



WETLAND AND STREAM DELINEATION REPORT

Enfield Solar Development
56 South Applegate Road, Enfield, New York
LaBella Project No. 2203009

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1.0 INTRODUCTION

1.1 PROJECT DESCRIPTION

Norbut Solar Farms (Norbut, Client) retained LaBella Associates, D.P.C. (LaBella) to perform a wetland and stream delineation for the Enfield Solar Development (the Project). Norbut plans to construct a solar array in the Town of Enfield, Tompkins County, New York. For the purposes of the wetland and stream delineation, the Project Study Area is defined as an approximately 252-acre area consisting of a remote controlled airplane field, areas maintained for solar arrays, forested areas, and actively farmed agricultural fields. Please refer to Appendix A, Figure 1 for the Study Area location and boundary. The geographic coordinates of the approximate Study Area center are: 42.448323, -76.608559 (NAD83). Wetland and stream delineation field work was performed from October 5 to 7 and 9, 2020.

1.2 PURPOSE

This report was prepared for the purpose of obtaining concurrence from the United States Army Corps of Engineers (USACE)–Buffalo District on jurisdictional wetland and stream boundaries within the Study Area, in support of the Project. Specific tasks performed for this report include a field delineation of Federal Waters of the United States (WOUS) encompassing wetlands and streams, New York State Article 24 Freshwater Wetlands (State wetlands), and Article 15 State-classified Streams within the Study Area, a survey of jurisdictional water boundaries, and a detailed description of the delineated waters based on hydrology, vegetation, and soils information collected in the field.

This report describes the results of the delineation and data collection efforts performed by LaBella, and a description of the wetlands and streams that were delineated. This document is intended to provide the information required to support a Jurisdictional Determination with the USACE-Buffalo District or a Joint Permit Application if regulatory permit authorizations are required.

2.0 METHODOLOGY

2.1 RESOURCES

Materials and literature supporting this investigation are derived from a number of sources, including: United States Geological Survey (USGS) 7.5-minute Topographic Quadrangles; United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Tompkins County, New York Soil Survey (USDA-NRCS, 1965); USDA-NRCS Soil Map Unit shapefiles; USDA-NRCS Field Indicators of Hydric Soils in the United States (USDA-NRCS, 2018); Munsell Soil Color Charts (Kollmorgen Corporation, 1988); Federal Emergency Management Agency (FEMA) digital Flood Hazard data; United States Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) shapefiles; USGS 10 meter Digital Elevation Model (DEM); NYSDEC Freshwater Wetland shapefiles; NYSDEC Environmental Resource Mapper (NYSDEC, 2019); NYSDEC Stream Classification shapefiles; University of Nebraska-Lincoln United States Drought Monitor (University of Nebraska-Lincoln, 2020); and Tompkins County Natural Resource Inventory GIS Mapper (Tompkins County, 2020). Vascular plant names follow nomenclature found in the USDA PLANTS database (USDA, 2019). Wetland indicator status for vegetative species was determined by reference to the National Wetland Plant List

(Lichvar et al., 2018). Jurisdictional features are characterized according to the NWI mapped wetlands and deepwater habitat classification system (Cowardin, 1979).

2.2 JURISDICTIONAL AREA DELINEATION

LaBella field staff performed the wetland and stream delineation within the Study Area from October 5 to 7 and 9, 2020 in accordance with the methods presented in the *1987 Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987), as supplemented by the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, Version 2.0* (USACE, 2012).

Wetland and stream boundaries were defined in the field with sequentially-numbered pink surveyor's flagging or pink pin flags. Each flag was digitally recorded using a sub-foot Global Positioning System unit. Data and observations were collected from both wetland and upland data points within the Study Area. These data points were recorded on routine USACE Wetland Determination Data Forms (Appendix B).

Representative photographs were taken of the data point locations, delineated wetlands, and streams within the Study Area (Appendix C).

The USACE has jurisdiction of WOUS under section 404 of the Clean Water Act (CWA) (40 Code of Federal Regulations [CFR] 230) (CFR, 2010).

The Freshwater Wetlands Act (FWA) (Article 24 and Title 23 of Article 71 of the Environmental Conservation Law [ECL]) gives the NYSDEC jurisdiction over State wetlands and a 100-foot adjacent area. Article 24 of the FWA requires the NYSDEC to map all State-protected wetlands (generally 12.4 acres or greater) to allow landowners and other interested parties a means to determine where State jurisdictional wetlands exist.

