WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Canajoharie, Montgomery County **Sampling Date:** 2021-Sept-02
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-EES-13_UPL-1
Investigator(s): Ethan Snyder, Abi Light **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Hillslope **Local relief (concave, convex, none):** Undulating **Slope (%):** 1 to 3
Subregion (LRR or MLRA): LRR L **Lat:** 42.8626904 **Long:** -74.5405251 **Datum:** WGS84
Soil Map Unit Name: Churchville silty clay loam, 0 to 3 percent slopes **NWI classification:**
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____ No ✓		
Hydric Soil Present?	Yes ✓ No ____	**Is the Sampled Area within a Wetland?**	**Yes ____ No ✓**
Wetland Hydrology Present?	Yes ____ No ✓	**If yes, optional Wetland Site ID:**	

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is UPL. Area is upland, not all three wetland parameters are present.

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____ No ✓	Depth (inches):	
Water Table Present?	Yes ____ No ✓	Depth (inches):	**Wetland Hydrology Present?** Yes ____ No ✓
Saturation Present? (includes capillary fringe)	Yes ____ No ✓	Depth (inches):	

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

Remarks:
The criterion for wetland hydrology is not met. No positive indication of wetland hydrology was observed.

VEGETATION -- Use scientific names of plants.

Sampling Point: W-EES-13_UPL-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Poa pratensis*	50	Yes	FACU
2. *Solidago canadensis*	35	Yes	FACU
3. *Euthamia graminifolia*	30	Yes	FAC
4. *Symphyotrichum ericoides*	30	Yes	FACU
5. *Centaurea jacea*	25	No	FACU
6. *Solidago rugosa*	10	No	FAC
7.			
8.			
9.			
10.			
11.			
12.			
	180	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= 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:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	40	x 3 =	120
FACU species	140	x 4 =	560
UPL species	0	x 5 =	0
Column Totals	180	(A)	680 (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[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ____ No ✓

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

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC− or drier).

SOIL

Sampling Point: W-EES-13_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 5.5	10YR 4/3	100					Silty Clay Loam	
5.5 - 13	7.5YR 4/2	90	5YR 5/6	10	C	M	Silty Clay	
13 - 18	10YR 4/2	85	5YR 5/8	15	C	M	Silty Clay	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes _✓_ No ____

Remarks:

A positive indication of hydric soil was observed. The criterion for hydric soil is met.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Canajoharie, Montgomery County **Sampling Date:** 2021-Sept-03
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-EES-14_PEM-1
Investigator(s): Ethan Snyder, Abi Light **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** Undulating **Slope (%):** 0 to 1
Subregion (LRR or MLRA): LRR L **Lat:** 42.8661571 **Long:** -74.5434327 **Datum:** WGS84
Soil Map Unit Name: Ilion silt loam, 0 to 3 percent slopes **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes _✓_ No ____ (If no, explain in Remarks.)
Are Vegetation _✓_, Soil _✓_, or Hydrology _✓_ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No _✓_
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _✓_ No ____		
Hydric Soil Present?	Yes _✓_ No ____	**Is the Sampled Area within a Wetland?**	**Yes _✓_ No ____**
Wetland Hydrology Present?	Yes _✓_ No ____	**If yes, optional Wetland Site ID:**	W-EES-14

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is PEM. Area is wetland, all three wetland parameters are present. Circumstances are not normal due to agricultural activities. Circumstances are not normal due to mowing of vegetation.

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____ No _✓_	Depth (inches):		
Water Table Present?	Yes ____ No _✓_	Depth (inches):		**Wetland Hydrology Present?** Yes _✓_ No ____
Saturation Present? (includes capillary fringe)	Yes ____ No _✓_	Depth (inches):		

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

Remarks:
The criterion for wetland hydrology is met. A positive indication of wetland hydrology was observed (at least two secondary indicators).

VEGETATION -- Use scientific names of plants.

Sampling Point: W-EES-14_PEM-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Phalaris arundinacea*	50	Yes	FACW
2. *Carex vulpinoidea*	40	Yes	OBL
3. *Symphyotrichum lanceolatum*	30	Yes	FACW
4. *Setaria pumila*	20	No	FAC
5. *Euthamia graminifolia*	20	No	FAC
6. *Lythrum salicaria*	15	No	OBL
7. *Symphyotrichum novae-angliae*	10	No	FACW
8. *Centaurea jacea*	5	No	FACU
9. *Arrhenatherum elatius*	5	No	FACU
10.			
11.			
12.			
	195	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= 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:

Total % Cover of:		Multiply By:	
OBL species	55	x 1 =	55
FACW species	90	x 2 =	180
FAC species	40	x 3 =	120
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals	195	(A)	395 (B)
Prevalence Index = B/A =	2		

Hydrophytic Vegetation Indicators:

✓ 1- Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

✓ 3 - Prevalence Index is ≤ 3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ✓ No ____

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

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC). A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00). A positive indication of hydrophytic vegetation was observed (Rapid Test for Hydrophytic Vegetation).

SOIL

Sampling Point: W-EES-14_PEM-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 8.5	10YR 3/1	90	5YR 5/8	10	C	M	Org matter Clay Loam	
8.5 - 18	5YR 5/2	75	5YR 5/8	20	C	M	Clay	
8.5 - 18			10YR 6/1	5	D	M	Sandy Clay	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None
Depth (inches):

Hydric Soil Present? Yes _✓_ No ____

Remarks:

A positive indication of hydric soil was observed. The criterion for hydric soil is met.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Canajoharie, Montgomery County **Sampling Date:** 2021-Sept-03
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-EES-14_UPL-1
Investigator(s): Ethan Snyder, Abi Light **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Hillslope **Local relief (concave, convex, none):** Undulating **Slope (%):** 1 to 10
Subregion (LRR or MLRA): LRR L **Lat:** 42.8659301 **Long:** -74.5440836 **Datum:** WGS84
Soil Map Unit Name: Darien silt loam, 3 to 8 percent slopes **NWI classification:**
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ✓, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ✓
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____ No ✓		
Hydric Soil Present?	Yes ✓ No ____	**Is the Sampled Area within a Wetland?**	**Yes ____ No ✓**
Wetland Hydrology Present?	Yes ____ No ✓	**If yes, optional Wetland Site ID:**	

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is UPL. Area is upland, not all three wetland parameters are present. Circumstances are not normal due to mowing of vegetation.

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____ No ✓	Depth (inches):		
Water Table Present?	Yes ____ No ✓	Depth (inches):		**Wetland Hydrology Present?** Yes ____ No ✓
Saturation Present? (includes capillary fringe)	Yes ____ No ✓	Depth (inches):		

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

Remarks:
The criterion for wetland hydrology is not met. No positive indication of wetland hydrology was observed.

VEGETATION -- Use scientific names of plants.

Sampling Point: W-EES-14_UPL-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Poa pratensis*	75	Yes	FACU
2. *Daucus carota*	30	Yes	UPL
3. *Taraxacum officinale*	20	No	FACU
4. *Schedonorus pratensis*	15	No	FACU
5. *Vicia americana*	15	No	FACU
6. *Oxalis stricta*	10	No	FACU
7.			
8.			
9.			
10.			
11.			
12.			
	165	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	0	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	0	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	135	x 4 =	540
UPL species	30	x 5 =	150
Column Totals	165	(A)	690 (B)
Prevalence Index = B/A =	4.2		

Hydrophytic Vegetation Indicators:

____ 1- Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is > 50%

____ 3 - Prevalence Index is ≤ 3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ____ No ✓

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

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC− or drier).

SOIL

Sampling Point: W-EES-14_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 11	10YR 4/2	90	2.5YR 4/6	10	C	M	Silt Loam	
11 - 18	10YR 5/2	85	5YR 5/6	10	C	M	Silty Clay Loam	
11 - 18			10YR 5/1	5	D	M	Silty Clay Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes _✓_ No ____

Remarks:

A positive indication of hydric soil was observed. The criterion for hydric soil is met.

Soil Photos

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Canajoharie, Montgomery County **Sampling Date:** 2021-Sept-01
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-EES-15_PEM-1
Investigator(s): Ethan Snyder, Abi Light **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** Undulating **Slope (%):** 0 to 1
Subregion (LRR or MLRA): LRR L **Lat:** 42.8648604 **Long:** -74.5399463 **Datum:** WGS84
Soil Map Unit Name: Darien silt loam, 3 to 8 percent slopes **NWI classification:**
Are climatic/hydrologic conditions on the site typical for this time of year? Yes _✓_ No ____ (If no, explain in Remarks.)
Are Vegetation _✓_, Soil _✓_, or Hydrology _✓_ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No _✓_
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _✓_ No ____		
Hydric Soil Present?	Yes _✓_ No ____	**Is the Sampled Area within a Wetland?**	**Yes _✓_ No ____**
Wetland Hydrology Present?	Yes _✓_ No ____	**If yes, optional Wetland Site ID:**	W-EES-15

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is PEM. Area is wetland, all three wetland parameters are present. __OTHER__. Hay 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)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____ No _✓_	Depth (inches):	
Water Table Present?	Yes ____ No _✓_	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes _✓_ No ____	Depth (inches):	0

Wetland Hydrology Present? Yes _✓_ No ____

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

Remarks:
The criterion for wetland hydrology is met. A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

VEGETATION -- Use scientific names of plants.

Sampling Point: W-EES-15_PEM-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Carex vulpinoidea*	50	Yes	OBL
2. *Scirpus atrovirens*	45	Yes	OBL
3. *Juncus tenuis*	30	No	FAC
4. *Phalaris arundinacea*	25	No	FACW
5. *Carex scoparia*	20	No	FACW
6. *Echinochloa muricata*	5	No	OBL
7.			
8.			
9.			
10.			
11.			
12.			
	175	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= 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:

Total % Cover of:		Multiply By:	
OBL species	100	x 1 =	100
FACW species	45	x 2 =	90
FAC species	30	x 3 =	90
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals	175	(A)	280 (B)
Prevalence Index = B/A =	1.6		

Hydrophytic Vegetation Indicators:

✓ 1- Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

✓ 3 - Prevalence Index is ≤ 3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ✓ No ____

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

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC). A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00). A positive indication of hydrophytic vegetation was observed (Rapid Test for Hydrophytic Vegetation).

SOIL

Sampling Point: W-EES-15_PEM-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 9.5	10YR 4/1	90	5YR 5/6	10	C	M	Silty Clay	
9.5 - 16	10YR 4/1	80	5YR 5/8	15	C	M	Clay	
9.5 - 16			10YR 6/1	5	D	M	Clay	Compacted

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: Heavy clay
Depth (inches): 9.5

Hydric Soil Present? Yes _✓_ No ____

Remarks:

A positive indication of hydric soil was observed. The criterion for hydric soil is met.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Canajoharie, Montgomery County **Sampling Date:** 2021-Sept-01
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-EES-15_UPL-1
Investigator(s): Ethan Snyder, Abi Light **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** Undulating **Slope (%):** 0 to 1
Subregion (LRR or MLRA): LRR L **Lat:** 42.8650787 **Long:** -74.5399669 **Datum:** WGS84
Soil Map Unit Name: Darien silt loam, 3 to 8 percent slopes **NWI classification:**
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ✓, Soil ✓, or Hydrology ✓ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ✓
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____ No ✓		
Hydric Soil Present?	Yes ✓ No ____	**Is the Sampled Area within a Wetland?**	**Yes ____ No ✓**
Wetland Hydrology Present?	Yes ____ No ✓	**If yes, optional Wetland Site ID:**	

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is UPL. Area is upland, not all three wetland parameters are present. Circumstances are not normal due to agricultural activities. Circumstances are not normal due to mowing of vegetation.

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____ No ✓	Depth (inches):		
Water Table Present?	Yes ____ No ✓	Depth (inches):		**Wetland Hydrology Present?** Yes ____ No ✓
Saturation Present? (includes capillary fringe)	Yes ____ No ✓	Depth (inches):		

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

Remarks:
The criterion for wetland hydrology is not met. No positive indication of wetland hydrology was observed.

VEGETATION -- Use scientific names of plants.

Sampling Point: W-EES-15_UPL-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Poa pratensis*	60	Yes	FACU
2. *Centaurea jacea*	55	Yes	FACU
3. *Galium aparine*	30	No	FACU
4. *Oxalis stricta*	15	No	FACU
5. *Phalaris arundinacea*	15	No	FACW
6. *Taraxacum officinale*	10	No	FACU
7. *Trifolium repens*	5	No	FACU
8.			
9.			
10.			
11.			
12.			
	190	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	0	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	0	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	15	x 2 =	30
FAC species	0	x 3 =	0
FACU species	175	x 4 =	700
UPL species	0	x 5 =	0
Column Totals	190	(A)	730 (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[1]

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

_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes _____ No ✓

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

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC− or drier).

SOIL

Sampling Point: W-EES-15_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 5	10YR 4/2	100					Silty Clay Loam	
5 - 15	10YR 4/1	80	5YR 5/6	20	C	M	Clay	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes _✓_ No ____

Remarks:

A positive indication of hydric soil was observed. The criterion for hydric soil is met.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Canajoharie, Montgomery County **Sampling Date:** 2021-Sept-03
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-EES-16_PEM-1
Investigator(s): Ethan Snyder, Abi Light **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Swale **Local relief (concave, convex, none):** Concave **Slope (%):** 1 to 3
Subregion (LRR or MLRA): LRR L **Lat:** 42.8683256 **Long:** -74.543213 **Datum:** WGS84
Soil Map Unit Name: Darien silt loam, 3 to 8 percent slopes **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes _✓_ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil _✓_, or Hydrology _✓_ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No _✓_
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _✓_ No ____		
Hydric Soil Present?	Yes _✓_ No ____	**Is the Sampled Area within a Wetland?**	**Yes _✓_ No ____**
Wetland Hydrology Present?	Yes _✓_ No ____	**If yes, optional Wetland Site ID:**	W-EES-16

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is PEM. Area is wetland, all three wetland parameters are present. excavated, disturbed soils .

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
_✓_ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
_✓_ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____ No _✓_	Depth (inches):	
Water Table Present?	Yes ____ No _✓_	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes _✓_ No ____	Depth (inches):	0

Wetland Hydrology Present? Yes _✓_ No ____

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

Remarks:
The criterion for wetland hydrology is met. A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

VEGETATION -- Use scientific names of plants.

Sampling Point: W-EES-16_PEM-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Scirpus cyperinus*	65	Yes	OBL
2. *Carex scoparia*	50	Yes	FACW
3. *Symphyotrichum lanceolatum*	15	No	FACW
4. *Lythrum salicaria*	10	No	OBL
5. *Bidens frondosa*	5	No	FACW
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	145	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= 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:

Total % Cover of:		Multiply By:	
OBL species	75	x 1 =	75
FACW species	70	x 2 =	140
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals	145	(A)	215 (B)
Prevalence Index = B/A =	1.5		

Hydrophytic Vegetation Indicators:

✓ 1- Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

✓ 3 - Prevalence Index is ≤ 3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ✓ No ____

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

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC). A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00). A positive indication of hydrophytic vegetation was observed (Rapid Test for Hydrophytic Vegetation).

