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
					FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes _____ No X	Depth (inches) _____	
Water Table Present?	Yes _____ No X	Depth (inches) _____	Wetland Hydrology Present? Yes X No _____
Saturation Present?	Yes X No _____	Depth (inches) 20	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200721-WL-38-38U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Populus deltoides	50	X	FAC
	50	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Rosa multiflora	30	X	FACU
Fagus grandifolia	30	X	FACU
Prunus virginiana	10		FACU
	70	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Toxicodendron radicans	20	X	FAC
Onoclea sensibilis	10	X	FACW
Fraxinus pennsylvanica	10	X	FACW
	40	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus quinquefolia	20	X	FACU
	20	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 57.1% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	20	x 2	40	
FAC species	70	x 3	210	
FACU species	90	x 4	360	
UPL species	0	x 5	0	
Column Totals	180	(A)	610	(B)

Prevalence Index = B/A = 3.39

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- ___ 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200721-WL-38-38U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-20	7.5YR 3/3	100					Clay Loam	
20-24	10YR 4/2	80	10YR 6/6	20	C	M	Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/21/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200721-WL-37-37U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.1074698 Long: -78.2064822 Datum: NAD83

Soil Map Unit Name: HIB NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200721-WL-37-37U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Ambrosia artemisiifolia	50	X	FACU
Triticum aestivum	30	X	UPL
Glyceria striata	10		OBL
Phleum pratense	10		FACU
	100 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index Worksheet:

OBL species	10	x 1	10	
FACW species	0	x 2	0	
FAC species	0	x 3	0	
FACU species	60	x 4	240	
UPL species	30	x 5	150	
Column Totals	100	(A)	400	(B)

Prevalence Index = B/A = 4

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200721-WL-37-37U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-16	2.5Y 3/3	95	7.5YR 4/6	5	C	PL	Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/21/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200721-WL-39-39W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.1065594 Long: -78.2094586 Datum: NAD83

Soil Map Unit Name: HIB NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL90
Wetland Hydrology Present?	Yes X 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)

X	Surface Water (A1)		Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required)
X	High Water Table (A2)		Aquatic Fauna (B13)		Surface Soil Cracks (B6)
X	Saturation (A3)		Marl Deposits (B15)		Drainage Patterns (B10)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Moss Trim Lines (B16)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Dry-Season Water Table (C2)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Crayfish Burrows (C8)
X	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Saturation Visible in Aerial Imagery (C9)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Stunted or Stressed Plants (D1)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Geomorphic Position (D2)
	Sparsley Vegetated Concave Surface (B8)				Shallow Aquitard (D3)
					Microtopographic Relief (D4)
					FAC-Neutral Test (D5)

Surface Water Present?	Yes X	No ____	Depth (inches)	3
Water Table Present?	Yes X	No ____	Depth (inches)	0
Saturation Present?	Yes X	No ____	Depth (inches)	0

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200721-WL-39-39W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	50	X	FACW
Salix interior	40	X	FACW
	90	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer rubrum	15	X	FAC
	15	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Typha angustifolia	50	X	OBL
Epilobium coloratum	15		OBL
Equisetum arvense	10		FAC
Cicuta maculata	5		OBL
Alisma subcordatum	5		OBL
	85	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

OBL species	75	x 1	75	
FACW species	90	x 2	180	
FAC species	25	x 3	75	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	190	(A)	330	(B)

Prevalence Index = B/A = 1.74

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200721-WL-39-39W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 4/2	90	7.5YR 4/6	10	C	PL	Silty Clay Loam	
12-20	10YR 4/2	80	7.5YR 4/6	20	C	M	Silty Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/21/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200721-WL-39-39U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.106589 Long: -78.209472 Datum: NAD83

Soil Map Unit Name: HlB NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200721-WL-39-39U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Zea mays	50	X	UPL
Equisetum arvense	5		FAC
Abutilon theophrasti	2		FACU
	57	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 0% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	5	x 3	15	
FACU species	2	x 4	8	
UPL species	50	x 5	250	
Column Totals	57	(A)	273	(B)

Prevalence Index = B/A = 4.79

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200721-WL-39-39U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-14	7.5YR 4/2	100					Silty Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 9/28/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02_20200928_WL48_W2

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.089035 Long: -78.213860 Datum: NAD83

Soil Map Unit Name: HlB NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL91
Wetland Hydrology Present?	Yes X 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)	____	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)
____	Sparsley Vegetated Concave Surface (B8)		

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 in Aerial Imagery (C9)
____	Stunted or Stressed Plants (D1)
X	Geomorphic Position (D2)
____	Shallow Aquitard (D3)
____	Microtopographic Relief (D4)
X	FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02_20200928_WL48_W2**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer rubrum	40	X	FAC
Acer saccharinum	40	X	FACW
	80	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lindera benzoin	30	X	FACW
Acer rubrum	15	X	FAC
Ulmus americana	5		FACW
	50	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	75	x 2	150	
FAC species	55	x 3	165	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	130	(A)	315	(B)

Prevalence Index = B/A = 2.42

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02_20200928_WL48_W2**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-13	10YR 2/1	100					Sandy Loam	
13-18	5Y 6/1	70	10YR 5/8	30	C	M	Sandy Loam	

Hydric Soil Indicators:

- ____ Histosol (A1)
- ____ Histic Epipedon (A2)
- ____ Black Histic (A3)
- ____ Hydrogen Sulfide (A4)
- ____ Stratified Layers (A5)
- X 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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/22/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200722-WL-42-42W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.088885 Long: -78.214995 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL91
Wetland Hydrology Present?	Yes X 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)

X	Surface Water (A1)		Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
	High Water Table (A2)	X	Aquatic Fauna (B13)		Drainage Patterns (B10)
	Saturation (A3)		Marl Deposits (B15)		Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
					FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes X No ____	Depth (inches) 2	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200722-WL-42-42W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phalaris arundinacea	40	X	FACW
Cyperus esculentus	20	X	FACW
Eleocharis obtusa	15		OBL
Glyceria striata	10		OBL
Asclepias incarnata	10		OBL
Carex lupuliformis	10		OBL
Echinochloa crus-galli	5		FAC
Asclepias syriaca	5		UPL
Alisma triviale	2		OBL
	117	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	47	x 1	47	
FACW species	60	x 2	120	
FAC species	5	x 3	15	
FACU species	0	x 4	0	
UPL species	5	x 5	25	
Column Totals	117	(A)	207	(B)

Prevalence Index = B/A = 1.77

Hydrophytic Vegetation Indicators:

X 1- Rapid Test For Hydrophytic Vegetation

X 2- Dominance Test is > 50%

X 3- Prevalence Index is =< 3.0

4- Morphological Adaptations

5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200722-WL-42-42W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-10	10YR 4/4	90	7.5YR 6/8	10	C	PL	Silt Loam	
10-24	10YR 5/1	80	7.5YR 6/8	20	C	M	Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/23/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200723-WL-45-45W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.090341 Long: -78.209459 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL91
Wetland Hydrology Present?	Yes X 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)

X	Surface Water (A1)		Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)
X	Saturation (A3)		Marl Deposits (B15)		Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)	X	Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
					FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes X No ____	Depth (inches) 1	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes X No ____	Depth (inches) 0	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200723-WL-45-45W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phalaris arundinacea	75	X	FACW
Carex alopecoidea	10		FACW
Cyperus esculentus	10		FACW
Carex lupuliformis	5		OBL
Carex cristatella	5		FACW
Asclepias incarnata	5		OBL
Typha angustifolia	5		OBL
	115	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

OBL species	15	x 1	15	
FACW species	100	x 2	200	
FAC species	0	x 3	0	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	115	(A)	215	(B)

Prevalence Index = B/A = 1.87

Hydrophytic Vegetation Indicators:

- X 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- 4- Morphological Adaptations
- 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200723-WL-45-45W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-20	10YR 4/2	80	10YR 6/6	20	C	M	Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- X Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/23/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200723-WL-46-46W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.090287 Long: -78.209451 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL91
Wetland Hydrology Present?	Yes X 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)

X	Surface Water (A1)	X	Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required)
	High Water Table (A2)		Aquatic Fauna (B13)		Surface Soil Cracks (B6)
X	Saturation (A3)		Marl Deposits (B15)		Drainage Patterns (B10)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)	X	Moss Trim Lines (B16)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Dry-Season Water Table (C2)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Crayfish Burrows (C8)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Saturation Visible in Aerial Imagery (C9)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Stunted or Stressed Plants (D1)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Geomorphic Position (D2)
	Sparsley Vegetated Concave Surface (B8)				Shallow Aquitard (D3)
					Microtopographic Relief (D4)
					FAC-Neutral Test (D5)

Surface Water Present?	Yes X	No ____	Depth (inches)	2
Water Table Present?	Yes ____	No X	Depth (inches)	____
Saturation Present?	Yes X	No ____	Depth (inches)	0

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200723-WL-46-46W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	40	X	FACW
	40	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phalaris arundinacea	20	X	FACW
Typha angustifolia	20	X	OBL
Carex lupuliformis	10		OBL
Eleocharis obtusa	10		OBL
Juncus articulatus	5		OBL
Alisma subcordatum	5		OBL
	70	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	50	x 1	50	
FACW species	60	x 2	120	
FAC species	0	x 3	0	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	110	(A)	170	(B)

Prevalence Index = B/A = 1.55

Hydrophytic Vegetation Indicators:

- X 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- 4- Morphological Adaptations
- 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200723-WL-46-46W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-6	10YR 4/2	100					Clay Loam	
6-24	10YR 4/2	90	7.5YR 4/6	10	C	PL	Clay	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/22/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200722-WL-42-42U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.088844 Long: -78.215014 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200722-WL-42-42U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phalaris arundinacea	40	X	FACW
Trifolium pratense	20	X	FACU
Symphyotrichum lanceolatum	10		FACW
Trifolium repens	5		FACU
Erigeron strigosus	5		FACU
Daucus carota	5		UPL
	85 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	50	x 2	100	
FAC species	0	x 3	0	
FACU species	30	x 4	120	
UPL species	5	x 5	25	
Column Totals	85	(A)	245	(B)

Prevalence Index = B/A = 2.88

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
disturbed, farm land

SOIL Sampling Point: **02-20200722-WL-42-42U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-20	10YR 4/6	100					Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/23/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200723-WL-46-46U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.090605 Long: -78.209463 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200723-WL-46-46U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phalaris arundinacea	30	X	FACW
Trifolium pratense	20	X	FACU
Trifolium repens	10		FACU
Ambrosia artemisiifolia	10		FACU
Daucus carota	5		UPL
Erigeron strigosus	5		FACU
Scorzoneroides autumnalis	2		FACU
	82	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	30	x 2	60	
FAC species	0	x 3	0	
FACU species	47	x 4	188	
UPL species	5	x 5	25	
Column Totals	82	(A)	273	(B)

Prevalence Index = B/A = 3.33

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200723-WL-46-46U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 4/6	100					Silty Clay Loam	
12-20	10YR 4/6	95	7.5YR 5/8	5	C	PL	Silty Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/23/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200723-WL-45-45U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.090158 Long: -78.210171 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: UPL

Are climatic / hyrologic 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 X	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	if yes, optional Wetland Site ID: _____
Wetland Hydrology Present?	Yes _____	No X	

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes _____	No X	Depth (inches) _____
Water Table Present?	Yes _____	No X	Depth (inches) _____
Saturation Present?	Yes _____	No X	Depth (inches) _____

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200723-WL-45-45U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	40	X	FACW
Acer negundo	20	X	FAC
	60	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lindera benzoin	20	X	FACW
Populus deltoides	10	X	FAC
	30	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Toxicodendron radicans	30	X	FAC
Alliaria petiolata	10	X	FACU
	40	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus quinquefolia	20	X	FACU
Vitis riparia	10	X	FAC
	30	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	60	x 2	120	
FAC species	70	x 3	210	
FACU species	30	x 4	120	
UPL species	0	x 5	0	
Column Totals	160	(A)	450	(B)

Prevalence Index = B/A = 2.81

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200723-WL-45-45U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-10	10YR 4/6	100					Silt Loam	
10-20	10YR 4/6	90	7.5YR 5/8	10	C	PL	Silt Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/21/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200722-WL-41-41U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.096881 Long: -78.211085 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: UPL

Are climatic / hyrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)

Are Vegetation X , 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 X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	if yes, optional Wetland Site ID: _____
Wetland Hydrology Present?	Yes ____	No X	

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____	No X	Depth (inches) ____
Water Table Present?	Yes ____	No X	Depth (inches) ____
Saturation Present?	Yes ____	No X	Depth (inches) ____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200722-WL-41-41U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Populus deltoides	20	X	FAC
	20	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Toxicodendron radicans	30	X	FAC
Symphyotrichum lanceolatum	30	X	FACW
Juncus tenuis	20		FAC
Populus deltoides	15		FAC
Alisma subcordatum	5		OBL
Ranunculus sceleratus	5		OBL
	105	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus quinquefolia	20	X	FACU
	20	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index Worksheet:

OBL species	10	x 1	10	
FACW species	30	x 2	60	
FAC species	85	x 3	255	
FACU species	20	x 4	80	
UPL species	0	x 5	0	
Column Totals	145	(A)	405	(B)

Prevalence Index = B/A = 2.79

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)
disturbed, tire tracks, wet plants in low areas

SOIL Sampling Point: **02-20200722-WL-41-41U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-18	10YR 3/4	95	10YR 6/8	5	C	PL	Silt Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/22/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200722-WL-41-41W

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.096544 Long: -78.211522 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL92
Wetland Hydrology Present?	Yes X 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)	X	Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)
	Saturation (A3)		Marl Deposits (B15)	X	Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
					FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X Depth (inches) ____	Wetland Hydrology Present?	Yes X No ____
Water Table Present?	Yes ____ No X Depth (inches) ____		
Saturation Present?	Yes ____ No X Depth (inches) ____		

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200722-WL-41-41W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	40	X	FACW
Populus deltoides	30	X	FAC
	70	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Toxicodendron radicans	20	X	FAC
	20	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Cardamine angustata	20	X	FACU
Carex cristatella	15	X	FACW
Fraxinus pennsylvanica	10		FACW
Glyceria striata	10		OBL
Toxicodendron radicans	2		FAC
	57	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80% (A/B)

Prevalence Index Worksheet:

OBL species	10	x 1	10	
FACW species	65	x 2	130	
FAC species	52	x 3	156	
FACU species	20	x 4	80	
UPL species	0	x 5	0	
Column Totals	147	(A)	376	(B)

Prevalence Index = B/A = 2.56

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200722-WL-41-41W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-6	10YR 2/2	90	7.5YR 4/6	10	C	PL	Silty Clay Loam	
6-20	7.5YR 6/4	80	7.5YR 4/6	20	C	M	Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/22/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200722-WL-40-40U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.095459 Long: -78.215298 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: UPL

Are climatic / hyrologic 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 X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	if yes, optional Wetland Site ID: _____
Wetland Hydrology Present?	Yes ____	No X	

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____	No X	Depth (inches) ____
Water Table Present?	Yes ____	No X	Depth (inches) ____
Saturation Present?	Yes ____	No X	Depth (inches) ____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200722-WL-40-40U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Populus deltoides	20	X	FAC
	20	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Alliaria petiolata	20	X	FACU
Phalaris arundinacea	20	X	FACW
Toxicodendron radicans	15	X	FAC
Fraxinus pennsylvanica	10		FACW
Geum canadense	10		FAC
	75	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	30	x 2	60	
FAC species	45	x 3	135	
FACU species	20	x 4	80	
UPL species	0	x 5	0	
Column Totals	95	(A)	275	(B)

Prevalence Index = B/A = 2.89

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200722-WL-40-40U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-20	10YR 4/3	100					Silt Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/23/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200723-WL-43-43W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.089709 Long: -78.214749 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL93
Wetland Hydrology Present?	Yes X 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)		Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
	High Water Table (A2)	X	Aquatic Fauna (B13)	X	Drainage Patterns (B10)
	Saturation (A3)		Marl Deposits (B15)		Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
					FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X Depth (inches) ____	Wetland Hydrology Present?	Yes X No ____
Water Table Present?	Yes ____ No X Depth (inches) ____		
Saturation Present?	Yes ____ No X Depth (inches) ____		

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200723-WL-43-43W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phalaris arundinacea	40	X	FACW
Carex lupuliformis	10	X	OBL
Glyceria striata	10	X	OBL
Trifolium pratense	10	X	FACU
Alisma triviale	5		OBL
Eleocharis obtusa	5		OBL
Juncus tenuis	5		FAC
	85	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index Worksheet:

OBL species	30	x 1	30	
FACW species	40	x 2	80	
FAC species	5	x 3	15	
FACU species	10	x 4	40	
UPL species	0	x 5	0	
Column Totals	85	(A)	165	(B)

Prevalence Index = B/A = 1.94

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200723-WL-43-43W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-6	10YR 4/4	95	7.5YR 6/8	5	C	PL	Silty Clay Loam	
6-20	10YR 4/2	80	7.5YR 6/8	20	C	M	Silty Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/23/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200723-WL-43-43U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.089838 Long: -78.215082 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200723-WL-43-43U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Trifolium repens	40	X	FACU
Phalaris arundinacea	30	X	FACW
Trifolium pratense	30	X	FACU
Ambrosia artemisiifolia	10		FACU
	110 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	30	x 2	60	
FAC species	0	x 3	0	
FACU species	80	x 4	320	
UPL species	0	x 5	0	
Column Totals	110	(A)	380	(B)

Prevalence Index = B/A = 3.45

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200723-WL-43-43U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-20	10YR 4/6	100					Silt Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/23/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200723-WL-44-44W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.088913 Long: -78.211614 Datum: NAD83

Soil Map Unit Name: ApA NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL94
Wetland Hydrology Present?	Yes X 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)	X	Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)
	Saturation (A3)		Marl Deposits (B15)	X	Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
					FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X Depth (inches) ____	Wetland Hydrology Present?	Yes X No ____
Water Table Present?	Yes ____ No X Depth (inches) ____		
Saturation Present?	Yes ____ No X Depth (inches) ____		