Under Article 15 of the ECL (Protection of Waters), the NYSDEC has jurisdiction over any activity that disturbs the bed or banks of protected streams. A protected stream is any stream, or particular portion of a stream, that has been assigned by the NYSDEC any of the following classifications or standards: AA, AA(t), A, A(t), A(ts), B, B(t), B(ts), C(t), or C(ts) (6 NYCRR Part 701). Additional NYSDEC stream classifications include: C and D.

3.0 PHYSICAL CHARACTERISTICS AND RESOURCES

3.1 PHYSIOGRAPHY

The Project is located in the Northeastern Forage and Forest Region (LRR R), Glaciated Allegheny Plateau and Catskill Mountains (MLRA 140). Land cover within the Study Area consists of forests, a remote controlled airplane field, solar arrays, and actively farmed agricultural fields. The Study Area topography slopes down gently from east to west ranging in elevation from approximately 1,440 feet above mean sea level (AMSL) in the northeastern portion of the Study Area to approximately 1,295 feet AMSL along the northwestern Study Area boundary (Tompkins County Planning, 2020).

3.2 SOILS

The Soil Survey of Tompkins County, New York and NRCS Web Soil Survey indicates there are eight soil map units within the Project Study Area, as outlined in Table 1 (refer to Appendix D).

Table 1. Soil Map units within the Study Area

NRCS Soil Map Unit	Map Unit Symbol	Drainage Class	Hydric Soil?	Hydric Rating (%)
Bath and Valois soils, 5 to 15 percent slopes	BgC	Well drained	No	0
Erie channery silt loam, 3 to 8 percent slopes	EbB	Poorly drained	Yes	5
Erie channery silt loam, 3 to 8 percent slopes, eroded	EbB3	Poorly drained	Yes	5
Erie-Chippewa channery silt loams, 0 to 3 percent slopes	ErA	Poorly drained	Yes	35
Howard gravelly loam, 5 to 15 percent simple slopes	HdC	Well drained	No	0
Langford channery silt loam, 2 to 8 percent slopes	LaB	Well drained	No	0
Langford channery silt loam, 3 to 8 percent slopes, eroded	LaB3	Well drained	No	0
Wayland soils complex, 0 to 3 percent slopes, frequently flooded	Ws	Poorly drained	Yes	90

Source: USDA, NRCS, 1965; Soil Survey Staff, 2019

The Hydric Soil ratings outlined in Table 1 and the Web Soil Survey map provided in Appendix D indicate there are four soil map units that contain hydric components. These map units range from five percent to 90 percent hydric components. The Web Soil Survey indicates the Erie soil map units have a depth to water table of 7 to 14 inches and 0 to 6 inches for the Wayland soil map unit.

3.3 HYDROLOGY

The Study Area is located in the Seneca watershed (USGS Hydrologic Unit code 04140201). The source of surface hydrology for the Study Area is precipitation and surface water runoff from the adjacent hillsides. Groundwater is also a source of hydrology for some of the wetlands within the Study Area. Except for the isolated wetlands discussed herein, all wetlands and streams within the Study Area flow to Enfield Creek, then Cayuga Inlet and Cayuga Lake.

The City of Ithaca receives an average of 39.2 inches of precipitation annually (NRCC, 2020). The United States Drought Monitor indicates moderate drought conditions prevail for the Study Area during the time of the site visit (University of Nebraska-Lincoln, 2020).

4.0 AGENCY RESOURCES

4.1 USFWS NATIONAL WETLAND INVENTORY

USFWS NWI mapping indicates there are eight NWI-mapped wetlands within the Study Area (refer to Appendix A, Figure 2), as outlined in Table 2.