SOIL

Sampling Point: W-EES-16_PEM-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 11.5	10YR 5/1	90	5YR 4/4	10	C	M	Clay	
11.5 - 18	10YR 5/3	85	5YR 5/4	10	C	M	Clay	
11.5 - 18			2.5Y 5/1	5	D	M	Clay	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: Heavy clay
Depth (inches): 11.5

Hydric Soil Present? Yes _✓_ No ____

Remarks:

A positive indication of hydric soil was observed. The criterion for hydric soil is met.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Canajoharie, Montgomery County **Sampling Date:** 2021-Sept-03
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-EES-16_UPL-1
Investigator(s): Ethan Snyder, Abi Light **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** Undulating **Slope (%):** 1 to 3
Subregion (LRR or MLRA): LRR L **Lat:** 42.86829 **Long:** -74.5432 **Datum:** WGS84
Soil Map Unit Name: Darien silt loam, 3 to 8 percent slopes **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ✓, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ✓
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____ No ✓		
Hydric Soil Present?	Yes ✓ No ____	**Is the Sampled Area within a Wetland?**	**Yes ____ No ✓**
Wetland Hydrology Present?	Yes ____ No ✓	**If yes, optional Wetland Site ID:**	

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is UPL. Area is upland, not all three wetland parameters are present. soils historically excavated, 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)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____ No ✓	Depth (inches):	
Water Table Present?	Yes ____ No ✓	Depth (inches):	**Wetland Hydrology Present?** Yes ____ No ✓
Saturation Present? (includes capillary fringe)	Yes ____ No ✓	Depth (inches):	

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

Remarks:
The criterion for wetland hydrology is not met. No positive indication of wetland hydrology was observed.

VEGETATION -- Use scientific names of plants.

Sampling Point: W-EES-16_UPL-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Centaurea jacea*	45	Yes	FACU
2. *Potentilla simplex*	30	Yes	FACU
3. *Lotus tenuis*	25	No	FACU
4. *Solidago canadensis*	15	No	FACU
5. *Symphyotrichum ericoides*	10	No	FACU
6. *Scirpus atrovirens*	5	No	OBL
7.			
8.			
9.			
10.			
11.			
12.			
	130	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	0	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	0	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	5	x 1 =	5
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	125	x 4 =	500
UPL species	0	x 5 =	0
Column Totals	130	(A)	505 (B)

Prevalence Index = B/A = 3.9

Hydrophytic Vegetation Indicators:

____ 1- Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is > 50%

____ 3 - Prevalence Index is ≤ 3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ____ No ✓

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

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC− or drier).

SOIL

Sampling Point: W-EES-16_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 9.5	10YR 4/2	90	5YR 5/8	8	C	M	Silty Clay	
0 - 9.5			10YR 6/1	2	D	M	Silty Clay	
9.5 - 18	10YR 3/3	80	5YR 5/6	15	C	M	Clay	
9.5 - 18			2.5Y 5/1	5	D	M	Clay	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None
Depth (inches):

Hydric Soil Present? Yes _✓_ No ____

Remarks:

A positive indication of hydric soil was observed. The criterion for hydric soil is met.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Canajoharie, Montgomery County **Sampling Date:** 2021-Sept-03
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-EES-17_PEM-1
Investigator(s): Ethan Snyder, Abi Light **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Swale **Local relief (concave, convex, none):** Concave **Slope (%):** 1 to 3
Subregion (LRR or MLRA): LRR L **Lat:** 42.8678665 **Long:** -74.5413767 **Datum:** WGS84
Soil Map Unit Name: Darien silt loam, 0 to 3 percent slopes **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes _✓_ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil _✓_, or Hydrology _✓_ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No _✓_
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _✓_ No ____		
Hydric Soil Present?	Yes _✓_ No ____	**Is the Sampled Area within a Wetland?**	**Yes _✓_ No ____**
Wetland Hydrology Present?	Yes _✓_ No ____	**If yes, optional Wetland Site ID:**	W-EES-17

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is PEM. Area is wetland, all three wetland parameters are present. soils excavated, 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)
___ Sparsely Vegetated Concave Surface (B8)
_✓ Water-Stained Leaves (B9)
_✓ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Wetland Hydrology Present? Yes _✓_ No ____

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

Remarks:
The criterion for wetland hydrology is met. A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

VEGETATION -- Use scientific names of plants.

Sampling Point: W-EES-17_PEM-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Typha latifolia*	45	Yes	OBL
2. *Scirpus cyperinus*	25	Yes	OBL
3. *Leersia oryzoides*	20	No	OBL
4. *Lythrum salicaria*	15	No	OBL
5. *Salix bebbiana*	5	No	FACW
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	110	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= 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:

Total % Cover of:		Multiply By:	
OBL species	105	x 1 =	105
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	110	(A)	115 (B)
Prevalence Index = B/A =	1		

Hydrophytic Vegetation Indicators:

✓ 1- Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

✓ 3 - Prevalence Index is ≤ 3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ✓ No ____

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

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC). A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00). A positive indication of hydrophytic vegetation was observed (Rapid Test for Hydrophytic Vegetation).

SOIL

Sampling Point: W-EES-17_PEM-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 12	10YR 5/1	85	7.5YR 4/6	15	C	M	Silty Clay	
12 - 18	10YR 4/3	75	5YR 5/6	20	C	M	Clay	
12 - 18			2.5Y 6/1	5	D	M	Clay	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None
Depth (inches):

Hydric Soil Present? Yes _✓_ No ____

Remarks:

A positive indication of hydric soil was observed. The criterion for hydric soil is met.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Canajoharie, Montgomery County **Sampling Date:** 2021-Sept-03
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-EES-17_UPL-1
Investigator(s): Ethan Snyder, Abi Light **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** Undulating **Slope (%):** 1 to 3
Subregion (LRR or MLRA): LRR L **Lat:** 42.8678923 **Long:** -74.5413144 **Datum:** WGS84
Soil Map Unit Name: Darien silt loam, 0 to 3 percent slopes **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ✓, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ✓
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____ No ✓		
Hydric Soil Present?	Yes ✓ No ____	**Is the Sampled Area within a Wetland?**	**Yes ____ No ✓**
Wetland Hydrology Present?	Yes ____ No ✓	**If yes, optional Wetland Site ID:**	

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is UPL. Area is upland, not all three wetland parameters are present. soils excavated, 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)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____ No ✓	Depth (inches):	
Water Table Present?	Yes ____ No ✓	Depth (inches):	**Wetland Hydrology Present?** Yes ____ No ✓
Saturation Present? (includes capillary fringe)	Yes ____ No ✓	Depth (inches):	

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

Remarks:
The criterion for wetland hydrology is not met. No positive indication of wetland hydrology was observed.

VEGETATION -- Use scientific names of plants.

Sampling Point: W-EES-17_UPL-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Centaurea jacea*	50	Yes	FACU
2. *Lotus tenuis*	45	Yes	FACU
3. *Potentilla simplex*	30	No	FACU
4. *Solidago canadensis*	20	No	FACU
5. *Euthamia graminifolia*	10	No	FAC
6. *Plantago lanceolata*	10	No	FACU
7.			
8.			
9.			
10.			
11.			
12.			
	165	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	0	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	0	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	10	x 3 =	30
FACU species	155	x 4 =	620
UPL species	0	x 5 =	0
Column Totals	165	(A)	650 (B)
Prevalence Index = B/A =	3.9		

Hydrophytic Vegetation Indicators:

_____ 1- Rapid Test for Hydrophytic Vegetation

_____ 2 - Dominance Test is > 50%

_____ 3 - Prevalence Index is ≤ 3.0[1]

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

_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes _____ No ✓

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

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC− or drier).

SOIL

Sampling Point: W-EES-17_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 9.5	10YR 4/2	90	5YR 4/4	10	C	M	Silty Clay	
9.5 - 16	10YR 4/1	85	7.5YR 5/6	15	C	M	Clay	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes _✓_ No ____

Remarks:

A positive indication of hydric soil was observed. The criterion for hydric soil is met.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Canajoharie, Montgomery County **Sampling Date:** 2021-Sept-03
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-EES-18_PUB-1
Investigator(s): Ethan Snyder, Abi Light **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Depression **Local relief (concave, convex, none):** Concave **Slope (%):** 1 to 3
Subregion (LRR or MLRA): LRR L **Lat:** 42.868542 **Long:** -74.540944 **Datum:** WGS84
Soil Map Unit Name: Ilion silt loam, 0 to 3 percent slopes **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes _✓_ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes _✓_ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _✓_ No ____		
Hydric Soil Present?	Yes _✓_ No ____	**Is the Sampled Area within a Wetland?**	**Yes _✓_ No ____**
Wetland Hydrology Present?	Yes _✓_ No ____	**If yes, optional Wetland Site ID:**	W-EES-18

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is PUB. Area is wetland, all three wetland parameters are present.

HYDROLOGY

Wetland Hydrology Indicators:

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

- _✓_ Surface Water (A1)
- _✓_ High Water Table (A2)
- _✓_ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- _✓_ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- _✓_ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes _✓_ No ____	Depth (inches):	36
Water Table Present?	Yes _✓_ No ____	Depth (inches):	0
Saturation Present? (includes capillary fringe)	Yes _✓_ No ____	Depth (inches):	0

Wetland Hydrology Present? Yes _✓_ No ____

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

Remarks:
The criterion for wetland hydrology is met. A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

VEGETATION -- Use scientific names of plants.

Sampling Point: W-EES-18_PUB-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Ceratophyllum demersum*	50	Yes	OBL
2. *Lemna minor*	10	No	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	60	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= 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:

Total % Cover of:		Multiply By:	
OBL species	60	x 1 =	60
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	60	(A)	60 (B)
Prevalence Index = B/A =	1		

Hydrophytic Vegetation Indicators:

✓ 1- Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

✓ 3 - Prevalence Index is ≤ 3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ✓ No ____

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

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC). A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00). A positive indication of hydrophytic vegetation was observed (Rapid Test for Hydrophytic Vegetation).

SOIL

Sampling Point: W-EES-18_PUB-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
-								

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes _✓_ No ____

Remarks:

Due to inundation a clear soil profile was unobtainable. Soils are assumed to be hydric. Soils were assumed to be hydric due to the presence of inundation, FACW and OBL vegetation species, and a definitive wetland boundary.

Photo of Sample Plot East

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Canajoharie, Montgomery County **Sampling Date:** 2021-Sept-13
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-EES-19_PEM-1
Investigator(s): Ethan Snyder, Abi Light **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Depression **Local relief (concave, convex, none):** Concave **Slope (%):** 1 to 3
Subregion (LRR or MLRA): LRR L **Lat:** 42.868716 **Long:** -74.5428447 **Datum:** WGS84
Soil Map Unit Name: Ilion silt loam, 0 to 3 percent slopes **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes _✓_ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes _✓_ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _✓_ No ____		
Hydric Soil Present?	Yes _✓_ No ____	**Is the Sampled Area within a Wetland?**	**Yes _✓_ No ____**
Wetland Hydrology Present?	Yes _✓_ No ____	**If yes, optional Wetland Site ID:**	W-EES-19

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is PEM. Area is wetland, all three wetland parameters are present.

HYDROLOGY

Wetland Hydrology Indicators:

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

_✓ Surface Water (A1)
___ High Water Table (A2)
_✓ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
_✓ Water-Stained Leaves (B9)
_✓ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes _✓_ No ____	Depth (inches):	2
Water Table Present?	Yes ____ No _✓_	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes _✓_ No ____	Depth (inches):	0

Wetland Hydrology Present? Yes _✓_ No ____

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

Remarks:
The criterion for wetland hydrology is met. A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

VEGETATION -- Use scientific names of plants.

Sampling Point: W-EES-19_PEM-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Scirpus cyperinus*	40	Yes	OBL
2. *Juncus nodosus*	35	Yes	OBL
3. *Juncus effusus*	20	No	OBL
4. *Carex vulpinoidea*	15	No	OBL
5. *Symphyotrichum lanceolatum*	10	No	FACW
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	120	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= 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:

Total % Cover of:		Multiply By:	
OBL species	110	x 1 =	110
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	120	(A)	130 (B)
Prevalence Index = B/A =	1.1		

Hydrophytic Vegetation Indicators:

_✓_ 1- Rapid Test for Hydrophytic Vegetation

_✓_ 2 - Dominance Test is >50%

_✓_ 3 - Prevalence Index is ≤ 3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes _✓_ No ____

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

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC). A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00). A positive indication of hydrophytic vegetation was observed (Rapid Test for Hydrophytic Vegetation).

SOIL

Sampling Point: W-EES-19_PEM-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 10	10YR 3/1	90	5YR 4/4	10	C	M	Silty Clay Loam	
10 - 18	10YR 4/2	90	5YR 5/6	10	C	M	Gravelly Silty Clay Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None
Depth (inches):

Hydric Soil Present? Yes _✓_ No ____

Remarks:

A positive indication of hydric soil was observed. The criterion for hydric soil is met.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Canajoharie, Montgomery County **Sampling Date:** 2021-Sept-13
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-EES-19_UPL-1
Investigator(s): Ethan Snyder, Abi Light **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Hillslope **Local relief (concave, convex, none):** Undulating **Slope (%):** 1 to 3
Subregion (LRR or MLRA): LRR L **Lat:** 42.8684948 **Long:** -74.5429342 **Datum:** WGS84
Soil Map Unit Name: Ilion silt loam, 0 to 3 percent slopes **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____ No ✓		
Hydric Soil Present?	Yes ____ No ✓	**Is the Sampled Area within a Wetland?**	**Yes ____ No ✓**
Wetland Hydrology Present?	Yes ____ No ✓	**If yes, optional Wetland Site ID:**	

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is UPL. Area is upland, not all three wetland parameters are present.

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____ No ✓	Depth (inches):	
Water Table Present?	Yes ____ No ✓	Depth (inches):	**Wetland Hydrology Present?** Yes ____ No ✓
Saturation Present? (includes capillary fringe)	Yes ____ No ✓	Depth (inches):	

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

Remarks:
The criterion for wetland hydrology is not met. No positive indication of wetland hydrology was observed.

VEGETATION -- Use scientific names of plants.

Sampling Point: W-EES-19_UPL-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Lotus tenuis*	50	Yes	FACU
2. *Solidago canadensis*	35	Yes	FACU
3. *Poa pratensis*	30	Yes	FACU
4. *Centaurea jacea*	15	No	FACU
5. *Symphyotrichum ericoides*	10	No	FACU
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	140	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= 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:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	140	x 4 =	560
UPL species	0	x 5 =	0
Column Totals	140	(A)	560 (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[1]

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

_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes _____ No ✓

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

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC− or drier).

SOIL

Sampling Point: W-EES-19_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 8	10YR 4/3	100					Silt Loam	
8 - 13	10YR 4/3	95	10YR 2/1	5	C	M	Gravelly Silt Loam	
13 - 18	10YR 4/1	80	5YR 5/8	15	C	M	Gravelly Silty Clay Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None
Depth (inches):

Hydric Soil Present? Yes ____ No ✓

Remarks:

No positive indication of hydric soils was observed. The criterion for hydric soil is not met.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Sprakers, Montgomery County **Sampling Date:** 2021-Sept-14
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-EES-20_PEM-1
Investigator(s): Ethan Snyder, Abi Light **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Hillslope **Local relief (concave, convex, none):** Undulating **Slope (%):** 1 to 10
Subregion (LRR or MLRA): LRR L **Lat:** 42.847886 **Long:** -74.495328 **Datum:** WGS84
Soil Map Unit Name: Darien silt loam, 3 to 8 percent slopes **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes _✓_ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes _✓_ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _✓_ No ____		
Hydric Soil Present?	Yes _✓_ No ____	**Is the Sampled Area within a Wetland?**	**Yes _✓_ No ____**
Wetland Hydrology Present?	Yes _✓_ No ____	**If yes, optional Wetland Site ID:**	W-EES-20

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is PEM. Area is wetland, all three wetland parameters are present.