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200723-WL-44-44W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	40	X	FACW
	40	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lindera benzoin	20	X	FACW
	20	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Carex alopecoidea	20	X	FACW
Lindera benzoin	10	X	FACW
Fraxinus pennsylvanica	10	X	FACW
Persicaria virginiana	10	X	FAC
Toxicodendron radicans	5		FAC
Circaea alpina	5		FACW
	60	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	105	x 2	210	
FAC species	15	x 3	45	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	120	(A)	255	(B)

Prevalence Index = B/A = 2.12

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200723-WL-44-44W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-10	10YR 4/2	100					Clay Loam	
10-20	10YR 4/2	90	2.5Y 6/8	10	C	PL	Clay	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/23/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200723-WL-44-44U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.088923 Long: -78.211539 Datum: NAD83

Soil Map Unit Name: ApA NWI Classification: UPL

Are climatic / hyrologic 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 X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	if yes, optional Wetland Site ID: _____
Wetland Hydrology Present?	Yes ____	No X	

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____	No X	Depth (inches) ____
Water Table Present?	Yes ____	No X	Depth (inches) ____
Saturation Present?	Yes ____	No X	Depth (inches) ____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200723-WL-44-44U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Populus deltoides	40	X	FAC
Acer rubrum	30	X	FAC
	70	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Alliaria petiolata	20	X	FACU
Fraxinus pennsylvanica	10	X	FACW
Toxicodendron radicans	5		FAC
Artemisia vulgaris	5		UPL
	40	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus quinquefolia	5	X	FACU
	5	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	10	x 2	20	
FAC species	75	x 3	225	
FACU species	25	x 4	100	
UPL species	5	x 5	25	
Column Totals	115	(A)	370	(B)

Prevalence Index = B/A = 3.22

Hydrophytic Vegetation Indicators:

- [ ] 1- Rapid Test For Hydrophytic Vegetation
- [x] 2- Dominance Test is > 50%
- [ ] 3- Prevalence Index is =< 3.0
- [ ] 4- Morphological Adaptations
- [ ] 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200723-WL-44-44U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-20	10YR 4/6	100					Silt Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 9/24/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200924_wl_110_u1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Dip Local relief (concave, convex, none): None Slope (%) 0 - 2

Subregion (LRR or MLRA): LRR L Lat: 43.087672 Long: -78.232506 Datum: NAD83

Soil Map Unit Name: La NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL95
Wetland Hydrology Present?	Yes X 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)		Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)
X	Saturation (A3)		Marl Deposits (B15)	X	Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
				X	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes X No ____	Depth (inches) 8	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200924_wl_110_u1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer saccharum	40	X	FACU
Fraxinus pennsylvanica	30	X	FACW
	70	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Cornus amomum	60	X	FACW
Lindera benzoin	10		FACW
	70	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Urtica dioica	5	X	FAC
	5	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	100	x 2	200	
FAC species	5	x 3	15	
FACU species	40	x 4	160	
UPL species	0	x 5	0	
Column Totals	145	(A)	375	(B)

Prevalence Index = B/A = 2.59

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **1_20200924_wl_110_u1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-8	10YR 2/1	100					Mucky Loam	
8-16	5Y 3/1	95	10YR 5/8	5	C	M	Silty Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 9/24/2020

Applicant/Owner: Hecate State: NY Sampling Point: _____

Investigator(s): Andrew Sorci Section, Township, Range: 1_20200924_WL29_U

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): None Slope (%) 2 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.098373 Long: -78.228308 Datum: NAD83

Soil Map Unit Name: LmA NWI Classification: UPL

Are climatic / hyrologic 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 X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	if yes, optional Wetland Site ID: _____
Wetland Hydrology Present?	Yes ____	No X	

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____	No X	Depth (inches) ____
Water Table Present?	Yes ____	No X	Depth (inches) ____
Saturation Present?	Yes ____	No X	Depth (inches) ____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200924_WL29_U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lonicera morrowii	75	X	FACU
Fraxinus pennsylvanica	60	X	FACW
Cornus racemosa	10		FAC
	145	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Symphyotrichum lanceolatum	10	X	FACW
	10	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Toxicodendron radicans	5	X	FAC
Parthenocissus quinquefolia	5	X	FACU
Vitis riparia	4	X	FAC
	14	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	70	x 2	140	
FAC species	19	x 3	57	
FACU species	80	x 4	320	
UPL species	0	x 5	0	
Column Totals	169	(A)	517	(B)

Prevalence Index = B/A = 3.06

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- ___ 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **1_20200924_WL29_U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-14	10YR 3/2	100					Sandy Loam	
14-20	10YR 4/2	80	10YR 4/6	20	C	M	Clay	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/23/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200723-WL-48-48W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.092695 Long: -78.205165 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL96
Wetland Hydrology Present?	Yes X 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)	X	Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)
	Saturation (A3)		Marl Deposits (B15)	X	Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)	X	Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
					FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X Depth (inches) ____	Wetland Hydrology Present?	Yes X No ____
Water Table Present?	Yes ____ No X Depth (inches) ____		
Saturation Present?	Yes ____ No X Depth (inches) ____		

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200723-WL-48-48W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	40	X	FACW
Crataegus phaenopyrum	30	X	FAC
	70	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	30	X	FACW
	30	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Carex tuckermanii	20	X	OBL
Carex lupuliformis	10	X	OBL
Agrostis gigantea	10	X	FACW
Carex striata	10	X	OBL
Carex crinita	10	X	OBL
Symphyotrichum lanceolatum	5		FACW
	65	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

OBL species	50	x 1	50	
FACW species	85	x 2	170	
FAC species	30	x 3	90	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	165	(A)	310	(B)

Prevalence Index = B/A = 1.88

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200723-WL-48-48W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-10	2.5Y 4/3	90	7.5YR 4/6	10	C	PL	Silty Clay Loam	
10-20	2.5Y 4/2	80	10YR 5/4	20	C	M	Silty Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/23/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200723-WL-48-48U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.092798 Long: -78.20523 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: UPL

Are climatic / hyrologic 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 X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	if yes, optional Wetland Site ID: _____
Wetland Hydrology Present?	Yes ____	No X	

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____	No X	Depth (inches) ____
Water Table Present?	Yes ____	No X	Depth (inches) ____
Saturation Present?	Yes ____	No X	Depth (inches) ____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200723-WL-48-48U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	40	X	FACW
Crataegus phaenopyrum	30	X	FAC
Fagus grandifolia	20	X	FACU
	90	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Rhamnus cathartica	40	X	FAC
	40	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Toxicodendron radicans	20	X	FAC
Geum aleppicum	5	X	FAC
	25	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus quinquefolia	10	X	FACU
Vitis riparia	10	X	FAC
	20	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	40	x 2	80	
FAC species	105	x 3	315	
FACU species	30	x 4	120	
UPL species	0	x 5	0	
Column Totals	175	(A)	515	(B)

Prevalence Index = B/A = 2.94

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)
altered, farm land

SOIL Sampling Point: **02-20200723-WL-48-48U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 4/6	95	7.5YR 5/8	5	C	PL	Silt Loam	
12-20	10YR 4/6	80	7.5YR 5/8	20	C	PL	Silt Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/23/2020

Applicant/Owner: Hecate State: NY Sampling Point: _____

Investigator(s): Justin Ahn Section, Township, Range: 02-20200723-WL-47-47W

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.092053 Long: -78.203939 Datum: NAD83

Soil Map Unit Name: ApA NWI Classification: PEM

Are climatic / hyrologic 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 X No _____	**Is the Sampled Area within a Wetland?**	Yes X No _____
Hydric Soil Present?	Yes X No _____	if yes, optional Wetland Site ID:	WL97
Wetland Hydrology Present?	Yes X 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)

X	Surface Water (A1)		Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required)
	High Water Table (A2)		Aquatic Fauna (B13)		Surface Soil Cracks (B6)
	Saturation (A3)		Marl Deposits (B15)		Drainage Patterns (B10)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Moss Trim Lines (B16)
	Sediment Deposits (B2)	X	Oxidized Rhizospheres on Living Roots (C3)		Dry-Season Water Table (C2)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Crayfish Burrows (C8)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Saturation Visible in Aerial Imagery (C9)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Stunted or Stressed Plants (D1)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Geomorphic Position (D2)
	Sparsley Vegetated Concave Surface (B8)				Shallow Aquitard (D3)
					Microtopographic Relief (D4)
					FAC-Neutral Test (D5)

Surface Water Present?	Yes X	No _____	Depth (inches)	2
Water Table Present?	Yes _____	No X	Depth (inches)	_____
Saturation Present?	Yes _____	No X	Depth (inches)	_____

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200723-WL-47-47W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phalaris arundinacea	60	X	FACW
Carex alopecoidea	20		FACW
Carex lupuliformis	10		OBL
Asclepias incarnata	10		OBL
Alisma subcordatum	5		OBL
Ambrosia artemisiifolia	5		FACU
Typha angustifolia	5		OBL
	115	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

OBL species	30	x 1	30	
FACW species	80	x 2	160	
FAC species	0	x 3	0	
FACU species	5	x 4	20	
UPL species	0	x 5	0	
Column Totals	115	(A)	210	(B)

Prevalence Index = B/A = 1.83

Hydrophytic Vegetation Indicators:

X 1- Rapid Test For Hydrophytic Vegetation

X 2- Dominance Test is > 50%

X 3- Prevalence Index is =< 3.0

4- Morphological Adaptations

5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200723-WL-47-47W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 4/2	90	7.5YR 4/6	10	C	PL	Silty Clay Loam	
12-24	10YR 4/2	80	7.5YR 4/6	20	C	M	Clay	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/23/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200723-WL-47-47U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.091983 Long: -78.203803 Datum: NAD83

Soil Map Unit Name: ApA NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200723-WL-47-47U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Zea mays	50	X	UPL
Phalaris arundinacea	30	X	FACW
Ambrosia artemisiifolia	10		FACU
Abutilon theophrasti	5		FACU
	95	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	30	x 2	60	
FAC species	0	x 3	0	
FACU species	15	x 4	60	
UPL species	50	x 5	250	
Column Totals	95	(A)	370	(B)

Prevalence Index = B/A = 3.89

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200723-WL-47-47U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-20	10YR 3/4	95	10YR 6/8	5	C	PL	Silt Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennesee Sampling Date: 9/23/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200923_WL109_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.099829 Long: -78.260751 Datum: NAD83

Soil Map Unit Name: Wy NWI Classification: PUB

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL98
Wetland Hydrology Present?	Yes X No ____		

Remarks: (Explain alternative procedures here or in a separate report.)

Pond

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

X	Surface Water (A1)		Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required)
	High Water Table (A2)		Aquatic Fauna (B13)		Surface Soil Cracks (B6)
	Saturation (A3)		Marl Deposits (B15)		Drainage Patterns (B10)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Moss Trim Lines (B16)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Dry-Season Water Table (C2)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Crayfish Burrows (C8)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)	X	Saturation Visible in Aerial Imagery (C9)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Stunted or Stressed Plants (D1)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)	X	Geomorphic Position (D2)
	Sparsley Vegetated Concave Surface (B8)				Shallow Aquitard (D3)
					Microtopographic Relief (D4)
					FAC-Neutral Test (D5)

Surface Water Present?	Yes X	No ____	Depth (inches)	36
Water Table Present?	Yes ____	No X	Depth (inches)	____
Saturation Present?	Yes ____	No X	Depth (inches)	____

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200923_WL109_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Typha angustifolia	30	X	OBL
Phalaris arundinacea	30	X	FACW
	60 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	30	x 1	30	
FACW species	30	x 2	60	
FAC species	0	x 3	0	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	60	(A)	90	(B)

Prevalence Index = B/A = 1.5

Hydrophytic Vegetation Indicators:

X 1- Rapid Test For Hydrophytic Vegetation

X 2- Dominance Test is > 50%

X 3- Prevalence Index is =< 3.0

4- Morphological Adaptations

5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **1_20200923_WL109_W1**

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- X Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennesee Sampling Date: 10/1/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200923_WL109_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): Convex Slope (%) 2 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.099816 Long: -78.260801 Datum: NAD83

Soil Map Unit Name: La NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200923_WL109_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Rhus aromatica	20	X	UPL
Salix interior	15	X	FACW
	35 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Artemisia vulgaris	50	X	UPL
Solidago canadensis	15	X	FACU
Plantago major	5		FACU
	70 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	15	x 2	30	
FAC species	0	x 3	0	
FACU species	20	x 4	80	
UPL species	70	x 5	350	
Column Totals	105	(A)	460	(B)

Prevalence Index = B/A = 4.38

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **1_20200923_WL109_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 3/2	100					Sandy Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: Rock/Till

Depth (inches): 12

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/23/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200723-WL-50-50W

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.090767 Long: -78.202383 Datum: NAD83

Soil Map Unit Name: NgA NWI Classification: PFO

Are climatic / hyrologic conditions on the site typical for this time of year? Yes X No ____ (if no, explain in Remarks.)

Are Vegetation ____, Soil X, 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL99
Wetland Hydrology Present?	Yes X 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)	X	Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)
	Saturation (A3)		Marl Deposits (B15)	X	Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
X	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
					FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X Depth (inches) ____	Wetland Hydrology Present?	Yes X No ____
Water Table Present?	Yes ____ No X Depth (inches) ____		
Saturation Present?	Yes ____ No X Depth (inches) ____		

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200723-WL-50-50W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	30	X	FACW
	30	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Carex cristatella	20	X	FACW
Symphyotrichum lanceolatum	20	X	FACW
Fraxinus pennsylvanica	10		FACW
Carex alopecoidea	10		FACW
Glyceria striata	10		OBL
Carex tuckermanii	5		OBL
	75	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	15	x 1	15	
FACW species	90	x 2	180	
FAC species	0	x 3	0	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	105	(A)	195	(B)

Prevalence Index = B/A = 1.86

Hydrophytic Vegetation Indicators:

- X 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- 4- Morphological Adaptations
- 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200723-WL-50-50W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-8	10YR 2/2	100					Clay Loam	
8-20	2.5Y 6/4	90	7.5YR 6/8	10	C	PL	Clay	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/23/2020

Applicant/Owner: Hecate State: NY Sampling Point:02-20200723-WL-50-50U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.089373 Long: -78.199224 Datum: NAD83

Soil Map Unit Name: RsA NWI Classification: UPL

Are climatic / hyrologic 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 X	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	if yes, optional Wetland Site ID: _____
Wetland Hydrology Present?	Yes _____	No X	

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes _____	No X	Depth (inches) _____
Water Table Present?	Yes _____	No X	Depth (inches) _____
Saturation Present?	Yes _____	No X	Depth (inches) _____

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200723-WL-50-50U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Populus deltoides	40	X	FAC
	40	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Rhamnus cathartica	30	X	FAC
Rosa multiflora	20	X	FACU
	50	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Alliaria petiolata	15	X	FACU
Geum aleppicum	5	X	FAC
Symphyotrichum lanceolatum	5	X	FACW
	25	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	5	x 2	10	
FAC species	75	x 3	225	
FACU species	35	x 4	140	
UPL species	0	x 5	0	
Column Totals	115	(A)	375	(B)

Prevalence Index = B/A = 3.26

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- ___ 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200723-WL-50-50U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-18	10YR 4/6	100					Silt Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/23/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200723-WL49-49W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.089586 Long: -78.198131 Datum: NAD83

Soil Map Unit Name: Wy NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL100
Wetland Hydrology Present?	Yes X 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)	____	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)
____	Sparsley Vegetated Concave Surface (B8)		

Secondary Indicators (minimum of two required)

____	Surface Soil Cracks (B6)
X	Drainage Patterns (B10)
____	Moss Trim Lines (B16)
____	Dry-Season Water Table (C2)
____	Crayfish Burrows (C8)
____	Saturation Visible in Aerial Imagery (C9)
____	Stunted or Stressed Plants (D1)
X	Geomorphic Position (D2)
____	Shallow Aquitard (D3)
____	Microtopographic Relief (D4)
____	FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200723-WL49-49W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phalaris arundinacea	40	X	FACW
Carex alopecoidea	20	X	FACW
Solidago gigantea	20	X	FACW
Carex cristatella	15		FACW
Asclepias incarnata	10		OBL
Apocynum cannabinum	10		FAC
Glyceria striata	10		OBL
Juncus tenuis	10		FAC
Asclepias syriaca	5		UPL
Carex lupuliformis	5		OBL
	145	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	25	x 1	25	
FACW species	95	x 2	190	
FAC species	20	x 3	60	
FACU species	0	x 4	0	
UPL species	5	x 5	25	
Column Totals	145	(A)	300	(B)

Prevalence Index = B/A = 2.07

Hydrophytic Vegetation Indicators:

X 1- Rapid Test For Hydrophytic Vegetation

X 2- Dominance Test is > 50%

X 3- Prevalence Index is =< 3.0

4- Morphological Adaptations

5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200723-WL49-49W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-10	10YR 3/2	90	5YR 4/6	10	C	PL	Silty Clay Loam	
10-20	10YR 5/4	90	7.5YR 6/8	10	C	PL	Clay	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/23/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200723-WL-49-49U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.089936 Long: -78.198003 Datum: NAD83

Soil Map Unit Name: RsA NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200723-WL-49-49U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Ambrosia artemisiifolia	20	X	FACU
Phalaris arundinacea	20	X	FACW
Cirsium arvense	15	X	FACU
Trifolium pratense	10		FACU
Trifolium repens	10		FACU
Inula helenium	5		FACU
Agrostis gigantea	5		FACW
Solidago canadensis			FACU
	85	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	25	x 2	50	
FAC species	0	x 3	0	
FACU species	60	x 4	240	
UPL species	0	x 5	0	
Column Totals	85	(A)	290	(B)

Prevalence Index = B/A = 3.41

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200723-WL-49-49U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-20	10YR 4/3	100					Silt Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/24/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200724-WL-51-51W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.085881 Long: -78.211188 Datum: NAD83

Soil Map Unit Name: Ld NWI Classification: PSS

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL101
Wetland Hydrology Present?	Yes X 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)