Table 2. USFWS-NWI Mapped Wetlands within the Study Area

NWI Wetland Code	Classification Code description	Delineated Wetland
PSS1E	Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded/Saturated	Wetland 1
PFO1E	Palustrine, Forested, Broad-leaved Deciduous, Seasonally Flooded/Saturated	Wetland 3
PFO1E	Palustrine, Forested, Broad-leaved Deciduous, Seasonally Flooded/Saturated	Wetland 3
PSS1E	Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded/Saturated	Wetland 3
PEM1E	Palustrine, Emergent, Persistent, Seasonally Flooded/Saturated	Wetland 3
PFO1E	Palustrine, Forested, Broad-leaved Deciduous, Seasonally Flooded/Saturated	N/A
PSS1E	Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded/Saturated	Wetland 7
R4SBC	Riverine, Intermittent, Streambed, Seasonally Flooded	Stream 1
R4SBC	Riverine, Intermittent, Streambed, Seasonally Flooded	Streams 2, 4, and 6

4.2 NYSDEC FRESHWATER WETLANDS AND PROTECTED STREAMS

NYSDEC freshwater wetland mapping indicates there are no State-protected wetlands within the Study Area (refer to Appendix A, Figure 3). The closest State-protected wetland is TW-4 approximately 5,150 feet to the northeast. According to NYSDEC stream classification mapping there is one State-classified stream that corresponds to four delineated stream segments within the Study Area as outlined in Table 3 (refer to Appendix A, Figure 3).

Table 3. NYSDEC Classified Streams within the Study Area

Stream Name	Stream Classification	Delineated Stream
898-350	C	Stream 1
898-350	C	Stream 2
898-350	C	Stream 4
898-350	C	Stream 6

4.3 FEMA 100-YEAR FLOOD ZONES

FEMA has not completed a study to determine flood hazard areas for the Town of Enfield, New York, and therefore a flood map has not been published for the Study Area.

5.0 RESULTS

LaBella field staff delineated seven PEM wetlands, four PFO wetlands, two PEM/PFO wetlands, and six intermittent streams within the Study Area. Tables 4 and 5 provide areas and classifications of the delineated WOUS. The remainder of the Study Area is considered to be upland forested areas, actively farmed agricultural fields, and areas maintained for solar arrays. These habitats lack a dominance of hydrophytic vegetation, wetland hydrology, and/or hydric soils.

Table 4. Delineated Wetlands

Wetland ID	Cowardin Classification	Acreage Onsite	Latitude, Longitude (NAD83)	Jurisdiction
Wetland 1	PFO	1.69	42.443276, -76.607443	USACE
Wetland 2	PFO	11.71	42.448323, -76.608559	USACE
	PEM	0.62		
Wetland 3	PFO	24.82	42.446127, -76.599388	USACE
	PEM	2.02		
Wetland 4	PEM	0.08	42.441524, -76.601812	USACE
Wetland 5	PEM	0.16	42.446745, -76.601164	USACE (potentially non-jurisdictional)
Wetland 6	PEM	3.67	42.446333, -76.603254	USACE (potentially non-jurisdictional)
Wetland 7	PEM	3.12	42.450656, -76.603102	USACE (potentially non-jurisdictional)
Wetland 8	PFO	0.52	42.446663, -76.606963	USACE
Wetland 9	PEM	0.46	42.445504, -76.608448	USACE (potentially non-jurisdictional)
Wetland 10	PFO	0.11	42.440707, -76.601676	USACE
Wetland 11	PFO	0.23	42.439012, -76.600861	USACE
Wetland 12	PEM	0.05	42.445269, -76.606459	USACE (potentially non-jurisdictional)
Wetland 13	PEM	0.05	42.448088, -76.60656	USACE (potentially non-jurisdictional)

Table 5. Delineated Streams

Stream ID	NYSDEC Class, Flow Regime	Stream Order	Size in Study Area	Stream Bed Substrate	Latitude, Longitude (NAD83)	Jurisdiction
Stream 1	C, Intermittent	1st	1,795 ft long 6 ft wide	cobble, gravel, sand, and silt	42.442747, -76.606176	USACE
Stream 2	C, Intermittent	1st	420 ft long 1 ft wide	cobble, gravel, and clay	42.439164, -76.599698	USACE
Stream 3	Unclassified, Intermittent	1st	765 ft long 1 ft wide	cobble, gravel, and clay	42.440543, -76.600667	USACE
Stream 4	C, Intermittent	1st	700 ft long 2 ft wide	cobble, gravel, and clay	42.441691, -76.601089	USACE
Stream 5	Unclassified, Intermittent	1st	1,680 ft long 2 ft wide	cobble, gravel, and clay	42.44627, -76.607607	USACE
Stream 6	C, Intermittent	1st	325 ft long 2 ft wide	cobble, gravel, sand, and silt	42.43928, -76.601504	USACE