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
_✓_ High Water Table (A2)
_✓_ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
_✓_ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____ No _✓_	Depth (inches):	
Water Table Present?	Yes _✓_ No ____	Depth (inches):	8
Saturation Present? (includes capillary fringe)	Yes _✓_ No ____	Depth (inches):	0

Wetland Hydrology Present? Yes _✓_ No ____

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

Remarks:
The criterion for wetland hydrology is met. A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

VEGETATION -- Use scientific names of plants.

Sampling Point: W-EES-20_PEM-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Salix bebbiana*	5	Yes	FACW
2. *Salix alba*	5	Yes	FACW
3.			
4.			
5.			
6.			
7.			
	10	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Symphyotrichum lanceolatum*	60	Yes	FACW
2. *Phalaris arundinacea*	20	Yes	FACW
3. *Lythrum salicaria*	20	Yes	OBL
4. *Typha latifolia*	15	No	OBL
5. *Solidago canadensis*	10	No	FACU
6. *Epilobium coloratum*	5	No	OBL
7. *Schoenoplectus tabernaemontani*	5	No	OBL
8.			
9.			
10.			
11.			
12.			
	135	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= 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:

Total % Cover of:		Multiply By:	
OBL species	45	x 1 =	45
FACW species	90	x 2 =	180
FAC species	0	x 3 =	0
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals	145	(A)	265 (B)
Prevalence Index = B/A =	1.8		

Hydrophytic Vegetation Indicators:

_✓_ 1- Rapid Test for Hydrophytic Vegetation

_✓_ 2 - Dominance Test is >50%

_✓_ 3 - Prevalence Index is ≤ 3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes _✓_ No ____

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

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC). A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00). A positive indication of hydrophytic vegetation was observed (Rapid Test for Hydrophytic Vegetation).

SOIL

Sampling Point: W-EES-20_PEM-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 5	10YR 4/2	95	5YR 4/4	5	C	PL	Silt Loam	
5 - 11	10YR 4/2	92	2.5YR 4/4	8	C	M	Gravelly Silty Clay Loam	
11 - 18	10YR 5/2	85	5YR 5/8	12	C	M	Gravelly Silty Clay	
11 - 18			2.5YR 4/8	3	C	M	Gravelly Silty Clay	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes _✓_ No ____

Remarks:

A positive indication of hydric soil was observed. The criterion for hydric soil is met.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Sprakers, Montgomery County **Sampling Date:** 2021-Sept-14
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-EES-20_UPL-1
Investigator(s): Ethan Snyder, Abi Light **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Hillslope **Local relief (concave, convex, none):** Undulating **Slope (%):** 1 to 10
Subregion (LRR or MLRA): LRR L **Lat:** 42.848 **Long:** -74.49554 **Datum:** WGS84
Soil Map Unit Name: Darien silt loam, 3 to 8 percent slopes **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____ No ✓		
Hydric Soil Present?	Yes ✓ No ____	**Is the Sampled Area within a Wetland?**	**Yes ____ No ✓**
Wetland Hydrology Present?	Yes ____ No ✓	**If yes, optional Wetland Site ID:**	

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is UPL. Area is upland, not all three wetland parameters are present.

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____ No ✓	Depth (inches):	
Water Table Present?	Yes ____ No ✓	Depth (inches):	**Wetland Hydrology Present?** Yes ____ No ✓
Saturation Present? (includes capillary fringe)	Yes ____ No ✓	Depth (inches):	

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

Remarks:
The criterion for wetland hydrology is not met. No positive indication of wetland hydrology was observed.

VEGETATION -- Use scientific names of plants.

Sampling Point: W-EES-20_UPL-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Poa pratensis*	60	Yes	FACU
2. *Trifolium repens*	55	Yes	FACU
3. *Schedonorus arundinaceus*	35	No	FACU
4. *Phleum pratense*	25	No	FACU
5. *Taraxacum officinale*	15	No	FACU
6. *Plantago major*	10	No	FACU
7.			
8.			
9.			
10.			
11.			
12.			
	200	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	0	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	0	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	200	x 4 =	800
UPL species	0	x 5 =	0
Column Totals	200	(A)	800 (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[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ____ No ✓

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

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC− or drier).

SOIL

Sampling Point: W-EES-20_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 5.5	10YR 4/3	100					Silt Loam	
5.5 - 12	10YR 4/2	95	5YR 5/6	5	C	M	Gravelly Silty Clay Loam	
12 - 18	10YR 5/2	90	5YR 5/8	10	C	M	Gravelly Silty Clay	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None
Depth (inches):

Hydric Soil Present? Yes _✓_ No ____

Remarks:

A positive indication of hydric soil was observed. The criterion for hydric soil is met.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Sprakers, Montgomery County **Sampling Date:** 2021-Sept-14
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-EES-21_PEM-1
Investigator(s): Ethan Snyder, Abi Light **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Hillslope **Local relief (concave, convex, none):** Undulating **Slope (%):** 1 to 10
Subregion (LRR or MLRA): LRR L **Lat:** 42.8479246 **Long:** -74.4937999 **Datum:** WGS84
Soil Map Unit Name: Darien silt loam, 3 to 8 percent slopes **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes _✓_ No ____ (If no, explain in Remarks.)
Are Vegetation _✓_, Soil ___, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No _✓_
Are Vegetation ___, Soil ___, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _✓_ No ____		
Hydric Soil Present?	Yes _✓_ No ____	**Is the Sampled Area within a Wetland?**	**Yes _✓_ No ____**
Wetland Hydrology Present?	Yes _✓_ No ____	**If yes, optional Wetland Site ID:**	W-EES-21

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is PEM. Area is wetland, all three wetland parameters are present. Circumstances are not normal due to mowing of vegetation.

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
_✓_ High Water Table (A2)
_✓_ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____ No _✓_	Depth (inches):	
Water Table Present?	Yes _✓_ No ____	Depth (inches):	4
Saturation Present? (includes capillary fringe)	Yes _✓_ No ____	Depth (inches):	0

Wetland Hydrology Present? Yes _✓_ No ____

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

Remarks:
The criterion for wetland hydrology is met. A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

VEGETATION -- Use scientific names of plants.

Sampling Point: W-EES-21_PEM-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Poaceae*	75	Yes	NI
2. *Cyperus esculentus*	40	Yes	FACW
3. *Typha latifolia*	15	No	OBL
4. *Scirpus atrovirens*	15	No	OBL
5. *Eleocharis obtusa*	10	No	OBL
6. *Nasturtium officinale*	5	No	OBL
7.			
8.			
9.			
10.			
11.			
12.			
	160	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= 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:

Total % Cover of:		Multiply By:	
OBL species	45	x 1 =	45
FACW species	40	x 2 =	80
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals	85	(A)	125 (B)
Prevalence Index = B/A =	1.5		

Hydrophytic Vegetation Indicators:

____ 1- Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is > 50%

_✓_ 3 - Prevalence Index is ≤ 3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes _✓_ No ____

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

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00). vegetation recently mowed, maintained .

SOIL

Sampling Point: W-EES-21_PEM-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 10.5	10YR 4/1	85	5YR 5/6	15	C	M	Gravelly Silty Clay	
10.5 - 18	2.5Y 5/1	80	5YR 5/8	20	C	M	Gravelly Clay	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes _✓_ No ____

Remarks:

A positive indication of hydric soil was observed. The criterion for hydric soil is met.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Sprakers, Montgomery County **Sampling Date:** 2021-Sept-14
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-EES-21_UPL-1
Investigator(s): Ethan Snyder, Abi Light **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Hillslope **Local relief (concave, convex, none):** Undulating **Slope (%):** 1 to 10
Subregion (LRR or MLRA): LRR L **Lat:** 42.8479682 **Long:** -74.4936323 **Datum:** WGS84
Soil Map Unit Name: Darien silt loam, 3 to 8 percent slopes **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ✓, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ✓
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____ No ✓		
Hydric Soil Present?	Yes ____ No ✓	**Is the Sampled Area within a Wetland?**	**Yes ____ No ✓**
Wetland Hydrology Present?	Yes ____ No ✓	**If yes, optional Wetland Site ID:**	

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is UPL. Area is upland, not all three wetland parameters are present. Circumstances are not normal due to mowing of vegetation.

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____ No ✓	Depth (inches):	
Water Table Present?	Yes ____ No ✓	Depth (inches):	**Wetland Hydrology Present?** Yes ____ No ✓
Saturation Present? (includes capillary fringe)	Yes ____ No ✓	Depth (inches):	

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

Remarks:
The criterion for wetland hydrology is not met. No positive indication of wetland hydrology was observed.

VEGETATION -- Use scientific names of plants.

Sampling Point: W-EES-21_UPL-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Poa pratensis*	75	Yes	FACU
2. *Phleum pratense*	40	Yes	FACU
3. *Cirsium arvense*	15	No	FACU
4. *Taraxacum officinale*	10	No	FACU
5. *Cichorium intybus*	5	No	FACU
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	145	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	0	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	0	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	145	x 4 =	580
UPL species	0	x 5 =	0
Column Totals	145	(A)	580 (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[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ____ No ✓

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

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC− or drier).

SOIL

Sampling Point: W-EES-21_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 11.5	10YR 4/3	100					Gravelly Silt Loam	
11.5 - 10	10YR 4/2	98	5YR 4/4	2	C	M	Gravelly Silty Clay Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None
Depth (inches):

Hydric Soil Present? Yes ____ No ✓

Remarks:

No positive indication of hydric soils was observed. The criterion for hydric soil is not met.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Sprakers, Montgomery County **Sampling Date:** 2021-Sept-14
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-EES-22_PEM-1
Investigator(s): Ethan Snyder, Abi Light **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Swale **Local relief (concave, convex, none):** Concave **Slope (%):** 1 to 10
Subregion (LRR or MLRA): LRR L **Lat:** 42.8452558 **Long:** -74.4957167 **Datum:** WGS84
Soil Map Unit Name: Darien silt loam, 3 to 8 percent slopes **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes _✓_ No ____ (If no, explain in Remarks.)
Are Vegetation _✓_, Soil ___, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No _✓_
Are Vegetation ___, Soil ___, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _✓_ No ____		
Hydric Soil Present?	Yes _✓_ No ____	**Is the Sampled Area within a Wetland?**	**Yes _✓_ No ____**
Wetland Hydrology Present?	Yes _✓_ No ____	**If yes, optional Wetland Site ID:**	W-EES-22

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is PEM. Area is wetland, all three wetland parameters are present. Circumstances are not normal due to mowing of vegetation.

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
_✓_ High Water Table (A2)
_✓_ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____ No _✓_	Depth (inches):	
Water Table Present?	Yes _✓_ No ____	Depth (inches):	10
Saturation Present? (includes capillary fringe)	Yes _✓_ No ____	Depth (inches):	0

Wetland Hydrology Present? Yes _✓_ No ____

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

Remarks:
The criterion for wetland hydrology is met. A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

VEGETATION -- Use scientific names of plants.

Sampling Point: W-EES-22_PEM-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Scirpus atrovirens*	65	Yes	OBL
2. *Cyperus esculentus*	40	Yes	FACW
3. *Echinochloa crus-galli*	30	No	FAC
4. *Panicum capillare*	25	No	FAC
5. *Carex vulpinoidea*	20	No	OBL
6. *Persicaria pensylvanica*	15	No	FACW
7. *Juncus effusus*	5	No	OBL
8.			
9.			
10.			
11.			
12.			
	200	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= 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:

Total % Cover of:		Multiply By:	
OBL species	90	x 1 =	90
FACW species	55	x 2 =	110
FAC species	55	x 3 =	165
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals	200	(A)	365 (B)
Prevalence Index = B/A =	1.8		

Hydrophytic Vegetation Indicators:

✓ 1- Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

✓ 3 - Prevalence Index is ≤ 3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ✓ No ____

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

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC). A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00). A positive indication of hydrophytic vegetation was observed (Rapid Test for Hydrophytic Vegetation).

SOIL

Sampling Point: W-EES-22_PEM-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 9.5	10YR 3/1	95	5YR 5/4	5	C	M	Silt Loam	
9.5 - 18	10YR 3/2	95	5YR 5/6	5	C	M	Rocky Silty Clay	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes ✓ No ____

Remarks:

A positive indication of hydric soil was observed. The criterion for hydric soil is met.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Sprakers, Montgomery County **Sampling Date:** 2021-Sept-14
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-EES-22_UPL-1
Investigator(s): Ethan Snyder, Abi Light **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Hillslope **Local relief (concave, convex, none):** Undulating **Slope (%):** 1 to 10
Subregion (LRR or MLRA): LRR L **Lat:** 42.8452597 **Long:** -74.4957114 **Datum:** WGS84
Soil Map Unit Name: Darien silt loam, 3 to 8 percent slopes **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ✓, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ✓
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____ No ✓		
Hydric Soil Present?	Yes ✓ No ____	**Is the Sampled Area within a Wetland?**	**Yes ____ No ✓**
Wetland Hydrology Present?	Yes ____ No ✓	**If yes, optional Wetland Site ID:**	

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is UPL. Area is upland, not all three wetland parameters are present. Circumstances are not normal due to mowing of vegetation.

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____ No ✓	Depth (inches):	
Water Table Present?	Yes ____ No ✓	Depth (inches):	**Wetland Hydrology Present?** Yes ____ No ✓
Saturation Present? (includes capillary fringe)	Yes ____ No ✓	Depth (inches):	

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

Remarks:
The criterion for wetland hydrology is not met. No positive indication of wetland hydrology was observed.

VEGETATION -- Use scientific names of plants.

Sampling Point: W-EES-22_UPL-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Schedonorus pratensis*	70	Yes	FACU
2. *Poa pratensis*	40	Yes	FACU
3. *Trifolium repens*	25	No	FACU
4. *Taraxacum officinale*	15	No	FACU
5. *Plantago major*	5	No	FACU
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	155	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	0	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	0	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	155	x 4 =	620
UPL species	0	x 5 =	0
Column Totals	155	(A)	620 (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[1]

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

_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes _____ No ✓

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

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC− or drier).

SOIL

Sampling Point: W-EES-22_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 6	10YR 4/3	100					Silty Clay Loam	
6 - 13	10YR 4/1	95	5YR 4/4	5	C	M	Gravelly Silty Clay	
13 - 18	10YR 4/2	95	2.5YR 5/4	5	C	M	Gravelly Silty Clay Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes _✓_ No ____

Remarks:

A positive indication of hydric soil was observed. The criterion for hydric soil is met.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Sprakers, Montgomery County **Sampling Date:** 2021-Sept-16
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-EES-23_PEM-1
Investigator(s): Ethan Snyder, Abi Light **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Hillslope **Local relief (concave, convex, none):** Undulating **Slope (%):** 1 to 10
Subregion (LRR or MLRA): LRR L **Lat:** 42.8445017 **Long:** -74.4906482 **Datum:** WGS84
Soil Map Unit Name: Darien silt loam, 3 to 8 percent slopes **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ✓, Soil ✓, or Hydrology ✓ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ✓
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✓ No ____		
Hydric Soil Present?	Yes ✓ No ____	**Is the Sampled Area within a Wetland?**	**Yes ✓ No ____**
Wetland Hydrology Present?	Yes ✓ No ____	**If yes, optional Wetland Site ID:**	W-EES-23

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is PEM. Area is wetland, all three wetland parameters are present. Circumstances are not normal due to agricultural activities. area artificially channeled, drainage altered .