X	Surface Water (A1)	X	Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required)
	High Water Table (A2)		Aquatic Fauna (B13)		Surface Soil Cracks (B6)
X	Saturation (A3)		Marl Deposits (B15)		Drainage Patterns (B10)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Moss Trim Lines (B16)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Dry-Season Water Table (C2)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Crayfish Burrows (C8)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Saturation Visible in Aerial Imagery (C9)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Stunted or Stressed Plants (D1)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Geomorphic Position (D2)
	Sparsley Vegetated Concave Surface (B8)				Shallow Aquitard (D3)
					Microtopographic Relief (D4)
					FAC-Neutral Test (D5)

Surface Water Present?	Yes X	No ____	Depth (inches)	2
Water Table Present?	Yes ____	No X	Depth (inches)	____
Saturation Present?	Yes X	No ____	Depth (inches)	0

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200724-WL-51-51W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	20	X	FACW
	20 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phalaris arundinacea	40	X	FACW
Typha angustifolia	30	X	OBL
Carex alopecoidea	20		FACW
Fraxinus pennsylvanica	10		FACW
Carex tuckermanii	10		OBL
	110 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	40	x 1	40	
FACW species	90	x 2	180	
FAC species	0	x 3	0	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	130	(A)	220	(B)

Prevalence Index = B/A = 1.69

Hydrophytic Vegetation Indicators:

X 1- Rapid Test For Hydrophytic Vegetation

X 2- Dominance Test is > 50%

X 3- Prevalence Index is =< 3.0

4- Morphological Adaptations

5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200724-WL-51-51W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-20	10YR 3/1	90	10YR 3/3	10	C	PL	Clay	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/24/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200724-WL-51-51U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.086005 Long: -78.211208 Datum: NAD83

Soil Map Unit Name: Ld NWI Classification: UPL

Are climatic / hyrologic 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 X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	if yes, optional Wetland Site ID: _____
Wetland Hydrology Present?	Yes ____	No X	

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____	No X	Depth (inches) ____
Water Table Present?	Yes ____	No X	Depth (inches) ____
Saturation Present?	Yes ____	No X	Depth (inches) ____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200724-WL-51-51U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Crataegus phaenopyrum	40	X	FAC
Populus deltoides	30	X	FAC
	70	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Toxicodendron radicans	20	X	FAC
Alliaria petiolata	20	X	FACU
Geum aleppicum	5		FAC
	45	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus quinquefolia	10	X	FACU
Vitis riparia	10	X	FAC
	20	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	105	x 3	315	
FACU species	30	x 4	120	
UPL species	0	x 5	0	
Column Totals	135	(A)	435	(B)

Prevalence Index = B/A = 3.22

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- ___ 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200724-WL-51-51U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 4/6	100					Silt Loam	
12-20	10YR 4/6	95	7.5YR 5/8	5	C	PL	Silt Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/24/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200724-WL-52-52W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.098699 Long: -78.217219 Datum: NAD83

Soil Map Unit Name: LoA NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL102
Wetland Hydrology Present?	Yes X 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)	____	Water-Stained Leaves (B9)	____	Surface Soil Cracks (B6)
____	High Water Table (A2)	____	Aquatic Fauna (B13)	____	Drainage Patterns (B10)
____	Saturation (A3)	____	Marl Deposits (B15)	____	Moss Trim Lines (B16)
____	Water Marks (B1)	____	Hydrogen Sulfide Odor (C1)	____	Dry-Season Water Table (C2)
____	Sediment Deposits (B2)	X	Oxidized Rhizospheres on Living Roots (C3)	____	Crayfish Burrows (C8)
____	Drift Deposits (B3)	____	Presence of Reduced Iron (C4)	____	Saturation Visible in Aerial Imagery (C9)
____	Algal Mat or Crust (B4)	____	Recent Iron Reduction in Tilled Soils (C6)	____	Stunted or Stressed Plants (D1)
____	Iron Deposits (B5)	____	Thin Muck Surface (C7)	____	Geomorphic Position (D2)
____	Inundation Visible on Aerial Imagery (B7)	____	Other (Explain in Remarks)	____	Shallow Aquitard (D3)
____	Sparsley Vegetated Concave Surface (B8)			____	Microtopographic Relief (D4)
				____	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200724-WL-52-52W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phragmites australis	40	X	FACW
Phalaris arundinacea	40	X	FACW
Apocynum cannabinum	20		FAC
Asclepias incarnata	10		OBL
	110	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	10	x 1	10	
FACW species	80	x 2	160	
FAC species	20	x 3	60	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	110	(A)	230	(B)

Prevalence Index = B/A = 2.09

Hydrophytic Vegetation Indicators:

- X 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- 4- Morphological Adaptations
- 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200724-WL-52-52W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-18	10YR 4/2	90	10YR 4/6	10	C	PL	Clay Loam	
18-24	10YR 4/2	80	10YR 4/6	20	C	PL	Clay	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/24/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200724-WL-52-52U

Investigator(s): Justin Ahn Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.098615 Long: -78.217214 Datum: NAD83

Soil Map Unit Name: LoA NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200724-WL-52-52U**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Medicago sativa	40	X	UPL
Trifolium repens	20	X	FACU
Phalaris arundinacea	10		FACW
Apocynum cannabinum	5		FAC
Trifolium pratense	5		FACU
Verbascum blattaria	2		FACU
	82 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	10	x 2	20	
FAC species	5	x 3	15	
FACU species	27	x 4	108	
UPL species	40	x 5	200	
Column Totals	82	(A)	343	(B)

Prevalence Index = B/A = 4.18

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200724-WL-52-52U**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-18	10YR 3/3	95	5YR 5/6	5	C	PL	Silty Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 9/21/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200921_WL103_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Dip Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.090623 Long: -78.270445 Datum: NAD83

Soil Map Unit Name: Pd NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL103
Wetland Hydrology Present?	Yes X 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)	____	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)
____	Sparsley Vegetated Concave Surface (B8)		

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 in Aerial Imagery (C9)
____	Stunted or Stressed Plants (D1)
X	Geomorphic Position (D2)
____	Shallow Aquitard (D3)
____	Microtopographic Relief (D4)
X	FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200921_WL103_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	20	X	FACW
	20 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phalaris arundinacea	90	X	FACW
Symphyotrichum lateriflorum	5		FAC
Juncus effusus	2		OBL
Agrostis gigantea	2		FACW
Scirpus cyperinus	1		OBL
Juncus tenuis	1		FAC
	101 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	3	x 1	3	
FACW species	112	x 2	224	
FAC species	6	x 3	18	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	121	(A)	245	(B)

Prevalence Index = B/A = 2.02

Hydrophytic Vegetation Indicators:

X 1- Rapid Test For Hydrophytic Vegetation

X 2- Dominance Test is > 50%

X 3- Prevalence Index is =< 3.0

4- Morphological Adaptations

5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **1_20200921_WL103_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-5	10YR 3/2	100					Loam	
5-8	10YR 3/2	98	10YR 4/6	2	C	M	Clay Loam	
8-16	7.5YR 5/2	90	10YR 4/6	10	C	M	Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 9/21/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200921_WL103_W2

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Dip Local relief (concave, convex, none): Concave Slope (%) 0 - 3

Subregion (LRR or MLRA): LRR L Lat: 43.089686 Long: -78.270731 Datum: NAD83

Soil Map Unit Name: CbA NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL103
Wetland Hydrology Present?	Yes X 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)		Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)
	Saturation (A3)		Marl Deposits (B15)	X	Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)	X	Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
				X	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X Depth (inches) ____	Wetland Hydrology Present?	Yes X No ____
Water Table Present?	Yes ____ No X Depth (inches) ____		
Saturation Present?	Yes ____ No X Depth (inches) ____		

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200921_WL103_W2**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Populus deltoides	60	X	FAC
	60	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	85	X	FACW
	85	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	5	X	FAC
	5	= Total Cover	

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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	85	x 2	170	
FAC species	65	x 3	195	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	150	(A)	365	(B)

Prevalence Index = B/A = 2.43

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **1_20200921_WL103_W2**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-5	10YR 2/2	100					Sandy Loam	
5-12	2.5Y 6/1	95	10YR 6/8	5	C	M	Sandy Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennesee Sampling Date: 9/22/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200922_WL103

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Dip Local relief (concave, convex, none): Concave Slope (%) 0 - 2

Subregion (LRR or MLRA): LRR L Lat: 43.090035 Long: -78.274513 Datum: NAD83

Soil Map Unit Name: La NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL104
Wetland Hydrology Present?	Yes X 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)	____	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)
____	Sparsley Vegetated Concave Surface (B8)		

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 in Aerial Imagery (C9)
____	Stunted or Stressed Plants (D1)
X	Geomorphic Position (D2)
____	Shallow Aquitard (D3)
____	Microtopographic Relief (D4)
X	FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200922_WL103**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	15	X	FACW
Acer negundo	15	X	FAC
	30	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Salix nigra	25	X	OBL
	25	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Impatiens capensis	70	X	FACW
Unknown species	30	X	UNK
Urtica dioica	15		FAC
Bidens frondosa	15		FACW
Symphyotrichum lateriflorum	15		FAC
Ranunculus hispidus	5		FAC
	150	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	5	X	FAC
	5	= 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: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83.3% (A/B)

Prevalence Index Worksheet:

OBL species	25	x 1	25	
FACW species	100	x 2	200	
FAC species	55	x 3	165	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	180	(A)	390	(B)

Prevalence Index = B/A = 2.17

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)
unknown grass species

SOIL Sampling Point: **1_20200922_WL103**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 2/1	98	10YR 3/6	2	C	M	Silt Loam	
12-20	10YR 4/1	80	10YR 4/6	20	C	M	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennesee Sampling Date: 9/22/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200922_WL103_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): Convex Slope (%) 2 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.090142 Long: -78.274341 Datum: NAD83

Soil Map Unit Name: La NWI Classification: UPL

Are climatic / hyrologic 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 X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	if yes, optional Wetland Site ID: _____
Wetland Hydrology Present?	Yes ____	No X	

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____	No X	Depth (inches) ____
Water Table Present?	Yes ____	No X	Depth (inches) ____
Saturation Present?	Yes ____	No X	Depth (inches) ____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200922_WL103_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Tilia americana	25	X	FACU
	25	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Rhamnus cathartica	50	X	FAC
Fraxinus pennsylvanica	25	X	FACW
	75	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Urtica dioica	15	X	FAC
Alliaria petiolata	5	X	FACU
Bidens frondosa	5	X	FACW
Persicaria virginiana	5	X	FAC
Ranunculus hispidus	3		FAC
	33	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus quinquefolia	10	X	FACU
Toxicodendron radicans	5	X	FAC
	15	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	30	x 2	60	
FAC species	78	x 3	234	
FACU species	40	x 4	160	
UPL species	0	x 5	0	
Column Totals	148	(A)	454	(B)

Prevalence Index = B/A = 3.07

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- ___ 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **1_20200922_WL103_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 2/2	100					Sandy Loam	
12-18	10YR 2/2	70	10YR 5/8	30	C	M	Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennesee Sampling Date: 10/8/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200922_WL104

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 3

Subregion (LRR or MLRA): LRR L Lat: 43.089921 Long: -78.273611 Datum: NAD83

Soil Map Unit Name: OdA NWI Classification: PEM

Are climatic / hyrologic conditions on the site typical for this time of year? Yes X No ____ (if no, explain in Remarks.)

Are Vegetation X , 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL105
Wetland Hydrology Present?	Yes X No ____		

Remarks: (Explain alternative procedures here or in a separate report.)

vegetated, maintained ditch

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

	Surface Water (A1)		Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)
	Saturation (A3)		Marl Deposits (B15)		Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)	X	Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)	X	Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)	X	Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
				X	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X Depth (inches) ____	Wetland Hydrology Present?	Yes X No ____
Water Table Present?	Yes ____ No X Depth (inches) ____		
Saturation Present?	Yes ____ No X Depth (inches) ____		

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200922_WL104**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Agrostis stolonifera	20	X	FACW
Phalaris arundinacea	20	X	FACW
Schoenoplectus tabernaemontani	10		OBL
Juncus effusus	10		OBL
Lythrum salicaria	5		OBL
Scirpus atrovirens	5		OBL
Ranunculus hispidus	5		FAC
Symphyotrichum lanceolatum	5		FACW
	80	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	30	x 1	30	
FACW species	45	x 2	90	
FAC species	5	x 3	15	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	80	(A)	135	(B)

Prevalence Index = B/A = 1.69

Hydrophytic Vegetation Indicators:

X 1- Rapid Test For Hydrophytic Vegetation

X 2- Dominance Test is > 50%

X 3- Prevalence Index is =< 3.0

4- Morphological Adaptations

5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **1_20200922_WL104**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-7	10YR 2/2	95	10YR 3/6	5	C	PL	Sandy Clay Loam	
7-16	10YR 4/1	85	10YR 4/6	15	C	M	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 9/22/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200922_WL104_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): None Slope (%) 2 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.089914 Long: -78.273536 Datum: NAD83

Soil Map Unit Name: OdA NWI Classification: UPL

Are climatic / hyrologic 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 X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	if yes, optional Wetland Site ID: ____
Wetland Hydrology Present?	Yes ____	No X	

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____	No X	Depth (inches) ____
Water Table Present?	Yes ____	No X	Depth (inches) ____
Saturation Present?	Yes ____	No X	Depth (inches) ____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200922_WL104_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Tilia americana	25	X	FACU
Fraxinus pennsylvanica	25	X	FACW
	50	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Rhamnus cathartica	50	X	FAC
	50	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Urtica dioica	15	X	FAC
Alliaria petiolata	5	X	FACU
Bidens frondosa	5	X	FACW
Persicaria virginiana	5	X	FAC
Ranunculus hispidus	3		FAC
	33	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus quinquefolia	10	X	FACU
Toxicodendron radicans	5	X	FAC
	15	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	30	x 2	60	
FAC species	78	x 3	234	
FACU species	40	x 4	160	
UPL species	0	x 5	0	
Column Totals	148	(A)	454	(B)

Prevalence Index = B/A = 3.07

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- ___ 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **1_20200922_WL104_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 2/2	100					Sandy Loam	
12-18	10YR 4/1	50	10YR 5/8	50	C	M	Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 9/22/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200922_WL105_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.088693 Long: -78.270644 Datum: NAD83

Soil Map Unit Name: CbA NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL106
Wetland Hydrology Present?	Yes X 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)	____	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)
____	Sparsley Vegetated Concave Surface (B8)		

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 in Aerial Imagery (C9)
____	Stunted or Stressed Plants (D1)
X	Geomorphic Position (D2)
____	Shallow Aquitard (D3)
____	Microtopographic Relief (D4)
X	FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200922_WL105_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lindera benzoin	3	X	FACW
Cornus racemosa	3	X	FAC
	6 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Eutrochium maculatum	25	X	OBL
Eupatorium perfoliatum	10	X	FACW
Solidago canadensis	10	X	FACU
Scirpus atrovirens	10	X	OBL
Symphyotrichum lanceolatum	10	X	FACW
Impatiens capensis	5		FACW
Doellingeria umbellata	5		FACW
Onoclea sensibilis	5		FACW
Amphicarpaea bracteata	5		FAC
Phragmites australis	3		FACW
	88 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 85.7% (A/B)

Prevalence Index Worksheet:

OBL species	35	x 1	35	
FACW species	41	x 2	82	
FAC species	8	x 3	24	
FACU species	10	x 4	40	
UPL species	0	x 5	0	
Column Totals	94	(A)	181	(B)

Prevalence Index = B/A = 1.93

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **1_20200922_WL105_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-2	10YR 2/2	100					Loam	
2-14	10YR 4/2	70	10YR 3/6	30	C	M	Sandy Loam	
14-18	7.5YR 5/3	70	7.5YR 5/6	30	C	M	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 9/22/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200922_WL105_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): Convex Slope (%) 3 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.088826 Long: -78.270683 Datum: NAD83

Soil Map Unit Name: CbA NWI Classification: UPL

Are climatic / hyrologic 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 X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	if yes, optional Wetland Site ID: ____
Wetland Hydrology Present?	Yes ____	No X	

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Surface Water Present?	Yes ____	No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____	No X	Depth (inches) ____	
Saturation Present?	Yes ____	No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200922_WL105_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Ulmus americana	20	X	FACW
Fraxinus pennsylvanica	20	X	FACW
Quercus macrocarpa	20	X	FACU
Tilia americana	15		FACU
Acer saccharum	10		FACU
Populus deltoides	10		FAC
Carya cordiformis	3		FAC
	98	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lindera benzoin	30	X	FACW
Rhamnus cathartica	20	X	FAC
	50	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Persicaria virginiana	5	X	FAC
Solidago canadensis	5	X	FACU
	10	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Toxicodendron radicans	15	X	FAC
Parthenocissus quinquefolia	10	X	FACU
	25	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	70	x 2	140	
FAC species	53	x 3	159	
FACU species	60	x 4	240	
UPL species	0	x 5	0	
Column Totals	183	(A)	539	(B)

Prevalence Index = B/A = 2.95

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **1_20200922_WL105_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-3	10YR 3/2	100					Sandy Loam	
3-8	10YR 3/2	98	10YR 4/6	2	C	M	Sandy Loam	
8-20	10YR 5/3	99	10YR 4/6	1	C	M	Sand	

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)

____ Polyvalue Below Surface (B15)
____ Thin Dark Surface (S9)
____ Loamy Mucky Mineral (F1)
____ Loamy Gleyed Matric (F2)
____ Depleted Matrix (F3)
____ Redox Dark Surface (F6)
____ Depleted Dark Surface (F7)
____ Redox Depressions (F8)

Indicators for Problematic Soils:

____ 2 cm Muck (A10)
____ Coast Prarie Redox (A16)
____ 5 cm Mucky Peat or Peat (S3)
____ Dark Surface (S7)
____ Polyvalue Below Surface (S8)
____ Thin Dark Surface (S9)
____ Iron-Manganese Masses (F12)
____ Piedmont Floodplain Soils (F19)
____ Mesic Spodic (TA6)
____ Red Parent Material (F21)
____ Very Shallow Dark Surface (TF12)
____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 9/22/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200922_WL106_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.088321 Long: -78.271403 Datum: NAD83