5.1 UPLANDS

Dominant vegetation within and along active agricultural upland areas include red maple (*Acer rubrum*), white ash (*Fraxinus americana*), black cherry (*Prunus serotina*), hophornbeam (*Ostrya virginiana*), arrowwood (*Viburnum dentatum*), redosier dogwood (*Cornus sericea*), Autumn olive (*Elaeagnus umbellata*), multiflora rose (*Rosa multiflora*), bristly dewberry (*Rubus hispidus*), common rush (*Juncus effusus*), Canada goldenrod (*Solidago canadensis*), white panicle aster (*Symphotrichum lanceolatum*), crookedstem aster (*Symphotrichum prenanthoides*), giant goldenrod (*Solidago gigantea*), flat-top goldentop (*Euthamia graminifolia*), redtop panicgrass (*Panicum rigidulum*), orchardgrass (*Dactylis glomerata*), stickwilly (*Galium aparine*), common milkweed (*Asclepias syriaca*), and corn (*Zea mays*).

Dominant vegetation within forested upland areas include red maple, black cherry, American beech (*Fagus grandifolia*), white ash, American elm (*Ulmus americana*), hophornbeam, pignut hickory (*Carya ovalis*), sugar maple (*Acer saccharum*), common buckthorn (*Rhamnus cathartica*), multiflora rose, white panicle aster, jumpseed (*Persicaria virginiana*), Canada goldenrod, Robert geranium (*Geranium robertianum*), flat-top goldentop, timothy (*Phleum pratense*), summer grape (*Vitis aestivalis*), and Christmas fern (*Polystichum acrostichoides*).

The Data Forms presented in Appendix B characterize the wetland conditions and their adjacent uplands observed in the Study Area.

5.2 WETLANDS

5.2.1 PEM Wetlands

Wetlands 5, 6, 7, 9, 12, and 13 are PEM wetlands located primarily within actively farmed agricultural fields and areas maintained for solar arrays on the northern portion of the Study Area. These wetlands are hydrologically isolated from other wetlands and streams, and are therefore considered to be non-jurisdictional. The Tompkins County Water Resources Council wetland mapping identifies the majority of Wetland 7 as being a wetland area and NWI mapping identifies the northeast portion of Wetland 7 as being a wetland area. Small portions of Wetlands 6 and 7 extend slightly into adjacent areas within forested cover.

Wetland 4 is a PEM wetland located on the southern portion of the Study Area surrounded by adjacent forested areas. It is hydrologically connected to Stream 4 beyond the Study Area to the west, which flows to Stream 1 and Enfield Creek.

Dominant and common vegetation in PEM wetlands within the Study Area includes yellow birch (*Betula alleghaniensis*), green ash (*Fraxinus pennsylvanica*), American hornbeam (*Carpinus caroliniana*), black willow (*Salix nigra*), woolgrass (*Scirpus cyperinus*), narrowleaf cattail (*Typha angustifolia*), broadleaf cattail (*Typha latifolia*), reed canarygrass (*Phalaris arundinacea*), redtop panicgrass, flat-top goldentop, tussock sedge (*Carex stricta*), fox sedge (*Carex vulpinoidea*), sensitive fern (*Onoclea sensibilis*), and jewelweed (*Impatiens capensis*).

At the time of the site visit, wetland hydrology indicators observed included oxidized rhizospheres on living roots, drainage patterns, and saturation visible on aerial imagery. Certain PEM wetlands also exhibited geomorphic position and the dominant vegetation passed the FAC-neutral test. Soils exhibit hydric soil indicators depleted matrix (10YR 4/1, 4/2 and 5/2 matrix colors with redoximorphic features), depleted below dark surface (depleted matrix below a reduced matrix), and redox dark surface (10YR 2/1 matrix color with redoximorphic features).