HYDROLOGY

Wetland Hydrology Indicators:

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

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ✓ No ____	Depth (inches):	1	
Water Table Present?	Yes ✓ No ____	Depth (inches):	10	**Wetland Hydrology Present?** Yes ✓ No ____
Saturation Present? (includes capillary fringe)	Yes ✓ No ____	Depth (inches):	4	

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

Remarks:
The criterion for wetland hydrology is met. A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

VEGETATION -- Use scientific names of plants.

Sampling Point: W-EES-23_PEM-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Viburnum lentago*	5	Yes	FAC
2. *Cornus amomum*	5	Yes	FACW
3.			
4.			
5.			
6.			
7.			
	10	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Lysimachia nummularia*	85	Yes	FACW
2. *Lythrum salicaria*	55	Yes	OBL
3. *Panicum capillare*	35	No	FAC
4. *Typha latifolia*	15	No	OBL
5. *Carex vulpinoidea*	10	No	OBL
6. *Bidens frondosa*	5	No	FACW
7.			
8.			
9.			
10.			
11.			
12.			
	205	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= 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:

Total % Cover of:		Multiply By:	
OBL species	80	x 1 =	80
FACW species	95	x 2 =	190
FAC species	40	x 3 =	120
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals	215	(A)	390 (B)
Prevalence Index = B/A =	1.8		

Hydrophytic Vegetation Indicators:

____ 1- Rapid Test for Hydrophytic Vegetation

_✓_ 2 - Dominance Test is >50%

_✓_ 3 - Prevalence Index is ≤ 3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes _✓_ No ____

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

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC). A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

SOIL

Sampling Point: W-EES-23_PEM-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 5	10YR 4/2	95	5YR 5/6	5	C	M	Silt Loam	
5 - 12	10YR 4/1	90	5YR 5/8	10	C	M/PL	Rocky Silty Clay Loam	
12 - 18	2.5Y 4/1	85	5YR 5/8	15	C	M	Gravelly Clay	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes _✓_ No ____

Remarks:

A positive indication of hydric soil was observed. The criterion for hydric soil is met.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** , Montgomery **Sampling Date:** 2021-Sept-15
Applicant/Owner: SunEast **State:** NY **Sampling Point:** W-EES-23_PFO-1
Investigator(s): Ethan Snyder, Abi Light **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Depression **Local relief (concave, convex, none):** Concave **Slope (%):** 1 to 3
Subregion (LRR or MLRA): LRR L **Lat:** 42.8415342 **Long:** -74.4946711 **Datum:** WGS84
Soil Map Unit Name: Madalin silty clay loam **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes _✓_ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes _✓_ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _✓_ No ____		
Hydric Soil Present?	Yes _✓_ No ____	**Is the Sampled Area within a Wetland?**	**Yes _✓_ No ____**
Wetland Hydrology Present?	Yes _✓_ No ____	**If yes, optional Wetland Site ID:**	W-EES-23

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is PFO. Area is wetland, all three wetland parameters are present.

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
_✓_ Saturation (A3)
_✓_ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
_✓_ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____ No _✓_	Depth (inches):	
Water Table Present?	Yes ____ No _✓_	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes _✓_ No ____	Depth (inches):	0

Wetland Hydrology Present? Yes _✓_ No ____

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

Remarks:
The criterion for wetland hydrology is met. A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

VEGETATION -- Use scientific names of plants.

Sampling Point: W-EES-23_PFO-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Tsuga canadensis*	35	Yes	FACU
2. *Betula nigra*	15	Yes	FACW
3. *Ulmus americana*	10	No	FACW
4. *Carya ovata*	10	No	FACU
5. *Acer saccharum*	5	No	FACU
6. *Tilia americana*	5	No	FACU
7.			
	80	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Carpinus caroliniana*	30	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	30	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Rubus idaeus*	10	Yes	FACU
2. *Toxicodendron radicans*	8	Yes	FAC
3. *Dryopteris carthusiana*	2	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	20	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1. *Toxicodendron radicans*	5	Yes	FAC
2. *Vitis riparia*	5	Yes	FAC
3.			
4.			
	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:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	27	x 2 =	54
FAC species	48	x 3 =	144
FACU species	65	x 4 =	260
UPL species	0	x 5 =	0
Column Totals	140	(A)	458 (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[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes _✓_ No ____

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

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC). A positive indication of hydrophytic vegetation was observed (Morphological Adaptations). raised buttresses, exposed roots on trees .

SOIL

Sampling Point: W-EES-23_PFO-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 5	10YR 3/2	100					Loam	
5 - 12	10YR 3/1	90	5YR 5/6	10	C	M	Silty Clay	
12 - 18	10YR 3/1	85	5YR 5/6	15	C	M	Gravelly Silty Clay	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes ✓ No ____

Remarks:

A positive indication of hydric soil was observed. The criterion for hydric soil is met.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Sprakers, Montgomery **Sampling Date:** 2021-Sept-16
Applicant/Owner: SunEast **State:** NY **Sampling Point:** W-EES-23_UPL-1
Investigator(s): Ethan Snyder, Brian Corrigan, Cory Dunning **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Hillslope **Local relief (concave, convex, none):** Undulating **Slope (%):** 1 to 3
Subregion (LRR or MLRA): LRR L **Lat:** 42.841646 **Long:** -74.4945596 **Datum:** WGS84
Soil Map Unit Name: Madalin silty clay loam **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes _✓_ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes _✓_ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____ No _✓_		
Hydric Soil Present?	Yes ____ No _✓_	**Is the Sampled Area within a Wetland?**	**Yes ____ No _✓_**
Wetland Hydrology Present?	Yes ____ No _✓_	**If yes, optional Wetland Site ID:**	

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is UPL. Area is upland, not all three wetland parameters are present.

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____ No _✓_	Depth (inches):	
Water Table Present?	Yes ____ No _✓_	Depth (inches):	**Wetland Hydrology Present?** Yes ____ No _✓_
Saturation Present? (includes capillary fringe)	Yes ____ No _✓_	Depth (inches):	

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

Remarks:
The criterion for wetland hydrology is not met. No positive indication of wetland hydrology was observed.

VEGETATION -- Use scientific names of plants.

Sampling Point: W-EES-23_UPL-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Tsuga canadensis*	60	Yes	FACU
2. *Acer saccharum*	15	No	FACU
3. *Tilia americana*	10	No	FACU
4. *Fagus grandifolia*	5	No	FACU
5.			
6.			
7.			
	90	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Carpinus caroliniana*	15	Yes	FAC
2. *Acer saccharum*	10	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	25	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Solidago flexicaulis*	10	Yes	FACU
2. *Carex gracillima*	5	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	15	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= 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:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	15	x 3 =	45
FACU species	115	x 4 =	460
UPL species	0	x 5 =	0
Column Totals	130	(A)	505 (B)
Prevalence Index = B/A =	3.9		

Hydrophytic Vegetation Indicators:

____ 1- Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is > 50%

____ 3 - Prevalence Index is ≤ 3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ____ No ✓

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

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC− or drier).

SOIL

Sampling Point: W-EES-23_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 6.5	10YR 5/3	100					Silt Loam	
6.5 - 12	10YR 5/4	100					Silty Clay Loam	
12 - 18	10YR 5/2	95	5YR 4/4	5	C	M	Rocky Silty Clay Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes ____ No ✓

Remarks:

No positive indication of hydric soils was observed. The criterion for hydric soil is not met.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Sprakers, Montgomery County **Sampling Date:** 2021-Sept-16
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-EES-23_UPL-2
Investigator(s): Ethan Snyder, Abi Light **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Hillslope **Local relief (concave, convex, none):** Undulating **Slope (%):** 1 to 10
Subregion (LRR or MLRA): LRR L **Lat:** 42.8445081 **Long:** -74.4907152 **Datum:** WGS84
Soil Map Unit Name: Darien silt loam, 3 to 8 percent slopes **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ✓, Soil ✓, or Hydrology ✓ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ✓
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____ No ____		
Hydric Soil Present?	Yes ✓ No ____	**Is the Sampled Area within a Wetland?**	**Yes ____ No ✓**
Wetland Hydrology Present?	Yes ____ No ✓	**If yes, optional Wetland Site ID:**	

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is UPL. Area is upland, not all three wetland parameters are present. Circumstances are not normal due to agricultural activities.

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____ No ✓	Depth (inches):	
Water Table Present?	Yes ____ No ✓	Depth (inches):	**Wetland Hydrology Present?** Yes ____ No ✓
Saturation Present? (includes capillary fringe)	Yes ____ No ✓	Depth (inches):	

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

Remarks:
The criterion for wetland hydrology is not met. No positive indication of wetland hydrology was observed.

VEGETATION -- Use scientific names of plants.

Sampling Point: W-EES-23_UPL-2

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Zea mays*	70	Yes	UPL
2. *Vicia americana*	5	No	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	75	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= 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:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	5	x 4 =	20
UPL species	70	x 5 =	350
Column Totals	75	(A)	370 (B)
Prevalence Index = B/A =	4.9		

Hydrophytic Vegetation Indicators:

_____ 1- Rapid Test for Hydrophytic Vegetation

_____ 2 - Dominance Test is > 50%

_____ 3 - Prevalence Index is ≤ 3.0[1]

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

_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes _____ No _____

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

Active agricultural field. No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC− or drier).

SOIL

Sampling Point: W-EES-23_UPL-2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 7	10YR 4/3	100					Silt Loam	
7 - 13	10YR 3/1	90	2.5YR 4/6	10	C	M/PL	Silty Clay	
13 - 18	2.5Y 3/1	85	5YR 5/6	15	C	M	Rocky Clay	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes ✓ No ____

Remarks:

A positive indication of hydric soil was observed. The criterion for hydric soil is met.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Sprakers, Montgomery County **Sampling Date:** 2021-Sept-16
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-EES-24_PEM-1
Investigator(s): Ethan Snyder, Abi Light **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** Undulating **Slope (%):** 0 to 1
Subregion (LRR or MLRA): LRR L **Lat:** 42.8429515 **Long:** -74.4968284 **Datum:** WGS84
Soil Map Unit Name: Churchville silty clay loam, 3 to 8 percent slopes **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes _✓_ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes _✓_ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _✓_ No ____		
Hydric Soil Present?	Yes _✓_ No ____	**Is the Sampled Area within a Wetland?**	**Yes _✓_ No ____**
Wetland Hydrology Present?	Yes _✓_ No ____	**If yes, optional Wetland Site ID:**	W-EES-24

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is PEM. Area is wetland, all three wetland parameters are present.

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
_✓_ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____ No _✓_	Depth (inches):	
Water Table Present?	Yes ____ No _✓_	Depth (inches):	**Wetland Hydrology Present?** Yes _✓_ No ____
Saturation Present? (includes capillary fringe)	Yes ____ No _✓_	Depth (inches):	

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

Remarks:
The criterion for wetland hydrology is met. A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

VEGETATION -- Use scientific names of plants.

Sampling Point: W-EES-24_PEM-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Solidago gigantea*	40	Yes	FACW
2. *Onoclea sensibilis*	35	Yes	FACW
3. *Impatiens capensis*	25	Yes	FACW
4. *Eutrochium maculatum*	10	No	OBL
5. *Phalaris arundinacea*	5	No	FACW
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	115	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= 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:

Total % Cover of:		Multiply By:	
OBL species	10	x 1 =	10
FACW species	105	x 2 =	210
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals	115	(A)	220 (B)
Prevalence Index = B/A =	1.9		

Hydrophytic Vegetation Indicators:

✓ 1- Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

✓ 3 - Prevalence Index is ≤ 3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ✓ No ____

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

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC). A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00). A positive indication of hydrophytic vegetation was observed (Rapid Test for Hydrophytic Vegetation).

SOIL

Sampling Point: W-EES-24_PEM-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 5	10YR 5/2	95	2.5YR 4/4	5	C	M/PL	Silty Clay Loam	
5 - 11.5	2.5Y 5/2	90	5YR 5/6	10	C	M	Silty Clay Loam	
11.5 - 18	10YR 5/2	90	5YR 5/6	10	C	M	Gravelly Silty Clay	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes _✓_ No ____

Remarks:

A positive indication of hydric soil was observed. The criterion for hydric soil is met.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Sprakers, Montgomery County **Sampling Date:** 2021-Sept-16
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-EES-24_UPL-1
Investigator(s): Ethan Snyder, Abi Light **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Hillslope **Local relief (concave, convex, none):** Undulating **Slope (%):** 1 to 3
Subregion (LRR or MLRA): LRR L **Lat:** 42.8428485 **Long:** -74.4968153 **Datum:** WGS84
Soil Map Unit Name: Lordstown gravelly silt loam, 3 to 8 percent slopes **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes _✓_ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes _✓_ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____ No _✓_		
Hydric Soil Present?	Yes _✓_ No ____	**Is the Sampled Area within a Wetland?**	**Yes ____ No _✓_**
Wetland Hydrology Present?	Yes ____ No _✓_	**If yes, optional Wetland Site ID:**	

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is UPL. Area is upland, not all three wetland parameters are present.

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____ No _✓_	Depth (inches):	
Water Table Present?	Yes ____ No _✓_	Depth (inches):	**Wetland Hydrology Present?** Yes ____ No _✓_
Saturation Present? (includes capillary fringe)	Yes ____ No _✓_	Depth (inches):	

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

Remarks:
The criterion for wetland hydrology is not met. No positive indication of wetland hydrology was observed.

VEGETATION -- Use scientific names of plants.

Sampling Point: W-EES-24_UPL-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Tsuga canadensis*	65	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	65	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Carpinus caroliniana*	20	Yes	FAC
2. *Carya cordiformis*	5	No	FAC
3. *Prunus serotina*	2	No	FACU
4.			
5.			
6.			
7.			
	27	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Veronica officinalis*	5	Yes	FACU
2. *Toxicodendron radicans*	2	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	7	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= 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:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	27	x 3 =	81
FACU species	72	x 4 =	288
UPL species	0	x 5 =	0
Column Totals	99	(A)	369 (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[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ____ No ✓

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

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC− or drier).

SOIL

Sampling Point: W-EES-24_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 8	10YR 4/3	98	5YR 5/6	2	C	M/PL	Silt Loam	
8 - 15	10YR 5/2	90	5YR 5/8	10	C	M	Rocky Silty Clay	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None
Depth (inches):

Hydric Soil Present? Yes _✓_ No ____

Remarks:

A positive indication of hydric soil was observed. The criterion for hydric soil is met. Refusal due to coarse fragments.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Canajoharie, Montgomery County **Sampling Date:** 2021-Sept-16
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-EES-25_PEM-1
Investigator(s): Ethan Snyder, Abi Light **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Depression **Local relief (concave, convex, none):** Concave **Slope (%):** 1 to 3
Subregion (LRR or MLRA): LRR L **Lat:** 42.8334948 **Long:** -74.5098029 **Datum:** WGS84
Soil Map Unit Name: Darien silt loam, 3 to 8 percent slopes **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes _✓_ No ____ (If no, explain in Remarks.)
Are Vegetation _✓_, Soil ___, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No _✓_
Are Vegetation ___, Soil ___, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _✓_ No ____		
Hydric Soil Present?	Yes _✓_ No ____	**Is the Sampled Area within a Wetland?**	**Yes _✓_ No ____**
Wetland Hydrology Present?	Yes _✓_ No ____	**If yes, optional Wetland Site ID:**	W-EES-25

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is PEM. Area is wetland, all three wetland parameters are present. Circumstances are not normal due to mowing of vegetation.