Soil Map Unit Name: Pd NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL107
Wetland Hydrology Present?	Yes X 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)		Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)
	Saturation (A3)		Marl Deposits (B15)	X	Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)	X	Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
				X	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X Depth (inches) ____	Wetland Hydrology Present?	Yes X No ____
Water Table Present?	Yes ____ No X Depth (inches) ____		
Saturation Present?	Yes ____ No X Depth (inches) ____		

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200922_WL106_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer rubrum	20	X	FAC
Tilia americana	15	X	FACU
Ulmus americana	15	X	FACW
Fraxinus pennsylvanica	5		FACW
	55	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lindera benzoin	30	X	FACW
Rhamnus cathartica	10	X	FAC
Aralia racemosa	10	X	FACU
	50	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Bidens frondosa	2		FACW
	2	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus quinquefolia	5	X	FACU
	5	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 57.1% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	52	x 2	104	
FAC species	30	x 3	90	
FACU species	30	x 4	120	
UPL species	0	x 5	0	
Column Totals	112	(A)	314	(B)

Prevalence Index = B/A = 2.8

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)
buttressing on trees

SOIL Sampling Point: **1_20200922_WL106_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-4	10YR 2/1	100					Sandy Loam	
4-16	2.5Y 6/1	75	10YR 5/6	25	C	M	Sandy Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 9/22/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200922_WL106_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): None Slope (%) 2 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.088409 Long: -78.271235 Datum: NAD83

Soil Map Unit Name: Pd NWI Classification: UPL

Are climatic / hyrologic 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 X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	if yes, optional Wetland Site ID: _____
Wetland Hydrology Present?	Yes ____	No X	

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____	No X	Depth (inches) ____
Water Table Present?	Yes ____	No X	Depth (inches) ____
Saturation Present?	Yes ____	No X	Depth (inches) ____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200922_WL106_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Tilia americana	30	X	FACU
Fraxinus pennsylvanica	15	X	FACW
Quercus macrocarpa	15	X	FACU
	60	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lindera benzoin	30	X	FACW
Rhamnus cathartica	20	X	FAC
	50	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Ageratina altissima	20	X	FACU
Symphyotrichum lateriflorum	15	X	FAC
Persicaria virginiana	15	X	FAC
Unknown species	15	X	UNK
Solidago canadensis	5		FACU
Onoclea sensibilis	5		FACW
	75	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Toxicodendron radicans	5	X	FAC
Vitis riparia	3	X	FAC
	8	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 11 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 63.6% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	50	x 2	100	
FAC species	58	x 3	174	
FACU species	70	x 4	280	
UPL species	0	x 5	0	
Column Totals	178	(A)	554	(B)

Prevalence Index = B/A = 3.11

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- ___ 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)
unknown grass species; unidentifiable in the field

SOIL Sampling Point: **1_20200922_WL106_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-11	10YR 2/2	100					Sandy Loam	
11-20	10YR 5/3	80	10YR 4/6	20	C	M	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 9/23/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200923_WL108

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.106884 Long: -78.262692 Datum: NAD83

Soil Map Unit Name: Fo NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL108
Wetland Hydrology Present?	Yes X 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)		Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)
	Saturation (A3)		Marl Deposits (B15)		Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)	X	Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)	X	Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
				X	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200923_WL108**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	70	X	FACW
	70 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phragmites australis	25	X	FACW
Urtica dioica	25	X	FAC
Lysimachia nummularia	20	X	FACW
Ageratina altissima	8		FACU
Impatiens capensis	7		FACW
Onoclea sensibilis	5		FACW
Alliaria petiolata	5		FACU
Solidago canadensis	3		FACU
	98 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	5	X	FAC
	5 = 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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	127	x 2	254	
FAC species	30	x 3	90	
FACU species	16	x 4	64	
UPL species	0	x 5	0	
Column Totals	173	(A)	408	(B)

Prevalence Index = B/A = 2.36

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **1_20200923_WL108**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-8	10YR 2/1	95	7.5YR 4/6	5	C	PL	Silty Clay Loam	
8-16	10YR 2/1	85	7.5YR 4/6	15	C	M	Silty Clay Loam	
16-20	2.5Y 6/2	90	2.5Y 5/6	10	C	M	Sand	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 9/23/2020

Applicant/Owner: Hecate State: NY Sampling Point:1_20200923_WL108_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): None Slope (%) 2 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.106822 Long: -78.262632 Datum: NAD83

Soil Map Unit Name: RoA NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200923_WL108_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Apocynum cannabinum	3		FAC
	3 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Panicum dichotomiflorum	35	X	FACW
Solidago canadensis	30	X	FACU
Phragmites australis	10		FACW
Physalis angulata	10		FAC
Cirsium arvense	5		FACU
Amaranthus albus	5		FACU
Urtica dioica	5		FAC
Xanthium spinosum	3		FACU
Echinochloa crus-galli	2		FAC
	105 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	45	x 2	90	
FAC species	20	x 3	60	
FACU species	43	x 4	172	
UPL species	0	x 5	0	
Column Totals	108	(A)	322	(B)

Prevalence Index = B/A = 2.98

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- ___ 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ___ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **1_20200923_WL108_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-10	10YR 2/2	100					Sandy Loam	
10-20	10YR 3/2	100					Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennesee Sampling Date: 10/8/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200922_WL109_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Linear Slope (%) 0 - 15

Subregion (LRR or MLRA): LRR L Lat: 43.096252 Long: -78.277469 Datum: NAD83

Soil Map Unit Name: La NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL109
Wetland Hydrology Present?	Yes X No ____		

Remarks: (Explain alternative procedures here or in a separate report.)

vegetated ditch

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

X	Surface Water (A1)		Water-Stained Leaves (B9)	X	Drainage Patterns (B10)
X	High Water Table (A2)		Aquatic Fauna (B13)		Moss Trim Lines (B16)
X	Saturation (A3)		Marl Deposits (B15)		Dry-Season Water Table (C2)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)	X	Saturation Visible in Aerial Imagery (C9)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Stunted or Stressed Plants (D1)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)	X	Geomorphic Position (D2)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Shallow Aquitard (D3)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Microtopographic Relief (D4)
	Sparsley Vegetated Concave Surface (B8)			X	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

	Surface Soil Cracks (B6)

Surface Water Present?	Yes X No ____	Depth (inches)	4
Water Table Present?	Yes X No ____	Depth (inches)	0
Saturation Present?	Yes X No ____	Depth (inches)	0

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200922_WL109_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Typha angustifolia	40	X	OBL
Phalaris arundinacea	25	X	FACW
	65 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	40	x 1	40	
FACW species	25	x 2	50	
FAC species	0	x 3	0	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	65	(A)	90	(B)

Prevalence Index = B/A = 1.38

Hydrophytic Vegetation Indicators:

X 1- Rapid Test For Hydrophytic Vegetation

X 2- Dominance Test is > 50%

X 3- Prevalence Index is =< 3.0

4- Morphological Adaptations

5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **1_20200922_WL109_W1**

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- X Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 9/22/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200922_WL105_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): None Slope (%) 0 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.096253 Long: -78.277470 Datum: NAD83

Soil Map Unit Name: CbA NWI Classification: UPL

Are climatic / hyrologic conditions on the site typical for this time of year? Yes X No ____ (if no, explain in Remarks.)

Are Vegetation X, 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	____
Wetland Hydrology Present?	Yes ____ No X		

Remarks: (Explain alternative procedures here or in a separate report.)

Recently mowed field

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches)	____
Water Table Present?	Yes ____ No X	Depth (inches)	____
Saturation Present?	Yes ____ No X	Depth (inches)	____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200922_WL105_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Unknown species	40	X	UNK
Cirsium arvense	15	X	FACU
Taraxacum officinale	10		FACU
Trifolium pratense	10		FACU
Lotus corniculatus	10		FACU
Plantago major	5		FACU
Daucus carota	5		UPL
	95	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	0	x 3	0	
FACU species	50	x 4	200	
UPL species	5	x 5	25	
Column Totals	55	(A)	225	(B)

Prevalence Index = B/A = 4.09

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
unknown grass due to recent mowing

SOIL Sampling Point: **1_20200922_WL105_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-13	10YR 3/2	99	10YR 3/6	1	C	M	Sandy Loam	
13-20	10YR 3/3	95	10YR 4/6	5	C	M	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennesee Sampling Date: 10/8/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20201008_WL110_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 2

Subregion (LRR or MLRA): LRR L Lat: 43.097739 Long: -78.240328 Datum: NAD83

Soil Map Unit Name: La NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL110
Wetland Hydrology Present?	Yes X 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)		Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)
	Saturation (A3)		Marl Deposits (B15)		Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)	X	Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)	X	Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
				X	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X Depth (inches) ____	Wetland Hydrology Present?	Yes X No ____
Water Table Present?	Yes ____ No X Depth (inches) ____		
Saturation Present?	Yes ____ No X Depth (inches) ____		

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20201008_WL110_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	50	X	FACW
Acer saccharinum	20	X	FACW
	70	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Cornus amomum	50	X	FACW
	50	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lysimachia nummularia	20	X	FACW
Scirpus atrovirens	15	X	OBL
Symphyotrichum lanceolatum	15	X	FACW
Bidens frondosa	10		FACW
	60	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

OBL species	15	x 1	15	
FACW species	165	x 2	330	
FAC species	0	x 3	0	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	180	(A)	345	(B)

Prevalence Index = B/A = 1.92

Hydrophytic Vegetation Indicators:

- X 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- 4- Morphological Adaptations
- 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **1_20201008_WL110_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-3	10YR 2/2	95	10YR 4/4	5	C	M	Sandy Clay Loam	
3-16	10YR 4/1	80	10YR 4/6	20	C	M	Sandy Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennesee Sampling Date: 10/1/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20201008_WL110_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): Convex Slope (%) 3 - 8

Subregion (LRR or MLRA): LRR L Lat: 43.097691 Long: -78.240271 Datum: NAD83

Soil Map Unit Name: La NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20201008_WL110_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Pinus strobus	75	X	FACU
	75	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lonicera morrowii	50	X	FACU
	50	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	15	X	FAC
Toxicodendron radicans	10	X	FAC
	25	= 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: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	25	x 3	75	
FACU species	125	x 4	500	
UPL species	0	x 5	0	
Column Totals	150	(A)	575	(B)

Prevalence Index = B/A = 3.83

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point:
1_20201008_WL110_U1

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-4	10YR 2/2	100					Sandy Loam	
4-15	10YR 3/2	100					Sandy Loam	
15-20	10YR 4/2	97	10YR 4/4	3	C	M	Loam	

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)

____ Polyvalue Below Surface (B15)
____ Thin Dark Surface (S9)
____ Loamy Mucky Mineral (F1)
____ Loamy Gleyed Matric (F2)
____ Depleted Matrix (F3)
____ Redox Dark Surface (F6)
____ Depleted Dark Surface (F7)
____ Redox Depressions (F8)

Indicators for Problematic Soils:

____ 2 cm Muck (A10)
____ Coast Prarie Redox (A16)
____ 5 cm Mucky Peat or Peat (S3)
____ Dark Surface (S7)
____ Polyvalue Below Surface (S8)
____ Thin Dark Surface (S9)
____ Iron-Manganese Masses (F12)
____ Piedmont Floodplain Soils (F19)
____ Mesic Spodic (TA6)
____ Red Parent Material (F21)
____ Very Shallow Dark Surface (TF12)
____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennesee Sampling Date: 10/8/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20201008_WL111_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Dip Local relief (concave, convex, none): Concave Slope (%) 1 - 3

Subregion (LRR or MLRA): LRR L Lat: 43.098295 Long: -78.236684 Datum: NAD83

Soil Map Unit Name: La NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL111
Wetland Hydrology Present?	Yes X 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)		Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)
	Saturation (A3)		Marl Deposits (B15)		Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)	X	Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)	X	Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
				X	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X Depth (inches) ____	Wetland Hydrology Present?	Yes X No ____
Water Table Present?	Yes ____ No X Depth (inches) ____		
Saturation Present?	Yes ____ No X Depth (inches) ____		

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20201008_WL111_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	25	X	FACW
Acer saccharinum	20	X	FACW
	45	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Cornus amomum	50	X	FACW
Cornus racemosa	25	X	FAC
Fraxinus pennsylvanica	15		FACW
Acer rubrum	10		FAC
	100	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Symphyotrichum lateriflorum	25	X	FAC
Eutrochium purpureum	15	X	FAC
	40	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	10	X	FAC
	10	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	110	x 2	220	
FAC species	85	x 3	255	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	195	(A)	475	(B)

Prevalence Index = B/A = 2.44

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **1_20201008_WL111_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-3	10YR 2/2	95	10YR 4/4	5	C	M	Sandy Clay Loam	
3-16	10YR 4/1	80	10YR 4/6	20	C	M	Sandy Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennesee Sampling Date: 10/8/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20201008_WL111_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Shoulder Local relief (concave, convex, none): Convex Slope (%) 3 - 15

Subregion (LRR or MLRA): LRR L Lat: 43.098326 Long: -78.236754 Datum: NAD83

Soil Map Unit Name: La NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20201008_WL111_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Hieracium gronovii	35	X	UPL
Unknown species	25	X	UNK
Centaurea jacea	15		FACU
Taraxacum officinale	10		FACU
	85 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus quinquefolia	10	X	FACU
	10 = 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% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	0	x 3	0	
FACU species	35	x 4	140	
UPL species	35	x 5	175	
Column Totals	70	(A)	315	(B)

Prevalence Index = B/A = 4.5

Hydrophytic Vegetation Indicators:

- 1- Rapid Test For Hydrophytic Vegetation
- 2- Dominance Test is > 50%
- 3- Prevalence Index is =< 3.0
- 4- Morphological Adaptations
- 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
unknown grass due to recent mowing

SOIL Sampling Point: **1_20201008_WL111_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-7	10YR 3/2	100					Sandy Loam	Gravelly

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: Rock/Till

Depth (inches): 7

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Gennessee Sampling Date: 7/15/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200715_WL22_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Shoulder Local relief (concave, convex, none): Convex Slope (%) 5 - 10

Subregion (LRR or MLRA): LRR L Lat: 43.092365 Long: -78.243538 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: UPL

Are climatic / hyrologic conditions on the site typical for this time of year? Yes X No ____ (if no, explain in Remarks.)

Are Vegetation X , Soil X , 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	____
Wetland Hydrology Present?	Yes ____ No X		

Remarks: (Explain alternative procedures here or in a separate report.)

Edge of agricultural field, recently tilled

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches)	____
Water Table Present?	Yes ____ No X	Depth (inches)	____
Saturation Present?	Yes ____ No X	Depth (inches)	____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200715_WL22_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lonicera morrowii	10	X	FACU
Cornus racemosa	5	X	FAC
	15 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Bromus inermis	5	X	UPL
Daucus carota	5	X	UPL
Erigeron annuus	5	X	FACU
Poa compressa	5	X	FACU
	20 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 16.7% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	5	x 3	15	
FACU species	20	x 4	80	
UPL species	10	x 5	50	
Column Totals	35	(A)	145	(B)

Prevalence Index = B/A = 4.14

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **1_20200715_WL22_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-10	10YR 3/2	100					Sandy Loam	
10-18	10YR 4/3	99	10YR 3/6	1	C	M	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/17/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200717_WL29_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): None Slope (%) 0 - 3

Subregion (LRR or MLRA): LRR L Lat: 43.095362 Long: -78.231783 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches)	____
Water Table Present?	Yes ____ No X	Depth (inches)	____
Saturation Present?	Yes ____ No X	Depth (inches)	____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200717_WL29_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Daucus carota	85	X	UPL
Ambrosia artemisiifolia	10		FACU
Plantago major	5		FACU
Cyperus strigosus	4		FACW
	104	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 0% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	4	x 2	8	
FAC species	0	x 3	0	
FACU species	15	x 4	60	
UPL species	85	x 5	425	
Column Totals	104	(A)	493	(B)

Prevalence Index = B/A = 4.74

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **1_20200717_WL29_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-16	10YR 2/2	100					Sandy Clay Loam	
16-20	10YR 5/2	70	10YR 5/8	30	C	M	Sand	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/21/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200720_WL42_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): Concave Slope (%) 1 - 10

Subregion (LRR or MLRA): LRR L Lat: 43.097375 Long: -78.219360 Datum: NAD83

Soil Map Unit Name: CaA NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	____
Wetland Hydrology Present?	Yes ____ No X		

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)	____ Water-Stained Leaves (B9)	____ Surface Soil Cracks (B6)
____ High Water Table (A2)	____ Aquatic Fauna (B13)	____ Drainage Patterns (B10)
____ Saturation (A3)	____ Marl Deposits (B15)	____ Moss Trim Lines (B16)
____ Water Marks (B1)	____ Hydrogen Sulfide Odor (C1)	____ Dry-Season Water Table (C2)
____ Sediment Deposits (B2)	____ Oxidized Rhizospheres on Living Roots (C3)	____ Crayfish Burrows (C8)
____ Drift Deposits (B3)	____ Presence of Reduced Iron (C4)	____ Saturation Visible in Aerial Imagery (C9)
____ Algal Mat or Crust (B4)	____ Recent Iron Reduction in Tilled Soils (C6)	____ Stunted or Stressed Plants (D1)
____ Iron Deposits (B5)	____ Thin Muck Surface (C7)	____ Geomorphic Position (D2)
____ Inundation Visible on Aerial Imagery (B7)	____ Other (Explain in Remarks)	____ Shallow Aquitard (D3)
____ Sparsley Vegetated Concave Surface (B8)		____ Microtopographic Relief (D4)
		____ FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200720_WL42_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Daucus carota	25	X	UPL
Lolium perenne	15	X	FACU
Trifolium pratense	5		FACU
Solidago canadensis	5		FACU
Daucus carota	5	X	UPL
Plantago major	4		FACU
Ambrosia artemisiifolia	3		FACU
	62	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus quinquefolia	10	X	FACU
Vitis riparia	3	X	FAC
	13	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 20% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	3	x 3	9	
FACU species	42	x 4	168	
UPL species	30	x 5	150	
Column Totals	75	(A)	327	(B)

Prevalence Index = B/A = 4.36

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **1_20200720_WL42_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-14	10YR 3/2	100					Sandy Loam	
14-20	10YR 3/2	95	10YR 5/6	5	C	M	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 7/23/2020

Applicant/Owner: Hecate State: NY Sampling Point: 1_07232020_WL50_W1

Investigator(s): Andrew Sorci Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Linear Slope (%) 0 - 15

Subregion (LRR or MLRA): LRR R Lat: 43.099379 Long: -78.225187 Datum: NAD83

Soil Map Unit Name: ClB NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL50
Wetland Hydrology Present?	Yes X No ____		

Remarks: (Explain alternative procedures here or in a separate report.)