5.2.2 PFO Wetlands

Wetlands 1, 8, and 11 are PFO wetlands located along intermittent streams within the Study Area. Wetlands 1 and 8 are located along Streams 1 and 5 in the central portion of the Study Area, respectively. The Tompkins County Water Resources Council wetland mapping and NWI mapping identifies Wetland 1 as being a wetland area. Stream 2 flows into Wetland 11 in the southern portion of the Study Area, which flows to Stream 6. Wetlands 1, 8, and 11 are hydrologically connected to Stream 1 and Enfield Creek via these streams. Wetland 10 is a PFO wetland in the southern portion of the Study Area that is not located along a delineated stream within the Study Area. Based on observations during the site visit, it is presumed Wetland 10 extends west beyond the Study Area and is hydrologically connected to Stream 3, and ultimately Stream 1 and Enfield Creek.

Dominant vegetation in PFO wetlands within the Study Area includes red maple, yellow birch, green ash, basswood (*Tilia americana*), quaking aspen (*Populus tremuloides*), hophornbeam, American hornbeam, sugar maple, multiflora rose, crookedstem aster, jewelweed, white panicle aster, purpleleaf willowherb (*Epilobium coloratum*), and sensitive fern. At the time of the site visit, wetland hydrology indicators observed included surface water, a high water table, saturated soils, drainage patterns, and moss trim lines. Certain wetlands also exhibited geomorphic position. Soils exhibit hydric soil indicators

depleted matrix (10YR 4/1 and 4/2 matrix colors with redoximorphic features), and redox dark surface (10YR 3/2 matrix color with redoximorphic features).

5.2.3 PEM/PFO Wetlands

Wetland 2 is a PEM/PFO wetland that is predominantly PFO and extends in a north/south orientation through forested areas in the central portion of the Study Area. The Tompkins County Water Resources Council wetland mapping identifies four wetland areas within areas of Wetland 2. A predominantly PEM linear wetland swale also extends from the northwest end of the larger wetland in an east/west orientation through actively farmed agricultural fields and a forested area. The wetland swale flows east to west and based on aerial photos is presumed to connect to other waters beyond South Applegate Road to the west that flow to Enfield Creek. A small PEM area of Wetland 2 is also present just south of where the swale meets South Applegate Road. Wetland 2 is also hydrologically connected to Enfield Creek via Stream 1, which forms within and flows out of the southern end of the wetland.

Dominant vegetation in the PFO portion of Wetland 2 within the Study Area includes green ash, red maple, multiflora rose, sensitive fern, and crookedstem aster. Dominant vegetation within the PEM portions of Wetland 2 within the Study Area includes woolgrass and sedges (*Carex* spp.). At the time of the site visit, wetland hydrology indicators observed included saturated soils, drainage patterns, and a shallow aquitard. Wetland 2 also exhibited geomorphic position and the dominant vegetation passed the FAC-neutral test. Soils exhibit hydric soil indicators depleted matrix (10YR 4/2 matrix color with redoximorphic features) and redox dark surface (10YR 3/2 matrix color with redoximorphic features).

Wetland 3 is a PEM/PFO wetland that is predominantly PFO and extends in a north/south orientation along nearly the entire east side of the Study Area. The PEM portion of Wetland 3 is present at its northern end in an area maintained for solar arrays. The Tompkins County Water Resources Council wetland mapping and NWI mapping identifies portions of delineated Wetland 3 as wetland areas. Streams 2, 3, and 4 originate from the southwest side of Wetland 3 and ultimately flow to Stream 1 and Enfield Creek.

Dominant vegetation in Wetland 3 within the Study Area includes black willow, redosier dogwood, New England aster (*Symphytotrichum novae-angliae*), and sensitive fern. At the time of the site visit, wetland hydrology indicators observed included a high water table and saturated soils, and the dominant vegetation passed the FAC-neutral test. Soils exhibit hydric soil indicator black histic (layer of muck greater than 8 inches).

5.3 STREAMS

All delineated streams are intermittent and flow through entirely forested areas within the Study Area. The streams are grouped together for discussion by the wetland within the Study Area that is the source of their hydrology.

5.3.1 Streams 1 and 5 (Wetland 2)

Stream 1 originates within the southern end of Wetland 2 in the central portion of the Study Area, then flows southwest and northwest beyond the Study Area. The portion of Stream 1 that flows northwest within the Study Area is mapped as an intermittent stream on the USGS topographic map and NWI mapping. This portion of Stream 1 is also a NYSDEC Class C stream. The entirety of Stream 1 is

mapped by the Tompkins County Water Resource Council. All other delineated streams within the Study Area flow to Stream 1, which flows to Enfield Creek. Average stream width is approximately six feet. Substrate consists of cobbles, gravel, sand, and silt. Undercut banks, overhanging vegetation, pool-riffle complexes, and isolated pools with fish were observed.