HYDROLOGY

Wetland Hydrology Indicators:

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

_✓ Surface Water (A1)
_✓ High Water Table (A2)
_✓ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
_✓ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes _✓_ No ____	Depth (inches):	1
Water Table Present?	Yes _✓_ No ____	Depth (inches):	2
Saturation Present? (includes capillary fringe)	Yes _✓_ No ____	Depth (inches):	0

Wetland Hydrology Present? Yes _✓_ No ____

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

Remarks:
The criterion for wetland hydrology is met. A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

VEGETATION -- Use scientific names of plants.

Sampling Point: W-EES-25_PEM-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Echinochloa muricata*	60	Yes	OBL
2. *Phalaris arundinacea*	30	Yes	FACW
3. *Cyperus esculentus*	15	No	FACW
4. *Trifolium repens*	15	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	120	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= 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:

Total % Cover of:		Multiply By:	
OBL species	60	x 1 =	60
FACW species	45	x 2 =	90
FAC species	0	x 3 =	0
FACU species	15	x 4 =	60
UPL species	0	x 5 =	0
Column Totals	120	(A)	210 (B)
Prevalence Index = B/A =	1.8		

Hydrophytic Vegetation Indicators:

✓ 1- Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

✓ 3 - Prevalence Index is ≤ 3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ✓ No ____

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

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC). A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00). A positive indication of hydrophytic vegetation was observed (Rapid Test for Hydrophytic Vegetation).

SOIL

Sampling Point: W-EES-25_PEM-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 6	10YR 3/2	95	5YR 5/6	5	C	M/PL	Silty Clay Loam	
6 - 11.5	10YR 4/1	95	5YR 5/4	5	C	M	Silty Clay	
11.5 - 18	2.5Y 5/1	85	7.5YR 5/6	15	C	M	Clay	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes _✓_ No ____

Remarks:

A positive indication of hydric soil was observed. The criterion for hydric soil is met.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Canajoharie, Montgomery County **Sampling Date:** 2021-Sept-16
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-EES-25_UPL-1
Investigator(s): Ethan Snyder, Abi Light **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Hilltop **Local relief (concave, convex, none):** Convex **Slope (%):** 1 to 3
Subregion (LRR or MLRA): LRR L **Lat:** 42.833517 **Long:** -74.5093842 **Datum:** WGS84
Soil Map Unit Name: Darien silt loam, 3 to 8 percent slopes **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ✓, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ✓
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____ No ✓		
Hydric Soil Present?	Yes ____ No ✓	**Is the Sampled Area within a Wetland?**	**Yes ____ No ✓**
Wetland Hydrology Present?	Yes ____ No ✓	**If yes, optional Wetland Site ID:**	

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is UPL. Area is upland, not all three wetland parameters are present. Circumstances are not normal due to mowing of vegetation.

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____ No ✓	Depth (inches):	
Water Table Present?	Yes ____ No ✓	Depth (inches):	**Wetland Hydrology Present?** Yes ____ No ✓
Saturation Present? (includes capillary fringe)	Yes ____ No ✓	Depth (inches):	

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

Remarks:
The criterion for wetland hydrology is not met. No positive indication of wetland hydrology was observed.

VEGETATION -- Use scientific names of plants.

Sampling Point: W-EES-25_UPL-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Schedonorus pratensis*	55	Yes	FACU
2. *Trifolium repens*	25	Yes	FACU
3. *Poa pratensis*	15	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	95	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	0	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	0	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	95	x 4 =	380
UPL species	0	x 5 =	0
Column Totals	95	(A)	380 (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[1]

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

_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes _____ No ✓

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

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC− or drier).

SOIL

Sampling Point: W-EES-25_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 6	10YR 4/3	100					Gravelly Silt Loam	
6 - 13	10YR 4/2	98	7.5YR 4/6	2	C	M	Gravelly Silty Clay Loam	
13 - 18	10YR 4/3	90	2.5YR 5/6	10	C	M	Gravelly Silty Clay	
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes ____ No ✓

Remarks:

No positive indication of hydric soils was observed. The criterion for hydric soil is not met.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Ames, **Sampling Date:** 2021-Sept-21
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-EES-26_PEM-1
Investigator(s): Ethan Snyder, Brian Corrigan, Abi Light **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Depression **Local relief (concave, convex, none):** Concave **Slope (%):** 1 to 3
Subregion (LRR or MLRA): LRR L **Lat:** 42.8339917 **Long:** -74.5046224 **Datum:** WGS84
Soil Map Unit Name: Nunda channery silt loam, 8 to 15 percent slopes **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes _✓_ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes _✓_ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _✓_ No ____		
Hydric Soil Present?	Yes _✓_ No ____	**Is the Sampled Area within a Wetland?**	**Yes _✓_ No ____**
Wetland Hydrology Present?	Yes _✓_ No ____	**If yes, optional Wetland Site ID:**	W-EES-26

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is PEM. Area is wetland, all three wetland parameters are present.

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
_✓_ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
_✓_ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____ No _✓_	Depth (inches):	
Water Table Present?	Yes ____ No _✓_	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes _✓_ No ____	Depth (inches):	0

Wetland Hydrology Present? Yes _✓_ No ____

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

Remarks:
The criterion for wetland hydrology is met. A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

VEGETATION -- Use scientific names of plants.

Sampling Point: W-EES-26_PEM-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus pennsylvanica*	15	Yes	FACW
2. *Acer saccharum*	10	Yes	FACU
3. *Fraxinus nigra*	5	No	FACW
4. *Carya cordiformis*	5	No	FAC
5.			
6.			
7.			
	35	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Carpinus caroliniana*	15	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	15	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Impatiens capensis*	45	Yes	FACW
2. *Lysimachia nummularia*	40	Yes	FACW
3. *Symphyotrichum novi-belgii*	25	No	FACW
4. *Symphyotrichum lanceolatum*	15	No	FACW
5. *Athyrium angustum*	5	No	FAC
6. *Eurybia macrophylla*	2	No	UPL
7.			
8.			
9.			
10.			
11.			
12.			
	132	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= 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:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	145	x 2 =	290
FAC species	25	x 3 =	75
FACU species	10	x 4 =	40
UPL species	2	x 5 =	10
Column Totals	182	(A)	415 (B)

Prevalence Index = B/A = 2.3

Hydrophytic Vegetation Indicators:

____ 1- Rapid Test for Hydrophytic Vegetation

_✓_ 2 - Dominance Test is >50%

_✓_ 3 - Prevalence Index is ≤ 3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes _✓_ No ____

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

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC). A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00). A positive indication of hydrophytic vegetation was observed (Morphological Adaptations). raised buttresses, exposed roots on trees .

SOIL

Sampling Point: W-EES-26_PEM-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 11.5	10YR 2/2	98	7.5YR 4/4	2	C	M	Silt Loam	
11.5 - 18	10YR 3/1	100					Gravelly Silt Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes _✓_ No ____

Remarks:

A positive indication of hydric soil was observed. The criterion for hydric soil is met.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Ames, **Sampling Date:** 2021-Sept-20
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-EES-26_PFO-1
Investigator(s): Ethan Snyder, Brian Corrigan, Abi Light **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** Undulating **Slope (%):** 1 to 3
Subregion (LRR or MLRA): LRR L **Lat:** 42.8318974 **Long:** -74.5061394 **Datum:** WGS84
Soil Map Unit Name: Burdett channery silt loam, 3 to 8 percent slopes **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes _✓_ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes _✓_ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _✓_ No ____		
Hydric Soil Present?	Yes _✓_ No ____	**Is the Sampled Area within a Wetland?**	**Yes _✓_ No ____**
Wetland Hydrology Present?	Yes _✓_ No ____	**If yes, optional Wetland Site ID:**	W-EES-26

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is PFO. Area is wetland, all three wetland parameters are present.

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
_✓_ High Water Table (A2)
_✓_ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
_✓_ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____ No _✓_	Depth (inches):	
Water Table Present?	Yes _✓_ No ____	Depth (inches):	2
Saturation Present? (includes capillary fringe)	Yes _✓_ No ____	Depth (inches):	0

Wetland Hydrology Present? Yes _✓_ No ____

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

Remarks:
The criterion for wetland hydrology is met. A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

VEGETATION -- Use scientific names of plants.

Sampling Point: W-EES-26_PFO-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus pennsylvanica*	60	Yes	FACW
2. *Tilia americana*	25	Yes	FACU
3. *Carpinus caroliniana*	10	No	FAC
4.			
5.			
6.			
7.			
	95	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Carpinus caroliniana*	20	Yes	FAC
2. *Tilia americana*	5	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	25	= Total Cover	

Herb Stratum (Plot size: 5 ft)			
1. *Aegopodium podagraria*	10	Yes	FAC
2. *Onoclea sensibilis*	5	Yes	FACW
3. *Carex vesicaria*	2	No	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	17	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= 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:

Total % Cover of:		Multiply By:	
OBL species	2	x 1 =	2
FACW species	65	x 2 =	130
FAC species	40	x 3 =	120
FACU species	30	x 4 =	120
UPL species	0	x 5 =	0
Column Totals	137	(A)	372 (B)

Prevalence Index = B/A = 2.7

Hydrophytic Vegetation Indicators:

____ 1- Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

✓ 3 - Prevalence Index is ≤ 3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ✓ No ____

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

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC). A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00). A positive indication of hydrophytic vegetation was observed (Morphological Adaptations). raised buttresses, exposed roots on trees.

SOIL

Sampling Point: W-EES-26_PFO-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 8	10YR 3/1	95	7.5YR 4/6	5	C	M	Silt Loam	
8 - 13	10YR 5/2	75	5YR 4/4	25	C	M	Silty Clay	
13 - 18	5YR 5/2	70	2.5YR 3/6	25	C	M	Gravelly Clay	
13 - 18			2.5Y 5/1	5	D	M	Gravelly Silty Clay	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes ✓ No ____

Remarks:

A positive indication of hydric soil was observed. The criterion for hydric soil is met.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Ames, **Sampling Date:** 2021-Sept-20
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-EES-26_UPL-1
Investigator(s): Ethan Snyder, Brian Corrigan, Abi Light **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Hillslope **Local relief (concave, convex, none):** Undulating **Slope (%):** 1 to 3
Subregion (LRR or MLRA): LRR L **Lat:** 42.832067 **Long:** -74.506226 **Datum:** WGS84
Soil Map Unit Name: Burdett channery silt loam, 3 to 8 percent slopes **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____ No ✓		
Hydric Soil Present?	Yes ____ No ✓	**Is the Sampled Area within a Wetland?**	**Yes ____ No ✓**
Wetland Hydrology Present?	Yes ____ No ✓	**If yes, optional Wetland Site ID:**	

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is UPL. Area is upland, not all three wetland parameters are present.

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____ No ✓	Depth (inches):	
Water Table Present?	Yes ____ No ✓	Depth (inches):	**Wetland Hydrology Present?** Yes ____ No ✓
Saturation Present? (includes capillary fringe)	Yes ____ No ✓	Depth (inches):	

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

Remarks:
The criterion for wetland hydrology is not met. No positive indication of wetland hydrology was observed.

VEGETATION -- Use scientific names of plants.

Sampling Point: W-EES-26_UPL-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Tsuga canadensis*	70	Yes	FACU
2. *Tilia americana*	25	Yes	FACU
3. *Acer saccharum*	10	No	FACU
4.			
5.			
6.			
7.			
	105	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Fagus grandifolia*	10	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	10	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Dryopteris marginalis*	5	Yes	FACU
2. *Maianthemum stellatum*	2	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	7	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= 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:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	2	x 3 =	6
FACU species	120	x 4 =	480
UPL species	0	x 5 =	0
Column Totals	122	(A)	486 (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[1]

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

_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes _____ No ✓

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

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC− or drier).

SOIL

Sampling Point: W-EES-26_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 4	10YR 4/3	100					Silty Clay Loam	
4 - 13	10YR 5/3	100					Silty Clay Loam	
13 - 18	10YR 5/2	95	5YR 4/4	5	C	M	Silty Clay Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes ____ No ✓

Remarks:

No positive indication of hydric soils was observed. The criterion for hydric soil is not met.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Ames, Montgomery **Sampling Date:** 2021-Sept-21
Applicant/Owner: SunEast **State:** NY **Sampling Point:** W-EES-26_UPL-2
Investigator(s): Ethan Snyder, Brian Corrigan, Abi Light **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Hillslope **Local relief (concave, convex, none):** Undulating **Slope (%):** 1 to 3
Subregion (LRR or MLRA): LRR L **Lat:** 42.8339636 **Long:** -74.5046013 **Datum:** WGS84
Soil Map Unit Name: Burdett channery silt loam, 3 to 8 percent slopes **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes _✓_ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes _✓_ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____ No _✓_		
Hydric Soil Present?	Yes ____ No _✓_	**Is the Sampled Area within a Wetland?**	**Yes ____ No _✓_**
Wetland Hydrology Present?	Yes ____ No _✓_	**If yes, optional Wetland Site ID:**	

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is UPL. Area is upland, not all three wetland parameters are present.

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____ No _✓_	Depth (inches):	
Water Table Present?	Yes ____ No _✓_	Depth (inches):	**Wetland Hydrology Present?** Yes ____ No _✓_
Saturation Present? (includes capillary fringe)	Yes ____ No _✓_	Depth (inches):	

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

Remarks:
The criterion for wetland hydrology is not met. No positive indication of wetland hydrology was observed.

VEGETATION -- Use scientific names of plants.

Sampling Point: W-EES-26_UPL-2

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Tsuga canadensis*	45	Yes	FACU
2. *Acer saccharum*	30	Yes	FACU
3. *Fagus grandifolia*	15	No	FACU
4. *Tilia americana*	5	No	FACU
5.			
6.			
7.			
	95	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Fagus grandifolia*	20	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	20	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Solidago flexicaulis*	5	Yes	FACU
2. *Eurybia*	5	Yes	NI
3. *Hepatica*	5	Yes	NI
4. *Sassafras albidum*	2	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	17	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= 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:	6	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	0	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	122	x 4 =	488
UPL species	0	x 5 =	0
Column Totals	122	(A)	488 (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[1]

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

_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes _____ No ✓

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

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC− or drier).

SOIL

Sampling Point: W-EES-26_UPL-2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 7	10YR 4/3	100					Fibric Silt Loam	
7 - 14	10YR 4/4	100					Rocky Silt Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None
Depth (inches):

Hydric Soil Present? Yes ____ No ✓

Remarks:

No positive indication of hydric soils was observed. The criterion for hydric soil is not met. Refusal due to coarse fragments.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Ames, **Sampling Date:** 2021-Sept-22
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-EES-27_PEM-1
Investigator(s): Ethan Snyder, Brian Corrigan, Abi Light **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Depression **Local relief (concave, convex, none):** Concave **Slope (%):** 1 to 3
Subregion (LRR or MLRA): LRR L **Lat:** 42.8369219 **Long:** -74.5039335 **Datum:** WGS84
Soil Map Unit Name: Ilion silt loam, 3 to 8 percent slopes **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes _✓_ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes _✓_ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _✓_ No ____		
Hydric Soil Present?	Yes _✓_ No ____	**Is the Sampled Area within a Wetland?**	**Yes _✓_ No ____**
Wetland Hydrology Present?	Yes _✓_ No ____	**If yes, optional Wetland Site ID:**	W-EES-27

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is PEM. Area is wetland, all three wetland parameters are present.