Associated with stream

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

X	Surface Water (A1)		Water-Stained Leaves (B9)	X	Drainage Patterns (B10)
	High Water Table (A2)		Aquatic Fauna (B13)		Moss Trim Lines (B16)
X	Saturation (A3)		Marl Deposits (B15)		Dry-Season Water Table (C2)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Saturation Visible in Aerial Imagery (C9)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Stunted or Stressed Plants (D1)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)	X	Geomorphic Position (D2)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Shallow Aquitard (D3)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Microtopographic Relief (D4)
	Sparsley Vegetated Concave Surface (B8)			X	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

	Surface Soil Cracks (B6)
X	Drainage Patterns (B10)
	Moss Trim Lines (B16)
	Dry-Season Water Table (C2)
	Crayfish Burrows (C8)
	Saturation Visible in Aerial Imagery (C9)
	Stunted or Stressed Plants (D1)
X	Geomorphic Position (D2)
	Shallow Aquitard (D3)
	Microtopographic Relief (D4)
X	FAC-Neutral Test (D5)

Surface Water Present?	Yes X No ____	Depth (inches)	2
Water Table Present?	Yes ____ No X	Depth (inches)	____
Saturation Present?	Yes X No ____	Depth (inches)	0

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_07232020_WL50_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Juglans cinerea	10	X	FACU
	10	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	40	X	FACW
	40	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phalaris arundinacea	90	X	FACW
Euthamia graminifolia	15		FAC
	105	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	130	x 2	260	
FAC species	15	x 3	45	
FACU species	10	x 4	40	
UPL species	0	x 5	0	
Column Totals	155	(A)	345	(B)

Prevalence Index = B/A = 2.23

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **1_07232020_WL50_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-4	10YR 4/2	95	10YR 4/4	5	C	PL	Loamy Sand	
4-9	7.5YR 5/3	80	7.5YR 5/8	20	C	M	Sandy Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 9

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genessee Sampling Date: 1/14/2021

Applicant/Owner: Hecate State: NY Sampling Point: 1_20210114_WL57_57W

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Linear Slope (%) 1 - 3

Subregion (LRR or MLRA): LRR R Lat: 43.108912 Long: -78.192589 Datum: NAD83

Soil Map Unit Name: ApA Appleton silt loam, 0 to 3 percent slopes NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL58
Wetland Hydrology Present?	Yes X No ____		

Remarks: (Explain alternative procedures here or in a separate report.)

Linear, roadside vegetated ditch

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

X	Surface Water (A1)		Water-Stained Leaves (B9)		Drainage Patterns (B10)
X	High Water Table (A2)		Aquatic Fauna (B13)		Moss Trim Lines (B16)
	Saturation (A3)		Marl Deposits (B15)		Dry-Season Water Table (C2)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Saturation Visible in Aerial Imagery (C9)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Stunted or Stressed Plants (D1)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)	X	Geomorphic Position (D2)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Shallow Aquitard (D3)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Microtopographic Relief (D4)
	Sparsley Vegetated Concave Surface (B8)			X	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes X No ____	Depth (inches) 1	
Water Table Present?	Yes X No ____	Depth (inches) 2	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20210114_WL57_57W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phalaris arundinacea	90	X	FACW
Euthamia graminifolia	10		FAC
	100 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	90	x 2	180	
FAC species	10	x 3	30	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	100	(A)	210	(B)

Prevalence Index = B/A = 2.1

Hydrophytic Vegetation Indicators:

X 1- Rapid Test For Hydrophytic Vegetation

X 2- Dominance Test is > 50%

X 3- Prevalence Index is =< 3.0

4- Morphological Adaptations

5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **1_20210114_WL57_57W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-5	10YR 3/2	100					Sandy Loam	
5-18	10YR 5/2	90	10YR 5/6	10	C	M	Sandy Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genessee Sampling Date: 1/14/2021

Applicant/Owner: Hecate State: NY Sampling Point: 1_20210114_WL113_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 5

Subregion (LRR or MLRA): LRR R Lat: 43.105387 Long: -78.242437 Datum: NAD83

Soil Map Unit Name: Ma Madalin silty clay loam, 0 to 3 percent slopes NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL113
Wetland Hydrology Present?	Yes X 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)

X	Surface Water (A1)		Water-Stained Leaves (B9)		Drainage Patterns (B10)
	High Water Table (A2)		Aquatic Fauna (B13)		Moss Trim Lines (B16)
	Saturation (A3)		Marl Deposits (B15)		Dry-Season Water Table (C2)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Saturation Visible in Aerial Imagery (C9)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Stunted or Stressed Plants (D1)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Geomorphic Position (D2)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Shallow Aquitard (D3)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Microtopographic Relief (D4)
	Sparsley Vegetated Concave Surface (B8)				FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

	Surface Soil Cracks (B6)

Surface Water Present?	Yes X	No ____	Depth (inches)	2	
Water Table Present?	Yes ____	No X	Depth (inches)	____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____	No X	Depth (inches)	____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20210114_WL113_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phalaris arundinacea	95	X	FACW
	95 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	95	x 2	190	
FAC species	0	x 3	0	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	95	(A)	190	(B)

Prevalence Index = B/A = 2

Hydrophytic Vegetation Indicators:

X 1- Rapid Test For Hydrophytic Vegetation

X 2- Dominance Test is > 50%

X 3- Prevalence Index is =< 3.0

4- Morphological Adaptations

5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **1_20210114_WL113_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-2	10YR 3/1	100					Clay Loam	
2-12	10YR 6/1	80	7.5YR 4/6	20	C	M	Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genessee Sampling Date: 1/14/2021

Applicant/Owner: Hecate State: NY Sampling Point: 1_20210114_WL113_W2

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Dip Local relief (concave, convex, none): Concave Slope (%) 0 - 2

Subregion (LRR or MLRA): LRR R Lat: 43.105521 Long: -78.243403 Datum: NAD83

Soil Map Unit Name: Ma Madalin silty clay loam, 0 to 3 percent slopes NWI Classification: PSS

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL113
Wetland Hydrology Present?	Yes X 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)

X	Surface Water (A1)		Water-Stained Leaves (B9)		Drainage Patterns (B10)
	High Water Table (A2)		Aquatic Fauna (B13)		Moss Trim Lines (B16)
	Saturation (A3)		Marl Deposits (B15)		Dry-Season Water Table (C2)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Saturation Visible in Aerial Imagery (C9)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Stunted or Stressed Plants (D1)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)	X	Geomorphic Position (D2)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Shallow Aquitard (D3)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Microtopographic Relief (D4)
	Sparsley Vegetated Concave Surface (B8)			X	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

	Surface Soil Cracks (B6)

Surface Water Present?	Yes X	No ____	Depth (inches)	4
Water Table Present?	Yes ____	No X	Depth (inches)	____
Saturation Present?	Yes ____	No X	Depth (inches)	____

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20210114_WL113_W2**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Cornus amomum	65	X	FACW
Populus deltoides	40	X	FAC
	105 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Agrostis stolonifera	15	X	FACW
Symphyotrichum lateriflorum	10	X	FAC
	25 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	80	x 2	160	
FAC species	50	x 3	150	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	130	(A)	310	(B)

Prevalence Index = B/A = 2.38

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **1_20210114_WL113_W2**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-3	10YR 2/1	100					Sandy Clay Loam	
3-8	7.5YR 6/1	75	7.5YR 4/6	25	C	M	Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genessee Sampling Date: 1/14/2021

Applicant/Owner: Hecate State: NY Sampling Point: 1_20210114_WL113_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): None Slope (%) 1 - 3

Subregion (LRR or MLRA): LRR R Lat: 43.105436 Long: -78.242227 Datum: NAD83

Soil Map Unit Name: Ma Madalin silty clay loam, 0 to 3 percent slopes NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches)	____
Water Table Present?	Yes ____ No X	Depth (inches)	____
Saturation Present?	Yes ____ No X	Depth (inches)	____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20210114_WL113_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phalaris arundinacea	50	X	FACW
Trifolium pratense	30	X	FACU
Daucus carota	25	X	UPL
	105	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	50	x 2	100	
FAC species	0	x 3	0	
FACU species	30	x 4	120	
UPL species	25	x 5	125	
Column Totals	105	(A)	345	(B)

Prevalence Index = B/A = 3.29

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **1_20210114_WL113_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-6	10YR 3/2	100					Clay Loam	
6-14	10YR 3/2	90	10YR 4/2	10	C	M	Clay Loam	
14-20	2.5Y 6/1	75	7.5YR 4/6	25	C	M	Clay	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genessee Sampling Date: 1/14/2021

Applicant/Owner: Hecate State: NY Sampling Point: WL114_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Dip Local relief (concave, convex, none): Concave Slope (%) 2 - 5

Subregion (LRR or MLRA): LRR R Lat: 43.110617 Long: -78.196939 Datum: NAD83

Soil Map Unit Name: Ld Lamson very fine sandy loam NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL114
Wetland Hydrology Present?	Yes X 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)		Water-Stained Leaves (B9)		Drainage Patterns (B10)
	High Water Table (A2)		Aquatic Fauna (B13)		Moss Trim Lines (B16)
	Saturation (A3)		Marl Deposits (B15)		Dry-Season Water Table (C2)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)	X	Saturation Visible in Aerial Imagery (C9)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Stunted or Stressed Plants (D1)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)	X	Geomorphic Position (D2)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Shallow Aquitard (D3)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Microtopographic Relief (D4)
	Sparsley Vegetated Concave Surface (B8)			X	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **WL114_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phalaris arundinacea	95	X	FACW
Symphyotrichum lanceolatum	5		FACW
	100 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	100	x 2	200	
FAC species	0	x 3	0	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	100	(A)	200	(B)

Prevalence Index = B/A = 2

Hydrophytic Vegetation Indicators:

X 1- Rapid Test For Hydrophytic Vegetation

X 2- Dominance Test is > 50%

X 3- Prevalence Index is =< 3.0

___ 4- Morphological Adaptations

___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **WL114_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-3	10YR 3/2	100					Sandy Loam	
3-16	10YR 4/2	85	10YR 4/4	15	C	M	Sandy Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genessee Sampling Date: 1/14/2021

Applicant/Owner: Hecate State: NY Sampling Point: 1_20210114_WL114_W2

Investigator(s): Andrew Sorci Section, Township, Range:

Landform (hillslope, terrace,etc.): Dip Local relief (concave, convex, none): Concave Slope (%) 1 - 3

Subregion (LRR or MLRA): LRR R Lat: 43.110749 Long: -78.197205 Datum: NAD83

Soil Map Unit Name: Ld Lamson very fine sandy loam NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL114
Wetland Hydrology Present?	Yes X 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)	____	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)
____	Sparsley Vegetated Concave Surface (B8)		

Secondary Indicators (minimum of two required)

____	Surface Soil Cracks (B6)
____	Drainage Patterns (B10)
X	Moss Trim Lines (B16)
____	Dry-Season Water Table (C2)
____	Crayfish Burrows (C8)
____	Saturation Visible in Aerial Imagery (C9)
____	Stunted or Stressed Plants (D1)
X	Geomorphic Position (D2)
____	Shallow Aquitard (D3)
____	Microtopographic Relief (D4)
X	FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20210114_WL114_W2**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Populus deltoides	75	X	FAC
Fraxinus pennsylvanica	15		FACW
	90	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Cornus amomum	20	X	FACW
Rhamnus cathartica	15	X	FAC
	35	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	35	x 2	70	
FAC species	90	x 3	270	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	125	(A)	340	(B)

Prevalence Index = B/A = 2.72

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **1_20210114_WL114_W2**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-6	10YR 3/2	100					Sandy Loam	
6-18	10YR 4/1	90	10YR 4/6	10	C	M	Sandy Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genessee Sampling Date: 1/14/2021

Applicant/Owner: Hecate State: NY Sampling Point: 1_20210114_WL114_W3

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Linear Slope (%) 1 - 3

Subregion (LRR or MLRA): LRR R Lat: 43.111123 Long: -78.197929 Datum: NAD83

Soil Map Unit Name: HlB Hilton loam, 3 to 8 percent slopes NWI Classification: PSS

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL114
Wetland Hydrology Present?	Yes X 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)	____	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)
____	Sparsley Vegetated Concave Surface (B8)		

Secondary Indicators (minimum of two required)

____	Surface Soil Cracks (B6)
X	Drainage Patterns (B10)
____	Moss Trim Lines (B16)
____	Dry-Season Water Table (C2)
____	Crayfish Burrows (C8)
____	Saturation Visible in Aerial Imagery (C9)
____	Stunted or Stressed Plants (D1)
X	Geomorphic Position (D2)
____	Shallow Aquitard (D3)
____	Microtopographic Relief (D4)
X	FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20210114_WL114_W3**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Cornus amomum	30	X	FACW
Fraxinus pennsylvanica	25	X	FACW
Rhamnus cathartica	10		FAC
	65	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Symphyotrichum lanceolatum	10	X	FACW
Solidago canadensis	5	X	FACU
	15	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	65	x 2	130	
FAC species	10	x 3	30	
FACU species	5	x 4	20	
UPL species	0	x 5	0	
Column Totals	80	(A)	180	(B)

Prevalence Index = B/A = 2.25

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **1_20210114_WL114_W3**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-4	10YR 3/2	95	7.5YR 4/6	5	C	M	Sandy Clay Loam	
4-16	7.5YR 6/2	80	7.5YR 4/6	20	C	M	Sandy Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genessee Sampling Date: 1/14/2021

Applicant/Owner: Hecate State: NY Sampling Point: WL114_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): Convex Slope (%) 5 - 10

Subregion (LRR or MLRA): LRR R Lat: 43.110560 Long: -78.197036 Datum: NAD83

Soil Map Unit Name: OnB Ontario loam, 3 to 8 percent slopes NWI Classification: UPL

Are climatic / hyrologic 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 X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	if yes, optional Wetland Site ID: _____
Wetland Hydrology Present?	Yes ____	No X	

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____	No X	Depth (inches) ____
Water Table Present?	Yes ____	No X	Depth (inches) ____
Saturation Present?	Yes ____	No X	Depth (inches) ____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **WL114_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phalaris arundinacea	85	X	FACW
Solidago canadensis	15		FACU
	100 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	85	x 2	170	
FAC species	0	x 3	0	
FACU species	15	x 4	60	
UPL species	0	x 5	0	
Column Totals	100	(A)	230	(B)

Prevalence Index = B/A = 2.3

Hydrophytic Vegetation Indicators:

X 1- Rapid Test For Hydrophytic Vegetation

X 2- Dominance Test is > 50%

X 3- Prevalence Index is =< 3.0

4- Morphological Adaptations

5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **WL114_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-20	10YR 3/2	98	10YR 4/4	2	C	M	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genessee Sampling Date: 1/15/2021

Applicant/Owner: Hecate State: NY Sampling Point: 1_20210115_WL115_W1

Investigator(s): Andrew Sorci Section, Township, Range:

Landform (hillslope, terrace,etc.): Dip Local relief (concave, convex, none): Concave Slope (%) 2 - 5

Subregion (LRR or MLRA): LRR R Lat: 43.094836 Long: -78.253690 Datum: NAD83

Soil Map Unit Name: Ma Madalin silty clay loam, 0 to 3 percent slopes NWI Classification: PEM

Are climatic / hyrologic conditions on the site typical for this time of year? Yes X No ____ (if no, explain in Remarks.)

Are Vegetation X , 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 X	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL115
Wetland Hydrology Present?	Yes X 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)

X	Surface Water (A1)		Water-Stained Leaves (B9)		Drainage Patterns (B10)
X	High Water Table (A2)		Aquatic Fauna (B13)		Moss Trim Lines (B16)
X	Saturation (A3)		Marl Deposits (B15)		Dry-Season Water Table (C2)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Saturation Visible in Aerial Imagery (C9)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Stunted or Stressed Plants (D1)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)	X	Geomorphic Position (D2)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Shallow Aquitard (D3)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Microtopographic Relief (D4)
	Sparsley Vegetated Concave Surface (B8)				FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes X No ____	Depth (inches)	1
Water Table Present?	Yes X No ____	Depth (inches)	6
Saturation Present?	Yes X No ____	Depth (inches)	0

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20210115_WL115_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Unknown species	5	X	UNK
	5 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 0% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	0	x 3	0	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	0	(A)	0	(B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
disturbed agricultural field, recent vegetation clearing. Trace amounts of grass present.