Stream 5 originates immediately downgradient of the northwest side of Wetland 2 in the northwest portion of the Study Area. Although there is not a wetland or stream connection to Wetland 2, it likely receives surface water runoff from the wetland. Stream 5 flows southwest where it is fringed by Wetland 8, then south to Stream 1 and Enfield Creek. Substrate consists of cobbles, gravel, and clay and overhanging vegetation was observed. Average stream width is approximately two feet.

5.3.2 Streams 2, 3, and 4 (Wetland 3)

Streams 2, 3, and 4 flow west from the southwest side of Wetland 3 in the southeast portion of the Study Area. Stream 4 flows directly to Stream 1 and Enfield Creek, and Stream 3 flows to Stream 4. Stream 2 flows to Stream 4 via Wetland 11 and Stream 6 (see below).

Stream substrate consists of cobble, gravel, and clay in each stream, and overhanging vegetation was observed along each stream. Average stream widths range from one to two feet. Streams 2 and 4 are NYSDEC Class C streams and mapped as intermittent streams on the USGS topographic map and NWI mapping. The entirety of all three streams within the Study Area are mapped by the Tompkins County Water Resource Council.

5.3.3 Stream 6 (Wetland 11)

Stream 6 flows northwest out of the western side of Wetland 11 in the southeast portion of the Study Area. It flows to Stream 4, which flows to Stream 1 and Enfield Creek. Stream 6 is a NYSDEC Class C stream and mapped as an intermittent stream on the USGS topographic map and NWI mapping. Average stream width is approximately two feet. Undercut banks and overhanging vegetation were observed as predominant stream cover types, and substrate consists of cobbles, gravel, sand, and silt.

6.0 CONCLUSIONS

LaBella delineated six PEM wetlands, three PFO wetlands, two PEM/PFO wetlands, and six intermittent streams within the Study Area. Wetlands 5, 6, 7, 9, 12, and 13 are hydrologically isolated from other wetlands and streams. All other delineated wetlands and streams are hydrologically connected to Enfield Creek, then Cayuga Inlet and Cayuga Lake. PEM wetlands are located within actively maintained areas within the Study Area and likely provide water and nutrient retention but provide little habitat functions. PFO wetlands within the Study Area likely provide significant habitat functions as they are relatively undisturbed and are part of vegetated habitat corridors and a patchwork of forested areas between actively farmed agricultural fields. They also likely provide significant water quality and nutrient retention functions due to their presence adjacent to actively farmed agricultural fields.

Wetlands 1, 2, 3, 4, 8, 10, and 11, and all delineated streams within the Study Area are considered to be jurisdictional WOUS under the CWA, as they connect to Enfield Creek, then Cayuga Inlet and Cayuga Lake, the nearest Traditional Navigable Water (TNW). As such, these Study Area WOUS were determined to have a significant nexus with a downstream TNW. Any Project-related filling or

disturbances within the delineated boundaries of these wetlands and streams (as approved by the USACE) will require Federal CWA Section 404 authorization through the USACE. In addition, such activities would also require a CWA Section 401 Water Quality Certification from the NYSDEC. Both authorizations may be obtained through the Joint Permit Application process. The final jurisdictional status and boundaries of these wetlands and streams are subject to final determination by the USACE-Buffalo District.

Wetlands 5, 6, 7, 9, 12, and 13 do not connect to other wetlands or streams, and therefore were determined to not be WOUS or have a significant nexus with a downstream TNW. These wetlands are anticipated to be considered non-jurisdictional under the CWA. However, as previously discussed, the final jurisdictional status and boundaries of these wetlands are subject to final determination by the USACE-Buffalo District.

7.0 SIGNATURE OF WETLAND PROFESSIONALS

We appreciate the opportunity to serve your professional environmental needs. If you have any questions please do not hesitate to contact Morgan Melekos at 585-402-7095.