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
_✓_ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____ No _✓_	Depth (inches):	
Water Table Present?	Yes ____ No _✓_	Depth (inches):	**Wetland Hydrology Present?** Yes _✓_ No ____
Saturation Present? (includes capillary fringe)	Yes ____ No _✓_	Depth (inches):	

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

Remarks:
The criterion for wetland hydrology is met. A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

VEGETATION -- Use scientific names of plants.

Sampling Point: W-EES-27_PEM-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus americana*	10	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	10	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Cornus amomum*	5	Yes	FACW
2. *Salix bebbiana*	5	Yes	FACW
3.			
4.			
5.			
6.			
7.			
	10	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Symphyotrichum novi-belgii*	40	Yes	FACW
2. *Solidago gigantea*	35	Yes	FACW
3. *Phalaris arundinacea*	20	No	FACW
4. *Symphyotrichum novae-angliae*	10	No	FACW
5. *Glyceria striata*	10	No	OBL
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	115	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= 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:

Total % Cover of:		Multiply By:	
OBL species	10	x 1 =	10
FACW species	125	x 2 =	250
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals	135	(A)	260 (B)
Prevalence Index = B/A =	1.9		

Hydrophytic Vegetation Indicators:

✓ 1- Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

✓ 3 - Prevalence Index is ≤ 3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ✓ No ____

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

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC). A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00). A positive indication of hydrophytic vegetation was observed (Rapid Test for Hydrophytic Vegetation).

SOIL

Sampling Point: W-EES-27_PEM-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 10.5	10YR 4/2	95	5YR 4/4	5	C	M	Silty Clay Loam	
10.5 - 18	10YR 5/2	90	5YR 5/6	10	C	M	Clay	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes _✓_ No ____

Remarks:

A positive indication of hydric soil was observed. The criterion for hydric soil is met.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Ames, Montgomery **Sampling Date:** 2021-Sept-22
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-EES-27_UPL-1
Investigator(s): Ethan Snyder, Brian Corrigan, Abi Light **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Foot slope **Local relief (concave, convex, none):** Undulating **Slope (%):** 1 to 10
Subregion (LRR or MLRA): LRR L **Lat:** 42.8369126 **Long:** -74.5039709 **Datum:** WGS84
Soil Map Unit Name: Ilion silt loam, 3 to 8 percent slopes **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ✓, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____ No ✓		
Hydric Soil Present?	Yes ____ No ✓	**Is the Sampled Area within a Wetland?**	**Yes ____ No ✓**
Wetland Hydrology Present?	Yes ____ No ✓	**If yes, optional Wetland Site ID:**	

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is UPL. Area is upland, not all three wetland parameters are present. Circumstances are not normal due to mowing of vegetation.

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____ No ✓	Depth (inches):	
Water Table Present?	Yes ____ No ✓	Depth (inches):	**Wetland Hydrology Present?** Yes ____ No ✓
Saturation Present? (includes capillary fringe)	Yes ____ No ✓	Depth (inches):	

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

Remarks:
The criterion for wetland hydrology is not met. No positive indication of wetland hydrology was observed.

VEGETATION -- Use scientific names of plants.

Sampling Point: W-EES-27_UPL-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Poa pratensis*	80	Yes	FACU
2. *Schedonorus pratensis*	20	No	FACU
3. *Trifolium pratense*	10	No	FACU
4. *Lotus tenuis*	10	No	FACU
5. *Oxalis stricta*	5	No	FACU
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	125	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= 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:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	125	x 4 =	500
UPL species	0	x 5 =	0
Column Totals	125	(A)	500 (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[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ____ No ✓

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

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC− or drier).

SOIL

Sampling Point: W-EES-27_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 9.5	10YR 4/3	100					Silty Clay Loam	
9.5 - 15	10YR 3/3	100					Silty Clay	
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes ____ No ✓

Remarks:

No positive indication of hydric soils was observed. The criterion for hydric soil is met.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Canajoharie, Montgomery County **Sampling Date:** 2021-Sept-22
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-EES-28_PEM-1
Investigator(s): Ethan Snyder, Brian Corrigan, Abi Light **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Depression **Local relief (concave, convex, none):** Concave **Slope (%):** 1 to 10
Subregion (LRR or MLRA): LRR L **Lat:** 42.8328877 **Long:** -74.5014816 **Datum:** WGS84
Soil Map Unit Name: Lansing silt loam, 8 to 15 percent slopes **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes _✓_ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes _✓_ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _✓_ No ____		
Hydric Soil Present?	Yes _✓_ No ____	**Is the Sampled Area within a Wetland?**	**Yes _✓_ No ____**
Wetland Hydrology Present?	Yes _✓_ No ____	**If yes, optional Wetland Site ID:**	W-EES-28

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is PEM. Area is wetland, all three wetland parameters are present.

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
_✓ High Water Table (A2)
_✓ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
_✓ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____ No _✓_	Depth (inches):	
Water Table Present?	Yes ____ No _✓_	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes _✓_ No ____	Depth (inches):	0

Wetland Hydrology Present? Yes _✓_ No ____

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

Remarks:
The criterion for wetland hydrology is met. A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

VEGETATION -- Use scientific names of plants.

Sampling Point: W-EES-28_PEM-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Tsuga canadensis*	15	Yes	FACU
2. *Fraxinus pennsylvanica*	10	Yes	FACW
3. *Carya cordiformis*	5	No	FAC
4.			
5.			
6.			
7.			
	30	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Ulmus americana*	5	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	5	= Total Cover	

Herb Stratum (Plot size: 5 ft)			
1. *Athyrium angustum*	20	Yes	FAC
2. *Impatiens capensis*	10	Yes	FACW
3. *Oxalis corniculata*	10	Yes	FACU
4. *Leersia virginica*	5	No	FACW
5. *Pilea pumila*	5	No	FACW
6. *Parthenocissus quinquefolia*	2	No	FACU
7.			
8.			
9.			
10.			
11.			
12.			
	52	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= 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:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	35	x 2 =	70
FAC species	25	x 3 =	75
FACU species	27	x 4 =	108
UPL species	0	x 5 =	0
Column Totals	87	(A)	253 (B)

Prevalence Index = B/A = 2.9

Hydrophytic Vegetation Indicators:

____ 1- Rapid Test for Hydrophytic Vegetation

_✓_ 2 - Dominance Test is >50%

_✓_ 3 - Prevalence Index is ≤ 3.0[1]

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

✓

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes _✓_ No ____

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

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC). A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00). A positive indication of hydrophytic vegetation was observed (Morphological Adaptations). raised buttresses, exposed roots on trees .

SOIL

Sampling Point: W-EES-28_PEM-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 2.5	7.5YR 2.5/2	100					Org matter Muck	
2.5 - 7	10Y 5/1	90	7.5YR 4/6	10	C	M	Sandy Clay	
7 - 18	10YR 5/2	85	5YR 4/6	15	C	M	Rocky Sandy Clay	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None
Depth (inches):

Hydric Soil Present? Yes _✓_ No ____

Remarks:

A positive indication of hydric soil was observed. The criterion for hydric soil is met.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Canajoharie, Montgomery County **Sampling Date:** 2021-Sept-22
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-EES-28_UPL-1
Investigator(s): Ethan Snyder, Brian Corrigan, Abi Light **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Hillslope **Local relief (concave, convex, none):** Undulating **Slope (%):** 1 to 10
Subregion (LRR or MLRA): LRR L **Lat:** 42.8329109 **Long:** -74.5015013 **Datum:** WGS84
Soil Map Unit Name: Lansing silt loam, 8 to 15 percent slopes **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____ No ✓		
Hydric Soil Present?	Yes ____ No ✓	**Is the Sampled Area within a Wetland?**	**Yes ____ No ✓**
Wetland Hydrology Present?	Yes ____ No ✓	**If yes, optional Wetland Site ID:**	

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is UPL. Area is upland, not all three wetland parameters are present.

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____ No ✓	Depth (inches):		
Water Table Present?	Yes ____ No ✓	Depth (inches):		**Wetland Hydrology Present?** Yes ____ No ✓
Saturation Present? (includes capillary fringe)	Yes ____ No ✓	Depth (inches):		

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

Remarks:
The criterion for wetland hydrology is not met. No positive indication of wetland hydrology was observed.

VEGETATION -- Use scientific names of plants.

Sampling Point: W-EES-28_UPL-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Tsuga canadensis*	60	Yes	FACU
2. *Fagus grandifolia*	35	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	95	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Fagus grandifolia*	15	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	15	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Dryopteris marginalis*	5	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	5	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= 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: **4** (B)

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

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	115	x 4 =	460
UPL species	0	x 5 =	0
Column Totals	115	(A)	460 (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[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ____ No ✓

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

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC− or drier).

SOIL

Sampling Point: W-EES-28_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 4	10YR 4/3	100					Silt Loam	
4 - 9.5	7.5YR 5/6	100					Silty Clay Loam	
9.5 - 16	7.5YR 5/3	100					Sandy Clay Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes ____ No ✓

Remarks:

No positive indication of hydric soils was observed. The criterion for hydric soil is not met.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Canajoharie, Montgomery County **Sampling Date:** 2021-Sept-22
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-EES-29_PEM-1
Investigator(s): Ethan Snyder, Abi Light **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Depression **Local relief (concave, convex, none):** Concave **Slope (%):** 1 to 10
Subregion (LRR or MLRA): LRR L **Lat:** 42.837129 **Long:** -74.498555 **Datum:** WGS84
Soil Map Unit Name: Darien silt loam, 3 to 8 percent slopes **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes _✓_ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil _✓_, or Hydrology _✓_ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No _✓_
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _✓_ No ____		
Hydric Soil Present?	Yes _✓_ No ____	**Is the Sampled Area within a Wetland?**	**Yes _✓_ No ____**
Wetland Hydrology Present?	Yes _✓_ No ____	**If yes, optional Wetland Site ID:**	W-EES-29

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is PEM. Area is wetland, all three wetland parameters are present. Circumstances are not normal due to agricultural activities.

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
_✓_ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
_✓_ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____ No _✓_	Depth (inches):	
Water Table Present?	Yes ____ No _✓_	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes _✓_ No ____	Depth (inches):	0

Wetland Hydrology Present? Yes _✓_ No ____

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

Remarks:
The criterion for wetland hydrology is met. A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

VEGETATION -- Use scientific names of plants.

Sampling Point: W-EES-29_PEM-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Phalaris arundinacea*	70	Yes	FACW
2. *Typha latifolia*	40	Yes	OBL
3. *Setaria pumila*	25	No	FAC
4. *Panicum capillare*	15	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	150	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= 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:

Total % Cover of:		Multiply By:	
OBL species	40	x 1 =	40
FACW species	70	x 2 =	140
FAC species	40	x 3 =	120
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals	150	(A)	300 (B)
Prevalence Index = B/A =	2		

Hydrophytic Vegetation Indicators:

✓ 1- Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

✓ 3 - Prevalence Index is ≤ 3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ✓ No ____

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

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC). A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00). A positive indication of hydrophytic vegetation was observed (Rapid Test for Hydrophytic Vegetation).

SOIL

Sampling Point: W-EES-29_PEM-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 11	10YR 3/1	95	2.5YR 4/4	5	C	M	Silt Loam	
11 - 15	10YR 4/1	90	5YR 5/6	10	C	M	Rocky Silty Clay Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None
Depth (inches):

Hydric Soil Present? Yes _✓_ No ____

Remarks:

A positive indication of hydric soil was observed. The criterion for hydric soil is met. Refusal due to coarse fragments.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Canajoharie, Montgomery County **Sampling Date:** 2021-Sept-22
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-EES-29_UPL-1
Investigator(s): Ethan Snyder, Abi Light **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Hillslope **Local relief (concave, convex, none):** Undulating **Slope (%):** 1 to 10
Subregion (LRR or MLRA): LRR L **Lat:** 42.836961 **Long:** -74.498678 **Datum:** WGS84
Soil Map Unit Name: Darien silt loam, 3 to 8 percent slopes **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ✓, Soil ✓, or Hydrology ✓ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ✓
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____ No ✓		
Hydric Soil Present?	Yes ✓ No ____	**Is the Sampled Area within a Wetland?**	**Yes ____ No ✓**
Wetland Hydrology Present?	Yes ____ No ✓	**If yes, optional Wetland Site ID:**	

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is UPL. Area is upland, not all three wetland parameters are present. Circumstances are not normal due to agricultural activities.

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____ No ✓	Depth (inches):	
Water Table Present?	Yes ____ No ✓	Depth (inches):	**Wetland Hydrology Present?** Yes ____ No ✓
Saturation Present? (includes capillary fringe)	Yes ____ No ✓	Depth (inches):	

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

Remarks:
The criterion for wetland hydrology is not met. No positive indication of wetland hydrology was observed.

VEGETATION -- Use scientific names of plants.

Sampling Point: W-EES-29_UPL-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Panicum virgatum*	5	Yes	FAC
2. *Zea mays*	5	Yes	UPL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	10	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= 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:

Total % Cover of:		Multiply By:	
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	5	x 5 =	25
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[1]

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

_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes _____ No ✓

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

Active agricultural field. No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC− or drier).

SOIL

Sampling Point: W-EES-29_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 7.5	10YR 3/1	92	7.5YR 4/4	2	C	M	Silt Loam	
7.5 - 15	2.5Y 4/1	90	5YR 5/8	10	C	M	Rocky Silty Clay	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes _✓_ No ____

Remarks:

A positive indication of hydric soil was observed. The criterion for hydric soil is met.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Canajoharie, Montgomery County **Sampling Date:** 2021-Sept-23
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-EES-30_PEM-1
Investigator(s): Ethan Snyder, Abi Light **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Depression **Local relief (concave, convex, none):** Concave **Slope (%):** 1 to 10
Subregion (LRR or MLRA): LRR L **Lat:** 42.8406555 **Long:** -74.5056929 **Datum:** WGS84
Soil Map Unit Name: Appleton silt loam, 3 to 8 percent slopes **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes _✓_ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes _✓_ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _✓_ No ____		
Hydric Soil Present?	Yes _✓_ No ____	**Is the Sampled Area within a Wetland?**	**Yes _✓_ No ____**
Wetland Hydrology Present?	Yes _✓_ No ____	**If yes, optional Wetland Site ID:**	W-EES-30

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is PEM. Area is wetland, all three wetland parameters are present.

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
_✓_ High Water Table (A2)
_✓_ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
_✓_ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
_✓_ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____ No _✓_	Depth (inches):		
Water Table Present?	Yes _✓_ No ____	Depth (inches):	2	**Wetland Hydrology Present?** Yes _✓_ No ____
Saturation Present? (includes capillary fringe)	Yes _✓_ No ____	Depth (inches):	0	

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

Remarks:
The criterion for wetland hydrology is met. A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

VEGETATION -- Use scientific names of plants.