SOIL Sampling Point: **1_20210115_WL115_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-4	10YR 3/1	100					Sandy Loam	
4-16	10YR 4/1	95	10YR 4/4	5	C	M	Sandy Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genessee Sampling Date: 1/15/2021

Applicant/Owner: Hecate State: NY Sampling Point: 1_20210115_WL115_W2

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Dip Local relief (concave, convex, none): None Slope (%) 2 - 5

Subregion (LRR or MLRA): LRR R Lat: 43.094665 Long: -78.253044 Datum: NAD83

Soil Map Unit Name: Ma Madalin silty clay loam, 0 to 3 percent slopes NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	_____
Wetland Hydrology Present?	Yes X 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)		Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required)
X	High Water Table (A2)		Aquatic Fauna (B13)		Surface Soil Cracks (B6)
X	Saturation (A3)		Marl Deposits (B15)		Drainage Patterns (B10)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Moss Trim Lines (B16)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Dry-Season Water Table (C2)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Crayfish Burrows (C8)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Saturation Visible in Aerial Imagery (C9)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Stunted or Stressed Plants (D1)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Geomorphic Position (D2)
	Sparsley Vegetated Concave Surface (B8)				Shallow Aquitard (D3)
					Microtopographic Relief (D4)
					FAC-Neutral Test (D5)

Surface Water Present?	Yes ____	No X	Depth (inches)	____
Water Table Present?	Yes X	No ____	Depth (inches)	8
Saturation Present?	Yes X	No ____	Depth (inches)	6

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20210115_WL115_W2**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	80	X	FACW
	80	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lonicera morrowii	40	X	FACU
	40	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Unknown species	50	X	UNK
Lysimachia nummularia	7		FACW
Heracleum maximum	5		FACW
Ranunculus hispidus	5		FAC
Fragaria virginiana	3		FACU
	70	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	92	x 2	184	
FAC species	5	x 3	15	
FACU species	43	x 4	172	
UPL species	0	x 5	0	
Column Totals	140	(A)	371	(B)

Prevalence Index = B/A = 2.65

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)
Species of grass unidentifiable in field

SOIL Sampling Point: **1_20210115_WL115_W2**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-10	10YR 3/1	90	7.5YR 4/4	10	C	M	Clay Loam	
10-18	10YR 4/1	80	7.5YR 4/4	20	C	M	Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genessee Sampling Date: 1/15/2021

Applicant/Owner: Hecate State: NY Sampling Point: 1_20210115_WL115_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): Convex Slope (%) 3 - 8

Subregion (LRR or MLRA): LRR R Lat: 43.094482 Long: -78.253655 Datum: NAD83

Soil Map Unit Name: RoA Rhinebeck silt loam, 0 to 3 percent slopes NWI Classification: UPL

Are climatic / hyrologic conditions on the site typical for this time of year? Yes X No ____ (if no, explain in Remarks.)

Are Vegetation X , 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	____
Wetland Hydrology Present?	Yes ____ No X		

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches)	____
Water Table Present?	Yes ____ No X	Depth (inches)	____
Saturation Present?	Yes ____ No X	Depth (inches)	____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20210115_WL115_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Zea mays	15	X	UPL
	15 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 0% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	0	x 3	0	
FACU species	0	x 4	0	
UPL species	15	x 5	75	
Column Totals	15	(A)	75	(B)

Prevalence Index = B/A = 5

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **1_20210115_WL115_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 4/3	99	10YR 4/6	1	C	M	Clay Loam	
12-20	2.5Y 5/3	60	10YR 4/6	40	C	M	Sandy Clay Loam	

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)
____ Polyvalue Below Surface (B15)
____ Thin Dark Surface (S9)
____ Loamy Mucky Mineral (F1)
____ Loamy Gleyed Matric (F2)
____ Depleted Matrix (F3)
____ Redox Dark Surface (F6)
____ Depleted Dark Surface (F7)
____ Redox Depressions (F8)

Indicators for Problematic Soils:

____ 2 cm Muck (A10)
____ Coast Prarie Redox (A16)
____ 5 cm Mucky Peat or Peat (S3)
____ Dark Surface (S7)
____ Polyvalue Below Surface (S8)
____ Thin Dark Surface (S9)
____ Iron-Manganese Masses (F12)
____ Piedmont Floodplain Soils (F19)
____ Mesic Spodic (TA6)
____ Red Parent Material (F21)
____ Very Shallow Dark Surface (TF12)
____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genessee Sampling Date: 1/15/2021

Applicant/Owner: Hecate State: NY Sampling Point: 1_20210115_WL116_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 2 - 5

Subregion (LRR or MLRA): LRR R Lat: 43.092629 Long: -78.256065 Datum: NAD83

Soil Map Unit Name: Te Teel silt loam NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL116
Wetland Hydrology Present?	Yes X 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)

X	Surface Water (A1)		Water-Stained Leaves (B9)		Drainage Patterns (B10)
X	High Water Table (A2)		Aquatic Fauna (B13)		Moss Trim Lines (B16)
X	Saturation (A3)		Marl Deposits (B15)		Dry-Season Water Table (C2)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)
	Sediment Deposits (B2)	X	Oxidized Rhizospheres on Living Roots (C3)		Saturation Visible in Aerial Imagery (C9)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Stunted or Stressed Plants (D1)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Geomorphic Position (D2)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Shallow Aquitard (D3)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Microtopographic Relief (D4)
	Sparsley Vegetated Concave Surface (B8)				FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes X No ____ Depth (inches) 2
Water Table Present?	Yes X No ____ Depth (inches) 8
Saturation Present?	Yes X No ____ Depth (inches) 6
Wetland Hydrology Present?	Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20210115_WL116_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phalaris arundinacea	100	X	FACW
Xanthium strumarium	5		FAC
	105 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	100	x 2	200	
FAC species	5	x 3	15	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	105	(A)	215	(B)

Prevalence Index = B/A = 2.05

Hydrophytic Vegetation Indicators:

X 1- Rapid Test For Hydrophytic Vegetation

X 2- Dominance Test is > 50%

X 3- Prevalence Index is =< 3.0

___ 4- Morphological Adaptations

___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **1_20210115_WL116_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-12	10YR 4/1	90	10YR 4/4	10	C	PL	Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genessee Sampling Date: 1/15/2021

Applicant/Owner: Hecate State: NY Sampling Point: 1_20210115_WL116_W2

Investigator(s): Andrew Sorci Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 1 - 3

Subregion (LRR or MLRA): LRR R Lat: 43.092738 Long: -78.255911 Datum: NAD83

Soil Map Unit Name: Te Teel silt loam NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL116
Wetland Hydrology Present?	Yes X 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)

X	Surface Water (A1)		Water-Stained Leaves (B9)		Drainage Patterns (B10)
	High Water Table (A2)		Aquatic Fauna (B13)		Moss Trim Lines (B16)
	Saturation (A3)		Marl Deposits (B15)		Dry-Season Water Table (C2)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Saturation Visible in Aerial Imagery (C9)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Stunted or Stressed Plants (D1)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Geomorphic Position (D2)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Shallow Aquitard (D3)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Microtopographic Relief (D4)
	Sparsley Vegetated Concave Surface (B8)				FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes X No ____	Depth (inches) 4	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20210115_WL116_W2**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	75	X	FACW
	75	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lysimachia nummularia	15	X	FACW
Symphyotrichum lanceolatum	10	X	FACW
Phalaris arundinacea	10	X	FACW
Cinna arundinacea	6		FACW
Verbena hastata	5		FACW
Ranunculus hispidus	3		FAC
Heracleum maximum	3		FACW
	52	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	124	x 2	248	
FAC species	3	x 3	9	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	127	(A)	257	(B)

Prevalence Index = B/A = 2.02

Hydrophytic Vegetation Indicators:

X 1- Rapid Test For Hydrophytic Vegetation

X 2- Dominance Test is > 50%

X 3- Prevalence Index is =< 3.0

4- Morphological Adaptations

5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **1_20210115_WL116_W2**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-7	10YR 3/1	90	10YR 4/3	10	C	M	Clay Loam	
7-16	10YR 4/1	80	10YR 4/4	20	C	M	Sandy Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genessee Sampling Date: 1/15/2021

Applicant/Owner: Hecate State: NY Sampling Point: 1_20210115_WL116_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): Convex Slope (%) 2 - 4

Subregion (LRR or MLRA): LRR R Lat: 43.092854 Long: -78.255870 Datum: NAD83

Soil Map Unit Name: NgA Niagara silt loam, 0 to 2 percent slopes NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	____
Wetland Hydrology Present?	Yes ____ No X		

Remarks: (Explain alternative procedures here or in a separate report.)

Field edge

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

____ Surface Water (A1)	____ Water-Stained Leaves (B9)	____ Surface Soil Cracks (B6)
____ High Water Table (A2)	____ Aquatic Fauna (B13)	____ Drainage Patterns (B10)
____ Saturation (A3)	____ Marl Deposits (B15)	____ Moss Trim Lines (B16)
____ Water Marks (B1)	____ Hydrogen Sulfide Odor (C1)	____ Dry-Season Water Table (C2)
____ Sediment Deposits (B2)	____ Oxidized Rhizospheres on Living Roots (C3)	____ Crayfish Burrows (C8)
____ Drift Deposits (B3)	____ Presence of Reduced Iron (C4)	____ Saturation Visible in Aerial Imagery (C9)
____ Algal Mat or Crust (B4)	____ Recent Iron Reduction in Tilled Soils (C6)	____ Stunted or Stressed Plants (D1)
____ Iron Deposits (B5)	____ Thin Muck Surface (C7)	____ Geomorphic Position (D2)
____ Inundation Visible on Aerial Imagery (B7)	____ Other (Explain in Remarks)	____ Shallow Aquitard (D3)
____ Sparsley Vegetated Concave Surface (B8)		____ Microtopographic Relief (D4)
		____ FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20210115_WL116_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer saccharum	40	X	FACU
	40	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Setaria pumila	20	X	FAC
Solidago canadensis	15	X	FACU
Daucus carota	10	X	UPL
Alliaria petiolata	10	X	FACU
Taraxacum officinale	5		FACU
Brassica rapa	5		UPL
Lysimachia nummularia	5		FACW
Symphyotrichum lanceolatum	5		FACW
	75	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	10	X	FAC
	10	= 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: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	10	x 2	20	
FAC species	30	x 3	90	
FACU species	70	x 4	280	
UPL species	15	x 5	75	
Column Totals	125	(A)	465	(B)

Prevalence Index = B/A = 3.72

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
daucus carota = Zea mays

SOIL Sampling Point: **1_20210115_WL116_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-9	10YR 4/3	100					Sandy Loam	
9-20	10YR 4/3	98	10YR 5/6	2	C	M	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genessee Sampling Date: 1/15/2021

Applicant/Owner: Hecate State: NY Sampling Point: 1_20200115_WL117_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Dip Local relief (concave, convex, none): Concave Slope (%) 1 - 3

Subregion (LRR or MLRA): LRR R Lat: 43.092216 Long: -78.255353 Datum: NAD83

Soil Map Unit Name: Te Teel silt loam NWI Classification: PFO

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL117
Wetland Hydrology Present?	Yes X 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)		Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required)
	High Water Table (A2)		Aquatic Fauna (B13)		Surface Soil Cracks (B6)
	Saturation (A3)		Marl Deposits (B15)		Drainage Patterns (B10)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Moss Trim Lines (B16)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Dry-Season Water Table (C2)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Crayfish Burrows (C8)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Saturation Visible in Aerial Imagery (C9)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Stunted or Stressed Plants (D1)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)	X	Geomorphic Position (D2)
	Sparsley Vegetated Concave Surface (B8)				Shallow Aquitard (D3)
					Microtopographic Relief (D4)
				X	FAC-Neutral Test (D5)

Surface Water Present?	Yes ____	No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Water Table Present?	Yes ____	No X	Depth (inches) ____	
Saturation Present?	Yes ____	No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20200115_WL117_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	50	X	FACW
	50	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lysimachia nummularia	15	X	FACW
Cinna arundinacea	15	X	FACW
Symphyotrichum lanceolatum	15	X	FACW
Alliaria petiolata	10		FACU
Geum canadense	5		FAC
Galium mollugo	3		FACU
	63	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	95	x 2	190	
FAC species	5	x 3	15	
FACU species	13	x 4	52	
UPL species	0	x 5	0	
Column Totals	113	(A)	257	(B)

Prevalence Index = B/A = 2.27

Hydrophytic Vegetation Indicators:

X 1- Rapid Test For Hydrophytic Vegetation

X 2- Dominance Test is > 50%

X 3- Prevalence Index is =< 3.0

4- Morphological Adaptations

5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **1_20200115_WL117_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-3	10YR 3/2	100					Sandy Clay Loam	
3-12	10YR 3/1	100					Sandy Clay Loam	
12-20	10YR 4/1	92	10YR 4/6	8	C	M	Clay Loam	

Hydric Soil Indicators:

- ____ Histosol (A1)
- ____ Histic Epipedon (A2)
- ____ Black Histic (A3)
- ____ Hydrogen Sulfide (A4)
- ____ Stratified Layers (A5)
- X 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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genessee Sampling Date: 1/15/2021

Applicant/Owner: Hecate State: NY Sampling Point: 1_20210115_WL117_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): Convex Slope (%) 3 - 8

Subregion (LRR or MLRA): LRR R Lat: 43.092320 Long: -78.255284 Datum: NAD83

Soil Map Unit Name: Te Teel silt loam NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	____
Wetland Hydrology Present?	Yes ____ No X		

Remarks: (Explain alternative procedures here or in a separate report.)

raised berm between stream and PFO wetland to south

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches)	____
Water Table Present?	Yes ____ No X	Depth (inches)	____
Saturation Present?	Yes ____ No X	Depth (inches)	____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20210115_WL117_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	50	X	FACW
	50	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Crataegus douglasii	15	X	FAC
	15	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Alliaria petiolata	30	X	FACU
Galium mollugo	20	X	FACU
Ageratina altissima	15		FACU
Hesperis matronalis	10		FACU
Lysimachia nummularia	4		FACW
	79	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= 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: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	54	x 2	108	
FAC species	15	x 3	45	
FACU species	75	x 4	300	
UPL species	0	x 5	0	
Column Totals	144	(A)	453	(B)

Prevalence Index = B/A = 3.15

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **1_20210115_WL117_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-11	10YR 3/2	100					Loam	
11-14	10YR 4/3	98	10YR 4/4	2	C	M	Sandy Loam	
14-20	10YR 5/2	90	7.5YR 4/6	10	C	M	Sandy Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genessee Sampling Date: 1/15/2021

Applicant/Owner: Hecate State: NY Sampling Point: 1_20210115_WL118_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR R Lat: 43.093275 Long: -78.257054 Datum: NAD83

Soil Map Unit Name: Te Teel silt loam NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL118
Wetland Hydrology Present?	Yes X No ____		

Remarks: (Explain alternative procedures here or in a separate report.)

floodplain wetland, adjacent to stream

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

	Surface Water (A1)		Water-Stained Leaves (B9)		Drainage Patterns (B10)
X	High Water Table (A2)		Aquatic Fauna (B13)		Moss Trim Lines (B16)
X	Saturation (A3)		Marl Deposits (B15)		Dry-Season Water Table (C2)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Saturation Visible in Aerial Imagery (C9)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Stunted or Stressed Plants (D1)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)	X	Geomorphic Position (D2)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Shallow Aquitard (D3)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Microtopographic Relief (D4)
	Sparsley Vegetated Concave Surface (B8)			X	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes X No ____	Depth (inches) 6	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes X No ____	Depth (inches) 4	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20210115_WL118_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	25	X	FACW
	25 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Phalaris arundinacea	25	X	FACW
Lysimachia nummularia	20	X	FACW
Verbena hastata	15		FACW
Alliaria petiolata	10		FACU
Ageratina altissima	10		FACU
	80 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

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: 100% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	85	x 2	170	
FAC species	0	x 3	0	
FACU species	20	x 4	80	
UPL species	0	x 5	0	
Column Totals	105	(A)	250	(B)

Prevalence Index = B/A = 2.38

Hydrophytic Vegetation Indicators:

X 1- Rapid Test For Hydrophytic Vegetation

X 2- Dominance Test is > 50%

X 3- Prevalence Index is =< 3.0

4- Morphological Adaptations

5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **1_20210115_WL118_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-8	10YR 3/2	100					Sandy Loam	
8-16	10YR 4/1	95	10YR 4/4	5	C	M	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genessee Sampling Date: 1/15/2021

Applicant/Owner: Hecate State: NY Sampling Point: 1_20210115_WL118_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Rise Local relief (concave, convex, none): Convex Slope (%) 2 - 5

Subregion (LRR or MLRA): LRR R Lat: 43.093315 Long: -78.257176 Datum: NAD83

Soil Map Unit Name: Te Teel silt loam NWI Classification: UPL

Are climatic / hyrologic 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	____
Wetland Hydrology Present?	Yes ____ No X		

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)	____ Water-Stained Leaves (B9)	____ Surface Soil Cracks (B6)
____ High Water Table (A2)	____ Aquatic Fauna (B13)	____ Drainage Patterns (B10)
____ Saturation (A3)	____ Marl Deposits (B15)	____ Moss Trim Lines (B16)
____ Water Marks (B1)	____ Hydrogen Sulfide Odor (C1)	____ Dry-Season Water Table (C2)
____ Sediment Deposits (B2)	____ Oxidized Rhizospheres on Living Roots (C3)	____ Crayfish Burrows (C8)
____ Drift Deposits (B3)	____ Presence of Reduced Iron (C4)	____ Saturation Visible in Aerial Imagery (C9)
____ Algal Mat or Crust (B4)	____ Recent Iron Reduction in Tilled Soils (C6)	____ Stunted or Stressed Plants (D1)
____ Iron Deposits (B5)	____ Thin Muck Surface (C7)	____ Geomorphic Position (D2)
____ Inundation Visible on Aerial Imagery (B7)	____ Other (Explain in Remarks)	____ Shallow Aquitard (D3)
____ Sparsley Vegetated Concave Surface (B8)		____ Microtopographic Relief (D4)
		____ FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____ No X	Depth (inches) ____	
Saturation Present?	Yes ____ No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20210115_WL118_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	60	X	FACW
	60 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Alliaria petiolata	30	X	FACU
Hesperis matronalis	15	X	FACU
Galium mollugo	15	X	FACU
Lysimachia nummularia	5		FACW
	65 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	65	x 2	130	
FAC species	0	x 3	0	
FACU species	60	x 4	240	
UPL species	0	x 5	0	
Column Totals	125	(A)	370	(B)

Prevalence Index = B/A = 2.96

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **1_20210115_WL118_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-20	10YR 3/2	100					Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genessee Sampling Date: 1/15/2021

Applicant/Owner: Hecate State: NY Sampling Point: 1_20210115_WL119_W1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): None Slope (%) 0 - 2

Subregion (LRR or MLRA): LRR R Lat: 43.096530 Long: -78.257159 Datum: NAD83

Soil Map Unit Name: ClB Collamer silt loam NWI Classification: PEM

Are climatic / hyrologic conditions on the site typical for this time of year? Yes X No ____ (if no, explain in Remarks.)