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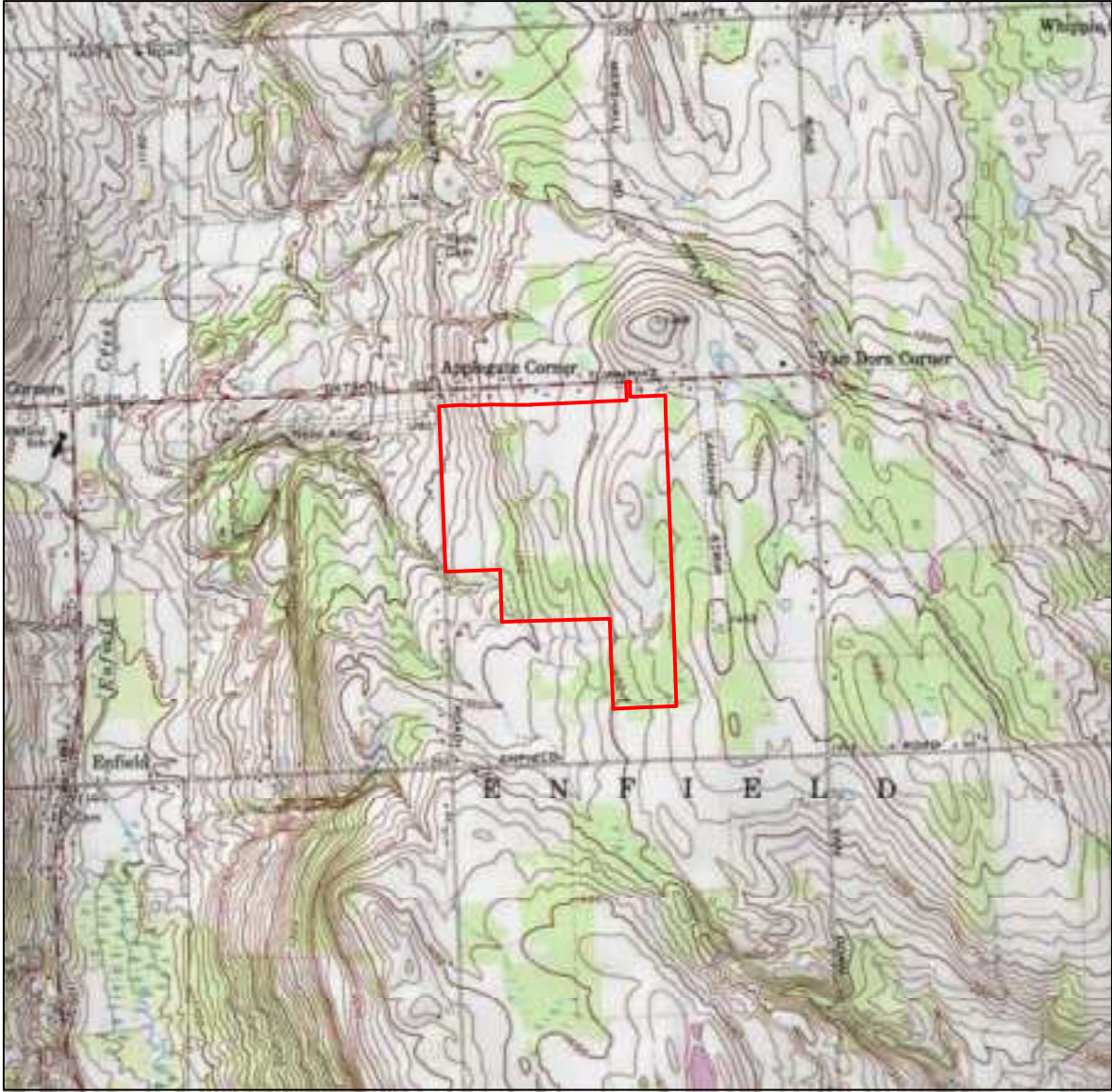
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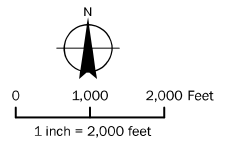
APPENDIX A