Sampling Point: W-EES-30_PEM-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Cornus racemosa*	10	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	10	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Phalaris arundinacea*	45	Yes	FACW
2. *Eutrochium maculatum*	25	Yes	OBL
3. *Solidago altissima*	10	No	FACU
4. *Symphyotrichum lanceolatum*	5	No	FACW
5. *Impatiens capensis*	2	No	FACW
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	87	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= 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:

Total % Cover of:		Multiply By:	
OBL species	25	x 1 =	25
FACW species	52	x 2 =	104
FAC species	10	x 3 =	30
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals	97	(A)	199 (B)
Prevalence Index = B/A =	2.1		

Hydrophytic Vegetation Indicators:

____ 1- Rapid Test for Hydrophytic Vegetation

_✓_ 2 - Dominance Test is >50%

_✓_ 3 - Prevalence Index is ≤ 3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes _✓_ No ____

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

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC). A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

SOIL

Sampling Point: W-EES-30_PEM-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 8	10YR 4/2	95	5YR 4/4	5	C	M/PL	Org matter Silt Loam	
8 - 15	10YR 3/1	90	5YR 5/6	10	C	M	Silty Clay Loam	
15 - 18	2.5Y 4/1	85	5YR 5/8	15	C	M	Silty Clay	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None
Depth (inches):

Hydric Soil Present? Yes _✓_ No ____

Remarks:

A positive indication of hydric soil was observed. The criterion for hydric soil is met.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Canajoharie, Montgomery County **Sampling Date:** 2021-Sept-23
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-EES-30_PSS-1
Investigator(s): Ethan Snyder, Abi Light **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Hillslope **Local relief (concave, convex, none):** Undulating **Slope (%):** 1 to 10
Subregion (LRR or MLRA): LRR L **Lat:** 42.8403255 **Long:** -74.5056579 **Datum:** WGS84
Soil Map Unit Name: Appleton silt loam, 3 to 8 percent slopes **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes _✓_ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes _✓_ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _✓_ No ____		
Hydric Soil Present?	Yes _✓_ No ____	**Is the Sampled Area within a Wetland?**	**Yes _✓_ No ____**
Wetland Hydrology Present?	Yes _✓_ No ____	**If yes, optional Wetland Site ID:**	W-EES-30

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is PSS. Area is wetland, all three wetland parameters are present.

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
_✓_ High Water Table (A2)
_✓_ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
_✓_ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____ No _✓_	Depth (inches):		
Water Table Present?	Yes _✓_ No ____	Depth (inches):	2	**Wetland Hydrology Present?** Yes _✓_ No ____
Saturation Present? (includes capillary fringe)	Yes _✓_ No ____	Depth (inches):	0	

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

Remarks:
The criterion for wetland hydrology is met. A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

VEGETATION -- Use scientific names of plants.

Sampling Point: W-EES-30_PSS-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Cornus racemosa*	65	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	65	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Solidago gigantea*	15	Yes	FACW
2. *Geum macrophyllum*	10	Yes	FACW
3. *Symphyotrichum novi-belgii*	5	No	FACW
4. *Fragaria virginiana*	5	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	35	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= 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:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	30	x 2 =	60
FAC species	65	x 3 =	195
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals	100	(A)	275 (B)
Prevalence Index = B/A =	2.8		

Hydrophytic Vegetation Indicators:

____ 1- Rapid Test for Hydrophytic Vegetation

_✓_ 2 - Dominance Test is >50%

_✓_ 3 - Prevalence Index is ≤ 3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes _✓_ No ____

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

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC). A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

SOIL

Sampling Point: W-EES-30_PSS-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 7.5	10YR 3/2	100					Silt Loam	
7.5 - 18	10YR 4/1	90	5YR 4/6	10	C	M	Silty Clay Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes _✓_ No ____

Remarks:

A positive indication of hydric soil was observed. The criterion for hydric soil is met.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Canajoharie, Montgomery County **Sampling Date:** 2021-Sept-23
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-EES-30_UPL-1
Investigator(s): Ethan Snyder, Abi Light **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Hillslope **Local relief (concave, convex, none):** Undulating **Slope (%):** 1 to 10
Subregion (LRR or MLRA): LRR L **Lat:** 42.8404474 **Long:** -74.5053189 **Datum:** WGS84
Soil Map Unit Name: Appleton silt loam, 3 to 8 percent slopes **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____ No ✓		
Hydric Soil Present?	Yes ✓ No ____	**Is the Sampled Area within a Wetland?**	**Yes ____ No ✓**
Wetland Hydrology Present?	Yes ____ No ✓	**If yes, optional Wetland Site ID:**	

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is UPL. Area is upland, not all three wetland parameters are present.

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____ No ✓	Depth (inches):	
Water Table Present?	Yes ____ No ✓	Depth (inches):	**Wetland Hydrology Present?** Yes ____ No ✓
Saturation Present? (includes capillary fringe)	Yes ____ No ✓	Depth (inches):	

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

Remarks:
The criterion for wetland hydrology is not met. No positive indication of wetland hydrology was observed.

VEGETATION -- Use scientific names of plants.

Sampling Point: W-EES-30_UPL-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Poa pratensis*	65	Yes	FACU
2. *Schedonorus arundinaceus*	50	Yes	FACU
3. *Taraxacum officinale*	15	No	FACU
4. *Trifolium repens*	5	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	135	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	0	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	0	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	135	x 4 =	540
UPL species	0	x 5 =	0
Column Totals	135	(A)	540 (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[1]

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

_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes _____ No ✓

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

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC− or drier).

SOIL

Sampling Point: W-EES-30_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 8	10YR 4/3	98	7.5YR 4/4	2	C	M/PL	Silty Clay Loam	
8 - 16	10YR 4/1	90	5YR 5/6	10	C	M	Gravelly Silty Clay	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes _✓_ No ____

Remarks:

A positive indication of hydric soil was observed. The criterion for hydric soil is met.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Sprakers, Montgomery County **Sampling Date:** 2021-Sept-21
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-IBP-01_PFO-1
Investigator(s): Isaac Pallant, Carson Rowe, Casey Pearce **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Flood Plain **Local relief (concave, convex, none):** Concave **Slope (%):** 0 to 1
Subregion (LRR or MLRA): LRR L **Lat:** 42.8508614 **Long:** -74.5193235 **Datum:** WGS84
Soil Map Unit Name: Phelps gravelly loam, fan **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes _✓_ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes _✓_ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _✓_ No ____		
Hydric Soil Present?	Yes _✓_ No ____	**Is the Sampled Area within a Wetland?**	**Yes _✓_ No ____**
Wetland Hydrology Present?	Yes _✓_ No ____	**If yes, optional Wetland Site ID:**	W-IBP-01

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is PFO. Area is wetland, all three wetland parameters are present.

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
_✓_ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____ No _✓_	Depth (inches):		
Water Table Present?	Yes _✓_ No ____	Depth (inches):	16	**Wetland Hydrology Present?** Yes _✓_ No ____
Saturation Present? (includes capillary fringe)	Yes _✓_ No ____	Depth (inches):	0	

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

Remarks:
The criterion for wetland hydrology is met. A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

VEGETATION -- Use scientific names of plants.

Sampling Point: W-IBP-01_PFO-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix alba*	30	Yes	FACW
2. *Populus deltoides*	20	Yes	FAC
3. *Carya cordiformis*	10	No	FAC
4.			
5.			
6.			
7.			
	60	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Cornus amomum*	50	Yes	FACW
2. *Rhamnus cathartica*	10	No	FAC
3.			
4.			
5.			
6.			
7.			
	60	= Total Cover	

Herb Stratum (Plot size: 5 ft)			
1. *Lysimachia nummularia*	70	Yes	FACW
2. *Impatiens capensis*	30	Yes	FACW
3. *Epilobium ciliatum*	15	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	115	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= 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:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	195	x 2 =	390
FAC species	40	x 3 =	120
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals	235	(A)	510 (B)

Prevalence Index = B/A = 2.2

Hydrophytic Vegetation Indicators:

____ 1- Rapid Test for Hydrophytic Vegetation

_✓_ 2 - Dominance Test is >50%

_✓_ 3 - Prevalence Index is ≤ 3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes _✓_ No ____

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

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC). A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

SOIL

Sampling Point: W-IBP-01_PFO-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 17	10YR 3/2	95	7.5YR 5/8	5	C	M	Sandy Loam	
17 - 20	2.5Y 4/1	75	5YR 5/6	25	C	M	Sandy Clay Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None
Depth (inches):

Hydric Soil Present? Yes ✓ No ____

Remarks:

A positive indication of hydric soil was observed. The criterion for hydric soil is met.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Sprakers, Montgomery County **Sampling Date:** 2021-Sept-21
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-IBP-01_UPL-1
Investigator(s): Isaac Pallant, Carson Rowe, Casey Pearce **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Levee **Local relief (concave, convex, none):** Convex **Slope (%):** 1 to 3
Subregion (LRR or MLRA): LRR L **Lat:** 42.8510515 **Long:** -74.5195054 **Datum:** WGS84
Soil Map Unit Name: Phelps gravelly loam, fan **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes _✓_ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes _✓_ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____ No _✓_		
Hydric Soil Present?	Yes ____ No _✓_	**Is the Sampled Area within a Wetland?**	**Yes ____ No _✓_**
Wetland Hydrology Present?	Yes ____ No _✓_	**If yes, optional Wetland Site ID:**	

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is UPL. Area is upland, not all three wetland parameters are present.

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____ No _✓_	Depth (inches):		
Water Table Present?	Yes ____ No _✓_	Depth (inches):		**Wetland Hydrology Present?** Yes ____ No _✓_
Saturation Present? (includes capillary fringe)	Yes ____ No _✓_	Depth (inches):		

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

Remarks:
The criterion for wetland hydrology is not met. No positive indication of wetland hydrology was observed.

VEGETATION -- Use scientific names of plants.

Sampling Point: W-IBP-01_UPL-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Rhus aromatica*	30	Yes	UPL
2. *Prunus serotina*	10	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	40	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Lonicera morrowii*	20	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	20	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Rubus allegheniensis*	45	Yes	FACU
2. *Solidago canadensis*	25	Yes	FACU
3. *Alliaria petiolata*	25	Yes	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	95	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= 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:	6	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	0	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	125	x 4 =	500
UPL species	30	x 5 =	150
Column Totals	155	(A)	650 (B)
Prevalence Index = B/A =	4.2		

Hydrophytic Vegetation Indicators:

_____ 1- Rapid Test for Hydrophytic Vegetation

_____ 2 - Dominance Test is > 50%

_____ 3 - Prevalence Index is ≤ 3.0[1]

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

_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes _____ No ✓

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

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC− or drier).

SOIL

Sampling Point: W-IBP-01_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 22	10YR 4/4	100					Rocky Silty Clay Loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes ____ No ✓

Remarks:

No positive indication of hydric soils was observed. The criterion for hydric soil is not met.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Canajoharie, Montgomery County **Sampling Date:** 2021-Sept-22
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-IBP-02_PEM-1
Investigator(s): Isaac Pallant, Carson Rowe, Casey Pearce **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Swale **Local relief (concave, convex, none):** Concave **Slope (%):** 1 to 3
Subregion (LRR or MLRA): LRR L **Lat:** 42.8497127 **Long:** -74.524247 **Datum:** WGS84
Soil Map Unit Name: Phelps gravelly loam, fan **NWI classification:** R2UB, R2UBH
Are climatic/hydrologic conditions on the site typical for this time of year? Yes _✓_ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes _✓_ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _✓_ No ____		
Hydric Soil Present?	Yes _✓_ No ____	**Is the Sampled Area within a Wetland?**	**Yes _✓_ No ____**
Wetland Hydrology Present?	Yes _✓_ No ____	**If yes, optional Wetland Site ID:**	W-IBP-02

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is PEM. Area is wetland, all three wetland parameters are present. wetland swale at field edge, likely used for drainage.

HYDROLOGY

Wetland Hydrology Indicators:

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

- _✓_ Surface Water (A1)
- _✓_ High Water Table (A2)
- _✓_ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes _✓_ No ____	Depth (inches):	1
Water Table Present?	Yes _✓_ No ____	Depth (inches):	3
Saturation Present? (includes capillary fringe)	Yes _✓_ No ____	Depth (inches):	0

Wetland Hydrology Present? Yes _✓_ No ____

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

Remarks:
The criterion for wetland hydrology is met. A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

VEGETATION -- Use scientific names of plants.

Sampling Point: W-IBP-02_PEM-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Phalaris arundinacea*	70	Yes	FACW
2. *Impatiens capensis*	15	No	FACW
3. *Eutrochium maculatum*	10	No	OBL
4. *Solidago gigantea*	5	No	FACW
5. *Solidago canadensis*	5	No	FACU
6. *Symphyotrichum lanceolatum*	5	No	FACW
7.			
8.			
9.			
10.			
11.			
12.			
	110	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= 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:

Total % Cover of:		Multiply By:	
OBL species	10	x 1 =	10
FACW species	95	x 2 =	190
FAC species	0	x 3 =	0
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals	110	(A)	220 (B)
Prevalence Index = B/A =	2		

Hydrophytic Vegetation Indicators:

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

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ✓ No ____

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

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC). A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00). A positive indication of hydrophytic vegetation was observed (Rapid Test for Hydrophytic Vegetation). Ag swale.

SOIL

Sampling Point: W-IBP-02_PEM-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 4.5	10YR 3/2	100					Mucky Clay Loam	
4.5 - 20	10YR 4/1	100					Rocky Silty Clay Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes _✓_ No ____

Remarks:

A positive indication of hydric soil was observed. The criterion for hydric soil is met. Soils potentially disturbed from agricultural activities, but not considered to be a significant disturbance.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Canajoharie, Montgomery County **Sampling Date:** 2021-Sept-22
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-IBP-02_UPL-1
Investigator(s): Isaac Pallant, Carson Rowe, Casey Pearce **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Hilltop **Local relief (concave, convex, none):** Convex **Slope (%):** 1 to 3
Subregion (LRR or MLRA): LRR L **Lat:** 42.84965 **Long:** -74.524385 **Datum:** WGS84
Soil Map Unit Name: Phelps gravelly loam, fan **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ✓, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ✓
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____ No ✓		
Hydric Soil Present?	Yes ____ No ✓	**Is the Sampled Area within a Wetland?**	**Yes ____ No ✓**
Wetland Hydrology Present?	Yes ____ No ✓	**If yes, optional Wetland Site ID:**	

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is UPL. Area is upland, not all three wetland parameters are present. intermittently mowed plot.

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____ No ✓	Depth (inches):	
Water Table Present?	Yes ____ No ✓	Depth (inches):	**Wetland Hydrology Present?** Yes ____ No ✓
Saturation Present? (includes capillary fringe)	Yes ____ No ✓	Depth (inches):	

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

Remarks:
The criterion for wetland hydrology is not met. No positive indication of wetland hydrology was observed.

VEGETATION -- Use scientific names of plants.

Sampling Point: W-IBP-02_UPL-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Phalaris arundinacea*	50	Yes	FACW
2. *Galium mollugo*	40	Yes	FACU
3. *Taraxacum officinale*	15	No	FACU
4. *Setaria pumila*	10	No	FAC
5. *Trifolium fucatum*	5	No	UPL
6. *Glechoma hederacea*	5	No	FACU
7.			
8.			
9.			
10.			
11.			
12.			
	125	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= 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:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	50	x 2 =	100
FAC species	10	x 3 =	30
FACU species	60	x 4 =	240
UPL species	5	x 5 =	25
Column Totals	125	(A)	395 (B)
Prevalence Index = B/A =	3.2		

Hydrophytic Vegetation Indicators:

____ 1- Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is > 50%

____ 3 - Prevalence Index is ≤ 3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ____ No ✓

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

Residential lawn. No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC− or drier).