Are Vegetation X , 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL119
Wetland Hydrology Present?	Yes X No ____		

Remarks: (Explain alternative procedures here or in a separate report.)

edge of agricultural field (corn)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

X	Surface Water (A1)		Water-Stained Leaves (B9)		Drainage Patterns (B10)
	High Water Table (A2)		Aquatic Fauna (B13)		Moss Trim Lines (B16)
	Saturation (A3)		Marl Deposits (B15)		Dry-Season Water Table (C2)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)
	Sediment Deposits (B2)	X	Oxidized Rhizospheres on Living Roots (C3)		Saturation Visible in Aerial Imagery (C9)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Stunted or Stressed Plants (D1)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Geomorphic Position (D2)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Shallow Aquitard (D3)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Microtopographic Relief (D4)
	Sparsley Vegetated Concave Surface (B8)				FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

	Surface Soil Cracks (B6)

Surface Water Present?	Yes X No ____	Depth (inches)	2
Water Table Present?	Yes ____ No X	Depth (inches)	____
Saturation Present?	Yes ____ No X	Depth (inches)	____

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20210115_WL119_W1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Panicum virgatum	20	X	FAC
	20 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	20	x 3	60	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	20	(A)	60	(B)

Prevalence Index = B/A = 3

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **1_20210115_WL119_W1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-8	10YR 4/1	85	7.5YR 4/4	15	C	M	Sandy Clay Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genessee Sampling Date: 1/15/2021

Applicant/Owner: Hecate State: NY Sampling Point: 1_20210115_WL119_U1

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Side Slope Local relief (concave, convex, none): Convex Slope (%) 5 - 25

Subregion (LRR or MLRA): LRR R Lat: 43.096595 Long: -78.257183 Datum: NAD83

Soil Map Unit Name: ClB, Collamer silt loam NWI Classification: UPL

Are climatic / hyrologic conditions on the site typical for this time of year? Yes X No ____ (if no, explain in Remarks.)

Are Vegetation X , Soil X , 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____ No X	if yes, optional Wetland Site ID:	____
Wetland Hydrology Present?	Yes ____ No X		

Remarks: (Explain alternative procedures here or in a separate report.)

edge of ag field and highway

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches)	____
Water Table Present?	Yes ____ No X	Depth (inches)	____
Saturation Present?	Yes ____ No X	Depth (inches)	____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **1_20210115_WL119_U1**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Unknown species	100	X	UNK
Taraxacum officinale	10		FACU
	110 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= 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: 0% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	0	x 3	0	
FACU species	10	x 4	40	
UPL species	0	x 5	0	
Column Totals	10	(A)	40	(B)

Prevalence Index = B/A = 4

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- ____ 2- Dominance Test is > 50%
- ____ 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
unknown grass species - unidentifiable in field (mowed, off-season)

SOIL Sampling Point: **1_20210115_WL119_U1**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	%	Type	Loc	Texture	Remarks
0-5	10YR 2/2	100					Sandy Loam	
5-15	10YR 3/2	100					Loamy Sand	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: Gravel Fill

Depth (inches): 15

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Oakfield/Genessee Sampling Date: 9/29/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200721_WL40_W2

Investigator(s): Andrew Sorci Section, Township, Range: _____

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.098734 Long: -78.204117 Datum: NAD83

Soil Map Unit Name: Ld: Lamson very fine sandy loam NWI Classification: PSS

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL92
Wetland Hydrology Present?	Yes X 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)	____	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)
____	Sparsley Vegetated Concave Surface (B8)		

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 in Aerial Imagery (C9)
____	Stunted or Stressed Plants (D1)
X	Geomorphic Position (D2)
____	Shallow Aquitard (D3)
____	Microtopographic Relief (D4)
X	FAC-Neutral Test (D5)

Surface Water Present?	Yes ____ No X	Depth (inches) ____	
Water Table Present?	Yes ____ No X	Depth (inches) ____	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes ____ No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200721_WL40_W2**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Cornus amomum	40	X	FACW
Salix nigra	25	X	OBL
Fraxinus pennsylvanica	20	X	FACW
	85	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Symphyotrichum puniceum	40	X	OBL
Unknown species	15	X	UNK
Solidago canadensis	10		FACU
	65	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	5	X	FAC
	5	= 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: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83.3% (A/B)

Prevalence Index Worksheet:

OBL species	65	x 1	65	
FACW species	60	x 2	120	
FAC species	5	x 3	15	
FACU species	10	x 4	40	
UPL species	0	x 5	0	
Column Totals	140	(A)	240	(B)

Prevalence Index = B/A = 1.71

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)
unknown grass species

SOIL Sampling Point: **02-20200721_WL40_W2**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-20	10YR 3/1	90	10YR 4/6	10	C	M	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/21/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200721-WL-40-40W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR L Lat: 43.095326 Long: -78.215260 Datum: NAD83

Soil Map Unit Name: HlA: Hilton loam, 0 to 3 percent slopes NWI Classification: PEM

Are climatic / hyrologic 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	if yes, optional Wetland Site ID:	WL92
Wetland Hydrology Present?	Yes X 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)

X	Surface Water (A1)	X	Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required)
	High Water Table (A2)		Aquatic Fauna (B13)		Surface Soil Cracks (B6)
X	Saturation (A3)		Marl Deposits (B15)		Drainage Patterns (B10)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Moss Trim Lines (B16)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Dry-Season Water Table (C2)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Crayfish Burrows (C8)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Saturation Visible in Aerial Imagery (C9)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Stunted or Stressed Plants (D1)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Geomorphic Position (D2)
	Sparsley Vegetated Concave Surface (B8)				Shallow Aquitard (D3)
					Microtopographic Relief (D4)
					FAC-Neutral Test (D5)

Surface Water Present?	Yes X	No ____	Depth (inches)	2
Water Table Present?	Yes ____	No X	Depth (inches)	____
Saturation Present?	Yes X	No ____	Depth (inches)	0

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200721-WL-40-40W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Bidens frondosa	30	X	FACW
Populus deltoides	30	X	FAC
Sparganium americanum	15		OBL
Alisma subcordatum	10		OBL
Ranunculus abortivus	5		FAC
Asclepias incarnata	5		OBL
Abutilon theophrasti	2		FACU
	97	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Echinocystis lobata	2		FACW
	2	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

OBL species	30	x 1	30	
FACW species	32	x 2	64	
FAC species	35	x 3	105	
FACU species	2	x 4	8	
UPL species	0	x 5	0	
Column Totals	99	(A)	207	(B)

Prevalence Index = B/A = 2.09

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ____ 4- Morphological Adaptations
- ____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200721-WL-40-40W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-4	10YR 2/2	95	5Y 2.5/1	5	C	PL	Silt Loam	
4-18	10YR 5/2	95	5Y 2.5/1	5	C	PL	Sandy Loam	
18-24	10YR 5/2	60	10YR 6/8	40	C	PL	Sandy Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- X Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Cider Solar Project City/County: Elba/Genesee Sampling Date: 7/22/2020

Applicant/Owner: Hecate State: NY Sampling Point: 02-20200722-WL-41-41W

Investigator(s): Justin Ahn Section, Township, Range:

Landform (hillslope, terrace,etc.): Toeslope Local relief (concave, convex, none): Linear Slope (%) 1 - 5

Subregion (LRR or MLRA): LRR L Lat: 43.095459 Long: -78.215298 Datum: NAD83

Soil Map Unit Name: CaA Canandaigua silt loam, 0 to 2 percent slopes NWI Classification: UPL

Are climatic / hyrologic 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 X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	if yes, optional Wetland Site ID: ____
Wetland Hydrology Present?	Yes ____	No X	

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)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____	No X	Depth (inches) ____
Water Table Present?	Yes ____	No X	Depth (inches) ____
Saturation Present?	Yes ____	No X	Depth (inches) ____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **02-20200722-WL-41-41W**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Populus deltoides	20	X	FAC
	20	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Alliaria petiolata	20	X	FACU
Phalaris arundinacea	20	X	FACW
Toxicodendron radicans	15	X	FAC
Fraxinus pennsylvanica	10		FACW
Geum canadense	10		FAC
	75	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	30	x 2	60	
FAC species	45	x 3	135	
FACU species	20	x 4	80	
UPL species	0	x 5	0	
Column Totals	95	(A)	275	(B)

Prevalence Index = B/A = 2.89

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) 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 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **02-20200722-WL-41-41W**

Depth (inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Loc	Texture	Remarks
0-20	10YR 4/3	100					Silt Loam	

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)
- ____ Polyvalue Below Surface (B15)
- ____ Thin Dark Surface (S9)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matric (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Soils:

- ____ 2 cm Muck (A10)
- ____ Coast Prarie Redox (A16)
- ____ 5 cm Mucky Peat or Peat (S3)
- ____ Dark Surface (S7)
- ____ Polyvalue Below Surface (S8)
- ____ Thin Dark Surface (S9)
- ____ Iron-Manganese Masses (F12)
- ____ Piedmont Floodplain Soils (F19)
- ____ Mesic Spodic (TA6)
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

Appendix F WETLAND FUNCTION AND VALUE SUMMARY TABLE

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Appendix F. Wetlands Functions and Values

Feature ID	Size (acres)[1]	Vegetation Characteristics			Hydrologic Characteristics				Buffer (within 100 feet)			Functional Capacity[2]	Principal Functions & Values
		Forested Component	Multiple Cover Types	Invasive Species Observed	Associated Perennial Stream	Associated Intermittent Stream	Surface Water Other Than Potential Vernal Pool	Potential Vernal Pool	Forest/ Shrubland	Agriculture	Road/ Development		
WL01	M	X	X	X	-	-	X	-	X	X	-	M	floodflow alteration; sediment toxicant retention; sediment/shoreline stabilization
WL02	M	X	-	X	-	-	X	-	X	X	-	L	sediment/shoreline stabilization; floodflow alteration; nutrient removal/retention/transformation
WL03	S	X	-	X	-	-	X	-	X	X	-	L	sediment/shoreline stabilization; floodflow alteration; nutrient removal/retention/transformation
WL04	M	X	X	X	-	-	X	-	X	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation
WL05	S	X	X	X	-	-	X	-	X	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; sediment/shoreline stabilization
WL06	M	-	-	-	-	-	X	-	X	X	X	L	floodflow alteration
WL07	M	-	X	X	-	X	-	-	X	X	X	L	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; sediment/shoreline stabilization
WL08	S	-	-	X	-	-	-	-	X	X	-	L	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation
WL09	S	-	-	X	-	-	-	-	X	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation
WL10	S	-	-	-	-	-	-	-	X	X	-	L	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation
WL11	S	-	-	X	-	-	X	-	X	X	-	L	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation
WL12	S	-	-	X	-	-	X	-	X	X	-	L	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation
WL13	M	X	X	X	-	-	X	-	X	X	-	M	floodflow alteration; sediment toxicant retention

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Feature ID	Size (acres)[1]	Vegetation Characteristics			Hydrologic Characteristics				Buffer (within 100 feet)			Functional Capacity[2]	Principal Functions & Values
		Forested Component	Multiple Cover Types	Invasive Species Observed	Associated Perennial Stream	Associated Intermittent Stream	Surface Water Other Than Potential Vernal Pool	Potential Vernal Pool	Forest/ Shrubland	Agriculture	Road/ Development		
WL14	S	-	-	-	-	-	X	-	X	X	X	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; wildlife habitat
WL15	S	X	X	X	-	-	X	-	X	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; sediment/shoreline stabilization; wildlife habitat
WL16	S	-	-	X	-	-	-	-	X	X	-	L	sediment toxicant retention;
WL17	M	X	X	X	-	-	X	X	X	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; sediment/shoreline stabilization; wildlife habitat
WL18	M	X	X	X	-	-	-	-	X	X	X	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation
WL19	S	-	-	X	-	-	-	-	X	X	-	L	sediment toxicant retention
WL20	M	X	X	X	-	X	X	X	X	X	-	H	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; sediment/shoreline stabilization; wildlife habitat
WL21	S	-	X	X	-		X	-	X	-	-	L	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; wildlife habitat
WL22	M	X	-	X	X	X	X	-	X	X	-	H	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; sediment/shoreline stabilization; wildlife habitat
WL23	S	X	-	X	-	-	-	-	X	X	-	M	sediment toxicant retention
WL24	M	X	-	X	X	-	-	-	X	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; sediment/shoreline stabilization
WL25	M	X	-	X	-	-	-	-	X	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation
WL26	M	-	X	X	-	-	-	-	X	X	X	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation;

Feature ID	Size (acres)[1]	Vegetation Characteristics			Hydrologic Characteristics				Buffer (within 100 feet)			Functional Capacity[2]	Principal Functions & Values
		Forested Component	Multiple Cover Types	Invasive Species Observed	Associated Perennial Stream	Associated Intermittent Stream	Surface Water Other Than Potential Vernal Pool	Potential Vernal Pool	Forest/ Shrubland	Agriculture	Road/ Development		
WL27	S	X	-	X	X	-	X	-	X	X	X	M	sediment/shoreline stabilization; floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; fish and shellfish habitat; wildlife habitat
WL28	M	X	X	X	X	-	-	-	X	X	X	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; wildlife habitat; sediment/shoreline stabilization
WL29	L	X	X	X	X	-	X	-	X	X	-	H	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; sediment/shoreline stabilization; wildlife habitat; fish and shellfish habitat
WL30	S	-	-	X	-	-	X	-	X	X	X	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation
WL31	M	X	X	X	X	-	X	-	X	X	-	H	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; sediment/shoreline stabilization; wildlife habitat; fish and shellfish habitat
WL32	S	X	X	X	X	-	-	-	X	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; sediment/shoreline stabilization
WL33	M	X	X	X	-	X	-	-	X	X	X	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; sediment/shoreline stabilization
WL34	M	X	-	X	-	X	X	-	X	X	X	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; sediment/shoreline stabilization
WL35	S	-	-	-	-	-	-	-	X	X	-	L	sediment toxicant retention
WL36	M	X	-	X	-	-	-	X	X	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; wildlife habitat
WL37	S	-	-	-	-	-	-	-	X	X	-	L	sediment toxicant retention
WL38	S	-	-	-	-	-	-	-	X	X	-	L	sediment toxicant retention

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Feature ID	Size (acres)[1]	Vegetation Characteristics			Hydrologic Characteristics				Buffer (within 100 feet)			Functional Capacity[2]	Principal Functions & Values
		Forested Component	Multiple Cover Types	Invasive Species Observed	Associated Perennial Stream	Associated Intermittent Stream	Surface Water Other Than Potential Vernal Pool	Potential Vernal Pool	Forest/ Shrubland	Agriculture	Road/ Development		
WL39	S	X	X	X	-	-	-	X	X	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; wildlife habitat
WL40	M	X	-	X	-	-	-	-	X	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation
WL41	M	X	-	X	-	-	X	-	X	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; sediment/shoreline stabilization
WL42	M	X	-	X	-	-	-	-	X	X	-	L	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation
WL43	S	X	X	X	-	-	X	-	X	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; sediment/shoreline stabilization
WL44	M	-	-	X	-	-	-	-	X	X	X	L	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation
WL45	M	-	-	X	-	X	-	-	X	X	X	L	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; sediment/shoreline stabilization
WL46	M	X	X	X	-	-	-	-	X	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation
WL47	M	X	X	X	-	-	-	-	X	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation
WL48	S	-	-	X	-	-	-	-	X	X	-	L	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation
WL49	M	X	-	X	-	-	-	X	X	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; wildlife habitat
WL50	M	X	X	X	X	-	-	-	X	X	X	L	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; sediment/shoreline stabilization
WL51	M	X	X	X	-	-	-	-	X	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; sediment/shoreline stabilization

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Feature ID	Size (acres)[1]	Vegetation Characteristics			Hydrologic Characteristics				Buffer (within 100 feet)			Functional Capacity[2]	Principal Functions & Values
		Forested Component	Multiple Cover Types	Invasive Species Observed	Associated Perennial Stream	Associated Intermittent Stream	Surface Water Other Than Potential Vernal Pool	Potential Vernal Pool	Forest/ Shrubland	Agriculture	Road/ Development		
WL52	M	X	X	X	-	X	-	-	X	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; sediment/shoreline stabilization
WL53	M	-	X	X	-	X	X	-	X	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; sediment/shoreline stabilization
WL54	M	X		X	-	X	-	-	X	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; sediment/shoreline stabilization
WL55	M	X	X	X	-	-	-	-	X	X	X	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; sediment/shoreline stabilization; wildlife habitat
WL56	M	X	-	X	X	-	-	-	X	X	-	M	sediment/shoreline stabilization; floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; wildlife habitat; fish and shellfish habitat
WL57	M	X	-	X	-	-	-	X	X	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; wildlife habitat
WL58	M		-	X	X	X	-	-	X	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; sediment/shoreline stabilization
WL59	S	-	-	-	-	-	-	-	X	X	-	L	sediment toxicant retention
WL60	S	-	-	-	-	-	-	-	X	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation
WL61	S	-	-	-	-	-	-	-	-	-	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation
WL62	S	X	-	-	-	-	-	-	X	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation
WL63	S	-	-	-	-	-	-	-	X	X	-	L	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation
WL64	M	X	-	X	-	-	X	-	X	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation

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Feature ID	Size (acres)[1]	Vegetation Characteristics			Hydrologic Characteristics				Buffer (within 100 feet)			Functional Capacity[2]	Principal Functions & Values
		Forested Component	Multiple Cover Types	Invasive Species Observed	Associated Perennial Stream	Associated Intermittent Stream	Surface Water Other Than Potential Vernal Pool	Potential Vernal Pool	Forest/ Shrubland	Agriculture	Road/ Development		
WL65	S	-	-	X	-	-	-	X	-	X	-	L	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; wildlife habitat
WL66	M	X	X	-	-	-	-	-	X	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation
WL67	M	-	-	-	-	-	-	-	X	X	X	L	sediment toxicant retention
WL68	M	X	-	-	-	-	X	-	X	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation
WL69	S	-	-	-	-	-		-	X	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation
WL70	M	-	-	-	-	-	X	-	X	X	-	L	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation
WL71	M	X	-	X	-	-	-	-	X	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation
WL72	S	X	-		X	-	-	-	X	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; sediment/shoreline stabilization
WL73	L	X	X	X	X	X	-	-	X	X	X	H	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; sediment/shoreline stabilization; wildlife habitat
WL74	S	X	-	-	-	X	-	-	X	X	-	L	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; sediment/shoreline stabilization
WL75	S	X	-	-	-	-	-	X	X	X	-	L	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; sediment/shoreline stabilization; wildlife habitat
WL76	S	-	-	X	-	-	-	-	X	X	-	L	sediment toxicant retention
WL77	M	X	-	-	-	-	-	-	X	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; sediment/shoreline stabilization

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Feature ID	Size (acres)[1]	Vegetation Characteristics			Hydrologic Characteristics				Buffer (within 100 feet)			Functional Capacity[2]	Principal Functions & Values
		Forested Component	Multiple Cover Types	Invasive Species Observed	Associated Perennial Stream	Associated Intermittent Stream	Surface Water Other Than Potential Vernal Pool	Potential Vernal Pool	Forest/ Shrubland	Agriculture	Road/ Development		
WL78	M	X	-	X	-	-	-	-	X	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation
WL79	S	X	-	X	-	-	-	-	-	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation
WL80	S	-	-	X	-	-	-	-	X	X	-	L	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; sediment/shoreline stabilization
WL81	M	X	X	X	-	-	X	-	X	X	X	L	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation
WL82	S	-	-	-	-	-	-	-	X	X	-	L	sediment toxicant retention;
WL83	S	-	-	-	-	-	-	-	X	X	-	L	sediment toxicant retention
WL84	S	X	-	X	-	-	-	-	X	X	X	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; sediment/shoreline stabilization
WL85	M	X	-	X	-	-	-	-	X	X	X	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; sediment/shoreline stabilization
WL86	M	-	-	X	-	-	-	-	X	X	X	L	sediment toxicant retention
WL87	M	X	-	X	-	-	-	-	X	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation
WL88	S	X	-	X	-	-	-	-	X	X	-	L	sediment toxicant retention
WL89	M	X	X	X	X	-	-	-	X	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; sediment/shoreline stabilization
WL90	M	X	-	X	-	-	-	-	X	X	-	H	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation

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Feature ID	Size (acres)[1]	Vegetation Characteristics			Hydrologic Characteristics				Buffer (within 100 feet)			Functional Capacity[2]	Principal Functions & Values
		Forested Component	Multiple Cover Types	Invasive Species Observed	Associated Perennial Stream	Associated Intermittent Stream	Surface Water Other Than Potential Vernal Pool	Potential Vernal Pool	Forest/ Shrubland	Agriculture	Road/ Development		
WL91	M	X	X	X	X	-	-	X	X	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; wildlife habitat
WL92	L	X	-	X	-	X	-	-	X	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; sediment/shoreline stabilization
WL93	S	-	-	X	X	-	-	-	X	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; sediment/shoreline stabilization
WL94	S	X	-	X	-	-	-	-	X	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; sediment/shoreline stabilization
WL95	M	X	-	X	-	-	-	-	X	X	-	H	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; wildlife habitat
WL96	M	X	X	X	-	-	X	X	X	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; wildlife habitat
WL97	S	X	-	X	-	-	-	-	X	X	-	L	sediment toxicant retention
WL98	S	-	-	X	-	-	-	-	X	X	X	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; wildlife habitat
WL99	M	X	-	X	-	-	-	X	X	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; wildlife habitat
WL100	M	X	-	X	X		-	-	X	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation
WL101	M	X	X	X	-	X	-	-	X	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation
WL102	S	-	-	X	-	-	-	-	-	X	X	L	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation
WL103	M	X	X	X	-	X	-	-	X	X	-	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; sediment/shoreline stabilization

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Feature ID	Size (acres)[1]	Vegetation Characteristics			Hydrologic Characteristics				Buffer (within 100 feet)			Functional Capacity[2]	Principal Functions & Values
		Forested Component	Multiple Cover Types	Invasive Species Observed	Associated Perennial Stream	Associated Intermittent Stream	Surface Water Other Than Potential Vernal Pool	Potential Vernal Pool	Forest/ Shrubland	Agriculture	Road/ Development		
WL104	S	X	-	X	-	-	-	-	X	X	-	L	sediment toxicant retention
WL105	S	-	-	X	-	-	-	-	X	X	-	L	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation
WL106	S	-	-	X	-	-	-	-	X	X	-	L	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation
WL107	M	X	-	X	-	-	-	-	X	X	-	M	sediment toxicant retention
WL108	S	-	-	X	-	-	-	-	X	X	-	M	sediment toxicant retention
WL109	S	-	-	X	X	-	X	-	X	X	X	M	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; sediment/shoreline stabilization
WL110	M	-	-	X	-	-	-	-	X	X	X	M	floodflow alteration; sediment toxicant retention
WL111	M	X	-	X	-	-	-	-	X	X	X	M	floodflow alteration; sediment toxicant retention
WL112	M	X	-	X	-	-	-	-	X	X	X	L	floodflow alteration; sediment toxicant retention
WL113	M	-	-	X	-	-	-	-	X	X	-	M	floodflow alteration; sediment toxicant retention
WL114	S	X	X	X	-	-	X	-	X	X	-	M	floodflow alteration; sediment toxicant retention;
WL115	M	X	X	X	-	-	-	-	X	X	-	M	floodflow alteration; nutrient removal/retention/transformation
WL116	S	X	X	X	X	-	-	-	X	X	-	M	sediment/shoreline stabilization; floodflow alteration; nutrient removal/retention/transformation

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Feature ID	Size (acres)[1]	Vegetation Characteristics			Hydrologic Characteristics				Buffer (within 100 feet)			Functional Capacity[2]	Principal Functions & Values
		Forested Component	Multiple Cover Types	Invasive Species Observed	Associated Perennial Stream	Associated Intermittent Stream	Surface Water Other Than Potential Vernal Pool	Potential Vernal Pool	Forest/ Shrubland	Agriculture	Road/ Development		
WL117	M	X	-	X	-	-	-	-	X	X	-	H	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation
WL118	S	-	-	X	X	-	-	-	X	X	-	H	floodflow alteration; sediment toxicant retention; nutrient removal/retention/transformation; sediment/shoreline stabilization
WL119	S	-	-	-	-	-	-	-	X	X	X	L	sediment toxicant retention

[1] Size categories: S = < 1 acres; M = 1 - 11 acres; L = ≥ 12 acres based upon field delineated area

[2] Qualitative assessment of functional capacity based upon wetland and buffer characteristics, and wetland's opportunity to provide assessed functions and values. H= high; M = Medium; L = Low

Appendix G ORES APPROVED JURISDICTIONAL JURISDICTION

NEW YORK STATE OF OPPORTUNITY. Office of Renewable Energy Siting

ANDREW M. CUOMO
GOVERNOR

HOUTAN MOAVENI
ACTING EXECUTIVE DIRECTOR

Wetlands Jurisdictional Determination
April 2, 2021

Pursuant to § 900-1.3(e)(2), Hecate Energy Cider Solar LLC provided a draft wetland delineation report entitled "Wetland and Stream Delineation Report and Function and Value Assessment," dated November 2020, as well as shapefiles dated submitted March 2021 for Hecate Energy Cider Solar Farm, Genesee County, New York.

Pursuant to § 900-1.3(e)(4), the Office of Renewable Energy Siting (the Office or ORES), in consultation with the New York State Department of Environmental Conservation (NYSDEC), hereby provides in Attachments A and B specific jurisdictional determinations for state regulated wetlands identified in the draft wetland delineation report and shapefiles. The information provided in Attachment A, with the three minor changes noted, together with Attachment B, will be necessary for developing Exhibit 14 (§900-2.15) in support of an application to the Office for a major renewable energy facility.

Please note that this determination only applies to major renewable energy facilities covered by Section 94-c of New York Executive Law and 19 NYCRR Part 900. This determination does not cover other projects, nor does it cover determinations under other applicable federal, state, or local jurisdictions, such as the Army Corps of Engineer's regulatory program under Section 404 of the Clean Water Act. Please contact those entities regarding their potential regulatory jurisdiction.

This determination is valid for a period of five years from the date of this letter. After five years, determinations and delineations will be considered expired and subject to change until a new determination or delineation is conducted and ORES extends this determination or issues a new jurisdictional determination.

CC: NYSDEC

Attachment A

Office of Renewable Energy Siting

Wetland specific jurisdictional determination for wetlands from draft wetland delineation report

Wetland Delineation ID[1]	Acreage	Category[2]	State Wetland ID	Wetland Classification	Changes[3]
01_20200930_WL112	0.522256	Mapped	BN-1	3	
02_20200929_WL39	2.374389	Mapped	BN-4	2	
02_20200929_WL40	0.628514	Unmapped >12.4	NA	NA	
02-20200708-WL-01	2.891171	Mapped	BN-4	2	
02-20200708-WL-02	0.568202	Mapped	BN-4	2	
02-20200708-WL-02	2.582503	Mapped	BN-4	2	
02-20200709-WL-04	0.049311	Mapped	BN-6	2	
02-20200709-WL-05	0.049425	Mapped	BN-6	2	
02-20200709-WL-06	0.244138	Mapped	BN-6	2	
02-20200710-WL-07	0.290374	Mapped	BN-6	2	
02-20200710-WL-08	0.211065	Mapped	BN-7	2	
02-20200710-WL-08	5.59621	Mapped	BN-7	2	
02-20200710-WL-10	2.375764	Mapped	BN-9	2	
02-20200710-WL-11	0.222467	Mapped	BN-9	2	
02-20200713-WL-13	0.07388	Mapped	BN-4	2	
02-20200713-WL-13	0.385789	Mapped	BN-4	2	
02-20200714-WL-16	2.884057	Mapped	BN-9	2	
02-20200714-WL-17	0.219275	Mapped	BN-10	3	
02-20200715-WL-18	1.035823	Mapped	BN-11	3	

Wetland Delineation ID[1]	Acreage	Category[2]	State Wetland ID	Wetland Classification	Changes[3]
02-20200715-WL-18	0.057326	Mapped	BN-11	3	
02-20200715-WL-18	0.461999	Mapped	BN-11	3	
02-20200715-WL-18	0.298356	Mapped	BN-11	3	
02-20200715-WL-18	0.52559	Mapped	BN-11	3	
02-20200715-WL-18	3.161286	Mapped	BN-11	3	
02-20200715-WL-19	0.037472	Mapped	BN-11	3	
02-20200716-WL-18	2.909715	Mapped	BN-11	3	
02-20200716-WL-22	0.140152	Mapped	BN-11	3	
02-20200716-WL-24	0.071792	Mapped	BN-10	3	
02-20200716-WL-24	0.085086	Mapped	BN-10	3	
02-20200716-WL-24	0.059409	Mapped	BN-10	3	
02-20200716-WL-24	1.643888	Mapped	BN-11	3	
02-20200720-WL-32	0.346523	Mapped	BN-2	2	
02-20200721-WL-35	1.787573	Mapped	BN-2	2	
02-20200721-WL-37	2.714504	Mapped	BN-4	2	
02-20200721-WL-37	0.371252	Mapped	BN-4	2	
02-20200721-WL-38	0.226776	Mapped	BN-4	2	
02-20200721-WL-39	0.361543	Mapped	BN-4	2	
02-20200721-WL-40	11.57416	Unmapped >12.4	NA	NA	
02-20200721-WL-41	1.321893	Unmapped >12.4	NA	NA	
02-20200723-WL-49	11.76145	Unmapped >12.4	NA	NA	
02-20200723-WL-50	0.173285	Unmapped >12.4	NA	NA	
02-20200723-WL-50	0.915839	Mapped	BN-12	2	
02-20200723-WL-50	0.109729	Mapped	BN-12	2	
02-20200723-WL-50	7.014872	Mapped	BN-12	2	
02-20200724-WL-51	1.61291	Mapped	BN-12	2	

Wetland Delineation ID[1]	Acreage	Category[2]	State Wetland ID	Wetland Classification	Changes[3]
02-20200930-WL-18	0.063739	Mapped	BN-11	3	
02-20201001-WL-08	3.28333	Mapped	BN-7	2	
1_07202020_WL31	1.197519	Mapped	BN-13	2	
1_07202020_WL31	5.400011	Mapped	BN-13	2	
1_07222020_WL45	1.684419	Mapped	BN-15	2	
1_07232020_WL51	2.418461	Mapped	BN-1	3	
1_07232020_WL52	0.500047	Mapped	BN-1	3	
1_07232020_WL52	0.061917	Mapped	BN-1	3	
1_07232020_WL52	1.390417	Mapped	BN-1	3	
1_202000925_WL52	2.582858	Mapped	BN-1	3	
1_20200706_WL01	0.636565	Mapped	OK-1	1	
1_20200706_WL01	1.523009	Mapped	OK-1	1	Removed ditch running East/West (±250 feet)
1_20200706_WL01	0.383753	Mapped	OK-1	1	
1_20200709_WL09	0.504766	Mapped	OK-1	1	
1_20200714_WL20_01	0.079821	Unmapped >12.4	NA	NA	
1_20200714_WL20_02	1.950557	Unmapped >12.4	NA	NA	
1_20200714_WL20_03	0.144125	Unmapped >12.4	NA	NA	
1_20200714_WL20_04	0.146322	Unmapped >12.4	NA	NA	
1_20200714_WL20_05	0.192224	Unmapped >12.4	NA	NA	
1_20200714_WL20_06	0.409674	Unmapped >12.4	NA	NA	
1_20200714_WL20_07	0.501633	Unmapped >12.4	NA	NA	
1_20200714_WL20_08	7.861007	Unmapped >12.4	NA	NA	
1_20200715_WL15	0.147005	Mapped	BN-13	2	
1_20200715_WL15	0.087253	Mapped	BN-13	2	
1_20200715_WL20	0.271589	Unmapped >12.4	NA	NA	

Wetland Delineation ID[1]	Acreage	Category[2]	State Wetland ID	Wetland Classification	Changes[3]
1_20200715_WL20	0.317891	Unmapped >12.4	NA	NA	
1_20200715_WL22	3.664682	Unmapped >12.4	NA	NA	
1_20200715_WL23	1.857745	Unmapped >12.4	NA	NA	
1_20200715_WL24	6.48859	Unmapped >12.4	NA	NA	
1_20200715_WL25	0.361122	Mapped	BN-13	2	
1_20200715_WL28	0.257459	Mapped	BN-13	2	
1_20200715_WL29	1.133875	Mapped	BN-13	2	
1_20200715_WL29	10.96659	Mapped	BN-13	2	
1_20200715_WL30	1.709685	Mapped	BN-13	2	
1_20200716_WL27	0.077126	Unmapped >12.4	NA	NA	
1_20200716_WL28	1.505004	Mapped	BN-13	2	
1_20200716_WL28	0.536321	Mapped	BN-13	2	
1_20200716_WL28	1.281625	Mapped	BN-13	2	
1_20200720_WL31	0.419222	Mapped	BN-13	2	
1_20200720_WL32	0.00011	Mapped	BN-13	2	
1_20200720_WL32	0.030991	Mapped	BN-13	2	
1_20200720_WL33	0.319437	Mapped	BN-14	3	
1_20200720_WL33	0.995117	Mapped	BN-14	3	
1_20200720_WL40	1.15791	Mapped	BN-13	2	
1_20200722_WL46	0.314998	Mapped	BN-15	2	
1_20200722_WL46	0.583963	Mapped	BN-15	2	
1_20200722_WL47	0.158779	Mapped	BN-1	3	
1_20200722_WL47	2.414519	Mapped	BN-1	3	
1_20200722_WL48	0.00824	Mapped	BN-1	3	
1_20200722_WL49	1.365022	Mapped	BN-1	3	
1_20200723_WL53	1.006466	Mapped	BN-1	3	Removed separated ditch (±170 feet)

Wetland Delineation ID[1]	Acreage	Category[2]	State Wetland ID	Wetland Classification	Changes[3]
1_20200723_WL53	0.594728	Mapped	BN-1	3	Removed portion of wetland under transmission line (±0.3 acres)
1_20200723_WL54	0.136549	Mapped	BN-14	3	
1_20200723_WL54	0.71108	Mapped	BN-14	3	
1_20200922_WL105	0.218765	Mapped	OK-11	2	
1_20200922_WL106	1.504988	Mapped	OK-11	2	
1_20200923_WL108	0.362071	Mapped	OK-1	1	
1_20200923_WL109	2.955281	Unmapped >12.4	NA	NA	
1_20200925_WL111	1.203939	Mapped	BN-2	2	
1_2020921_WL103	0.068705	Mapped	OK-11	2	
1_2020921_WL103	0.041197	Mapped	OK-11	2	
1_2020921_WL103	0.689733	Mapped	OK-11	2	
1_2020921_WL103	0.185157	Mapped	OK-11	2	
1_2020921_WL103	1.699459	Mapped	OK-11	2	
1_2020921_WL103	0.115932	Mapped	OK-11	2	
Off-Site Wetland	2.486078	Mapped	OK-11	2	

[1] ID assigned by applicant in draft wetland delineation report.
[2] Includes mapped wetlands and unmapped wetlands with a total area greater than 12.4 acres in size.
[3]Changes include any minor adjustments to features provided by the applicant

Attachment B
Hecate Energy Cider Solar Farm
Locations of Minor Changes to Draft Wetland Delineation Report