SOIL

Sampling Point: W-IBP-02_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 20	10YR 4/4	100					Rocky Clay Loam	very

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes ____ No ✓

Remarks:

No positive indication of hydric soils was observed. The criterion for hydric soil is not met.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Sprakers, Montgomery County **Sampling Date:** 2021-Sept-22
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-IBP-03_PFO-1
Investigator(s): Isaac Pallant, Carson Rowe, Casey Pearce **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Depression **Local relief (concave, convex, none):** Concave **Slope (%):** 0 to 1
Subregion (LRR or MLRA): LRR L **Lat:** 42.8474166 **Long:** -74.5169873 **Datum:** WGS84
Soil Map Unit Name: Fredonia silt loam **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes _✓_ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes _✓_ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _✓_ No ____		
Hydric Soil Present?	Yes _✓_ No ____	**Is the Sampled Area within a Wetland?**	**Yes _✓_ No ____**
Wetland Hydrology Present?	Yes _✓_ No ____	**If yes, optional Wetland Site ID:**	W-IBP-03

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is PFO. Area is wetland, all three wetland parameters are present.

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____ No _✓_	Depth (inches):	
Water Table Present?	Yes ____ No _✓_	Depth (inches):	**Wetland Hydrology Present?** Yes _✓_ No ____
Saturation Present? (includes capillary fringe)	Yes ____ No _✓_	Depth (inches):	

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

Remarks:
The criterion for wetland hydrology is met. A positive indication of wetland hydrology was observed (at least two secondary indicators).

VEGETATION -- Use scientific names of plants.

Sampling Point: W-IBP-03_PFO-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus tremuloides*	30	Yes	FACU
2. *Ulmus americana*	15	Yes	FACW
3. *Salix bebbiana*	20	Percent cover cannot be greater than a previous species	FACW
4.			
5.			
6.			
7.			
	65	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Rhamnus cathartica*	30	Yes	FAC
2. *Lonicera morrowii*	10	Yes	FACU
3. *Cornus amomum*	10	Yes	FACW
4.			
5.			
6.			
7.			
	50	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Onoclea sensibilis*	30	Yes	FACW
2. *Symphyotrichum lanceolatum*	15	Yes	FACW
3. *Rubus idaeus*	10	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	55	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1. *Vitis riparia*	10	Yes	FAC
2.			
3.			
4.			
	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:	8	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	75	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	90	x 2 =	180
FAC species	40	x 3 =	120
FACU species	50	x 4 =	200
UPL species	0	x 5 =	0
Column Totals	180	(A)	500 (B)
Prevalence Index = B/A =	2.8		

Hydrophytic Vegetation Indicators:

____ 1- Rapid Test for Hydrophytic Vegetation

_✓_ 2 - Dominance Test is >50%

_✓_ 3 - Prevalence Index is ≤ 3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes _✓_ No ____

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

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC). A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

SOIL

Sampling Point: W-IBP-03_PFO-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 20	10YR 3/2	100					Rocky Clay Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes _✓_ No ____

Remarks:

A positive indication of hydric soil was observed. The criterion for hydric soil is met.

Vegetation Photos

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Sprakers, Montgomery County **Sampling Date:** 2021-Sept-22
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-IBP-03_UPL-1
Investigator(s): Isaac Pallant, Carson Rowe, Casey Pearce **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** None **Slope (%):** 0 to 1
Subregion (LRR or MLRA): LRR L **Lat:** 42.847587 **Long:** -74.516879 **Datum:** WGS84
Soil Map Unit Name: Alton gravelly loam, 3 to 8 percent slopes **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ✓, Soil ✓, or Hydrology ✓ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ✓
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____ No ____		
Hydric Soil Present?	Yes ____ No ✓	**Is the Sampled Area within a Wetland?**	**Yes ____ No ✓**
Wetland Hydrology Present?	Yes ____ No ✓	**If yes, optional Wetland Site ID:**	

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is UPL. Area is upland, not all three wetland parameters are present. Circumstances are not normal due to agricultural activities.

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____ No ✓	Depth (inches):	
Water Table Present?	Yes ____ No ✓	Depth (inches):	**Wetland Hydrology Present?** Yes ____ No ✓
Saturation Present? (includes capillary fringe)	Yes ____ No ✓	Depth (inches):	

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

Remarks:
The criterion for wetland hydrology is not met. No positive indication of wetland hydrology was observed.

VEGETATION -- Use scientific names of plants.

Sampling Point: W-IBP-03_UPL-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Zea mays*	50	Yes	UPL
2. *Setaria pumila*	20	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	70	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= 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:

Total % Cover of:		Multiply By:	
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	50	x 5 =	250
Column Totals	70	(A)	310 (B)
Prevalence Index = B/A =	4.4		

Hydrophytic Vegetation Indicators:

_____ 1- Rapid Test for Hydrophytic Vegetation

_____ 2 - Dominance Test is > 50%

_____ 3 - Prevalence Index is ≤ 3.0[1]

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

_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes _____ No _____

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

Active agricultural field. No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC− or drier).

SOIL

Sampling Point: W-IBP-03_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 20	7.5YR 4/2	100					Rocky Silt Loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None
Depth (inches):

Hydric Soil Present? Yes ____ No ✓

Remarks:

No positive indication of hydric soils was observed. The criterion for hydric soil is not met.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Canajoharie, Montgomery County **Sampling Date:** 2021-Sept-22
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-IBP-04_PEM-1
Investigator(s): Isaac Pallant, Carson Rowe, Casey Pearce **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Swale **Local relief (concave, convex, none):** Concave **Slope (%):** 0 to 1
Subregion (LRR or MLRA): LRR L **Lat:** 42.8431158 **Long:** -74.5072781 **Datum:** WGS84
Soil Map Unit Name: Fluvaquents, loamy **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes _✓_ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes _✓_ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _✓_ No ____		
Hydric Soil Present?	Yes _✓_ No ____	**Is the Sampled Area within a Wetland?**	**Yes _✓_ No ____**
Wetland Hydrology Present?	Yes _✓_ No ____	**If yes, optional Wetland Site ID:**	W-IBP-04

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is PEM. Area is wetland, all three wetland parameters are present. successional old 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)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Wetland Hydrology Present? Yes _✓_ No ____

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

Remarks:
The criterion for wetland hydrology is met. A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

VEGETATION -- Use scientific names of plants.

Sampling Point: W-IBP-04_PEM-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Cornus racemosa*	15	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	15	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Galium mollugo*	20	Yes	FACU
2. *Solidago gigantea*	15	Yes	FACW
3. *Symphyotrichum lanceolatum*	15	Yes	FACW
4. *Scirpus atrovirens*	15	Yes	OBL
5. *Carex cristatella*	15	Yes	FACW
6. *Symphyotrichum novae-angliae*	15	Yes	FACW
7. *Juncus tenuis*	10	No	FAC
8. *Eupatorium perfoliatum*	10	No	FACW
9. *Eutrochium maculatum*	10	No	OBL
10.			
11.			
12.			
	125	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= 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:

Total % Cover of:		Multiply By:	
OBL species	25	x 1 =	25
FACW species	70	x 2 =	140
FAC species	25	x 3 =	75
FACU species	20	x 4 =	80
UPL species	0	x 5 =	0
Column Totals	140	(A)	320 (B)
Prevalence Index = B/A =	2.3		

Hydrophytic Vegetation Indicators:

____ 1- Rapid Test for Hydrophytic Vegetation

_✓_ 2 - Dominance Test is >50%

_✓_ 3 - Prevalence Index is ≤ 3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes _✓_ No ____

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

Fallow field. A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC). A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

SOIL

Sampling Point: W-IBP-04_PEM-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 8	10YR 3/2	100					Mucky Silty Clay Loam	
8 - 20	10YR 4/1	90	2.5YR 4/4	10	C	M	Gravelly Silty Clay	
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes _✓_ No ____

Remarks:

A positive indication of hydric soil was observed. The criterion for hydric soil is met.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Canajoharie, Montgomery County **Sampling Date:** 2021-Sept-22
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-IBP-04_PSS-2
Investigator(s): Isaac Pallant, Carson Rowe, Casey Pearce **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Depression **Local relief (concave, convex, none):** Concave **Slope (%):** 0 to 1
Subregion (LRR or MLRA): LRR L **Lat:** 42.8445111 **Long:** -74.5087122 **Datum:** WGS84
Soil Map Unit Name: Fluvaquents, loamy **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes _✓_ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes _✓_ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _✓_ No ____		
Hydric Soil Present?	Yes _✓_ No ____	**Is the Sampled Area within a Wetland?**	**Yes _✓_ No ____**
Wetland Hydrology Present?	Yes _✓_ No ____	**If yes, optional Wetland Site ID:**	W-IBP-04

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is PSS. Area is wetland, all three wetland parameters are present.

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
_✓_ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
_✓_ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____ No _✓_	Depth (inches):		
Water Table Present?	Yes _✓_ No ____	Depth (inches):	11	**Wetland Hydrology Present?** Yes _✓_ No ____
Saturation Present? (includes capillary fringe)	Yes _✓_ No ____	Depth (inches):	0	

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

Remarks:
The criterion for wetland hydrology is met. A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

VEGETATION -- Use scientific names of plants.

Sampling Point: W-IBP-04_PSS-2

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Cornus racemosa*	45	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	45	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Onoclea sensibilis*	30	Yes	FACW
2. *Solidago gigantea*	30	Yes	FACW
3. *Solidago canadensis*	10	No	FACU
4. *Symphyotrichum lanceolatum*	10	No	FACW
5. *Euthamia graminifolia*	10	No	FAC
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	90	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= 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:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	70	x 2 =	140
FAC species	55	x 3 =	165
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals	135	(A)	345 (B)
Prevalence Index = B/A =	2.6		

Hydrophytic Vegetation Indicators:

____ 1- Rapid Test for Hydrophytic Vegetation

_✓_ 2 - Dominance Test is >50%

_✓_ 3 - Prevalence Index is ≤ 3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes _✓_ No ____

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

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC). A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

SOIL

Sampling Point: W-IBP-04_PSS-2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 6	10YR 3/2	90	2.5YR 4/6	10	C	M	Silty Clay Loam	
6 - 20	10YR 4/1	75	7.5YR 5/8	25	C	M	Silty Clay	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes _✓_ No ____

Remarks:

A positive indication of hydric soil was observed. The criterion for hydric soil is met.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Canajoharie, Montgomery County **Sampling Date:** 2021-Sept-22
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-IBP-04_UPL-1
Investigator(s): Isaac Pallant, Carson Rowe, Casey Pearce **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** None **Slope (%):** 0 to 1
Subregion (LRR or MLRA): LRR L **Lat:** 42.8430507 **Long:** -74.5073867 **Datum:** WGS84
Soil Map Unit Name: Fluvaquents, loamy **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ✓, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ✓
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____ No ✓		
Hydric Soil Present?	Yes ____ No ✓	**Is the Sampled Area within a Wetland?**	**Yes ____ No ✓**
Wetland Hydrology Present?	Yes ____ No ✓	**If yes, optional Wetland Site ID:**	

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is UPL. Area is upland, not all three wetland parameters are present. 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)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____ No ✓	Depth (inches):	
Water Table Present?	Yes ____ No ✓	Depth (inches):	**Wetland Hydrology Present?** Yes ____ No ✓
Saturation Present? (includes capillary fringe)	Yes ____ No ✓	Depth (inches):	

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

Remarks:
The criterion for wetland hydrology is met. No positive indication of wetland hydrology was observed.

VEGETATION -- Use scientific names of plants.

Sampling Point: W-IBP-04_UPL-1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Phalaris arundinacea*	30	Yes	FACW
2. *Poa annua*	30	Yes	FACU
3. *Plantago major*	15	No	FACU
4. *Trifolium pratense*	15	No	FACU
5. *Taraxacum officinale*	10	No	FACU
6. *Plantago lanceolata*	5	No	FACU
7. *Galium mollugo*	5	No	FACU
8.			
9.			
10.			
11.			
12.			
	110	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= 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:

Total % Cover of:		Multiply By:	
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 =	3.5		

Hydrophytic Vegetation Indicators:

____ 1- Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is > 50%

____ 3 - Prevalence Index is ≤ 3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ____ No ✓

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

Fallow field. Residential lawn. No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC− or drier).

SOIL

Sampling Point: W-IBP-04_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 17	7.5YR 4/3	100					Clay Loam	
17 - 20	10YR 5/3	90	2.5Y 6/3	10	C	M	Gravelly Sandy Clay Loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes ____ No ✓

Remarks:

No positive indication of hydric soils was observed. The criterion for hydric soil is not met.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Flat Creek Solar Project **City/County:** Root, Montgomery County **Sampling Date:** 2021-Sept-22
Applicant/Owner: SunEast **State:** New York **Sampling Point:** W-IBP-04_UPL-2
Investigator(s): Isaac Pallant, Carson Rowe, Casey Pearce **Section, Township, Range:** NA
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** Undulating **Slope (%):** 1 to 3
Subregion (LRR or MLRA): LRR L **Lat:** 42.8446715 **Long:** -74.5085517 **Datum:** WGS84
Soil Map Unit Name: Phelps gravelly loam, fan **NWI classification:** None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____ No ✓		
Hydric Soil Present?	Yes ____ No ✓	**Is the Sampled Area within a Wetland?**	**Yes ____ No ✓**
Wetland Hydrology Present?	Yes ____ No ✓	**If yes, optional Wetland Site ID:**	

Remarks: (Explain alternative procedures here or in a separate report)
Covertype is UPL. Area is upland, not all three wetland parameters are present. roadside.

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____ No ✓	Depth (inches):		
Water Table Present?	Yes ____ No ✓	Depth (inches):		**Wetland Hydrology Present?** Yes ____ No ✓
Saturation Present? (includes capillary fringe)	Yes ____ No ✓	Depth (inches):		

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

Remarks:
The criterion for wetland hydrology is not met. No positive indication of wetland hydrology was observed.

VEGETATION -- Use scientific names of plants.

Sampling Point: W-IBP-04_UPL-2

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus americana*	10	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	10	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Solidago canadensis*	80	Yes	FACU
2. *Galium mollugo*	30	Yes	FACU
3. *Daucus carota*	10	No	UPL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	120	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
	0	= 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:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	0	x 3 =	0
FACU species	110	x 4 =	440
UPL species	10	x 5 =	50
Column Totals	130	(A)	510 (B)
Prevalence Index = B/A =	3.9		

Hydrophytic Vegetation Indicators:

_____ 1- Rapid Test for Hydrophytic Vegetation

_____ 2 - Dominance Test is > 50%

_____ 3 - Prevalence Index is ≤ 3.0[1]

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

_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes _____ No ✓

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

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC− or drier). non maintained road shoulder.

SOIL

Sampling Point: W-IBP-04_UPL-2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 8	7.5YR 4/3	100					Clay Loam	
8 - 20	10YR 3/3	90	7.5YR 5/8	10	C	M	Gravelly Clay Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes ____ No ✓

Remarks:

No positive indication of hydric soils was observed. The criterion for hydric soil is not met.

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West