FIGURES




**Norbut Solar Farms
Wetland and Stream
Delineation Report**

**Enfield Solar Development
56 Applegate Road S.
Ithaca, NY**



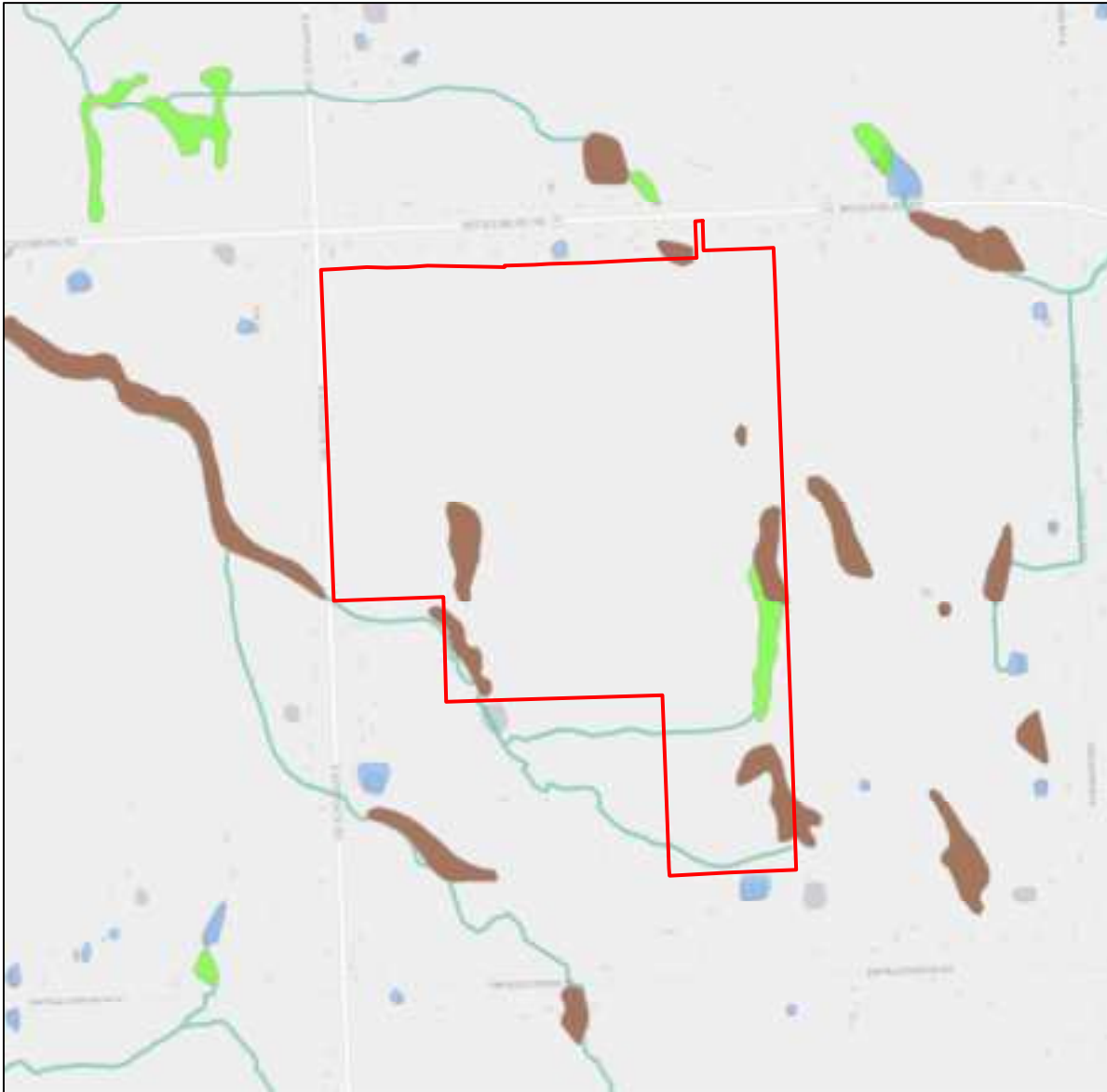
Legend

 Study Area

Sources:
1. Study Area: Created by LaBella using information provided by the client.
2. Basemap: Esri USA Topo Maps (2020) in reference to USGS Topographic Ithaca West Quadrangle (1978).

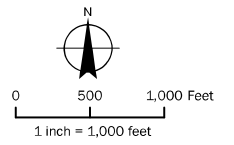
USGS Site Location

FIGURE 1



**Norbut Solar Farms
Wetland and Stream
Delineation Report**

**Enfield Solar Development
56 Applegate Road S.
Ithaca, NY**



Legend

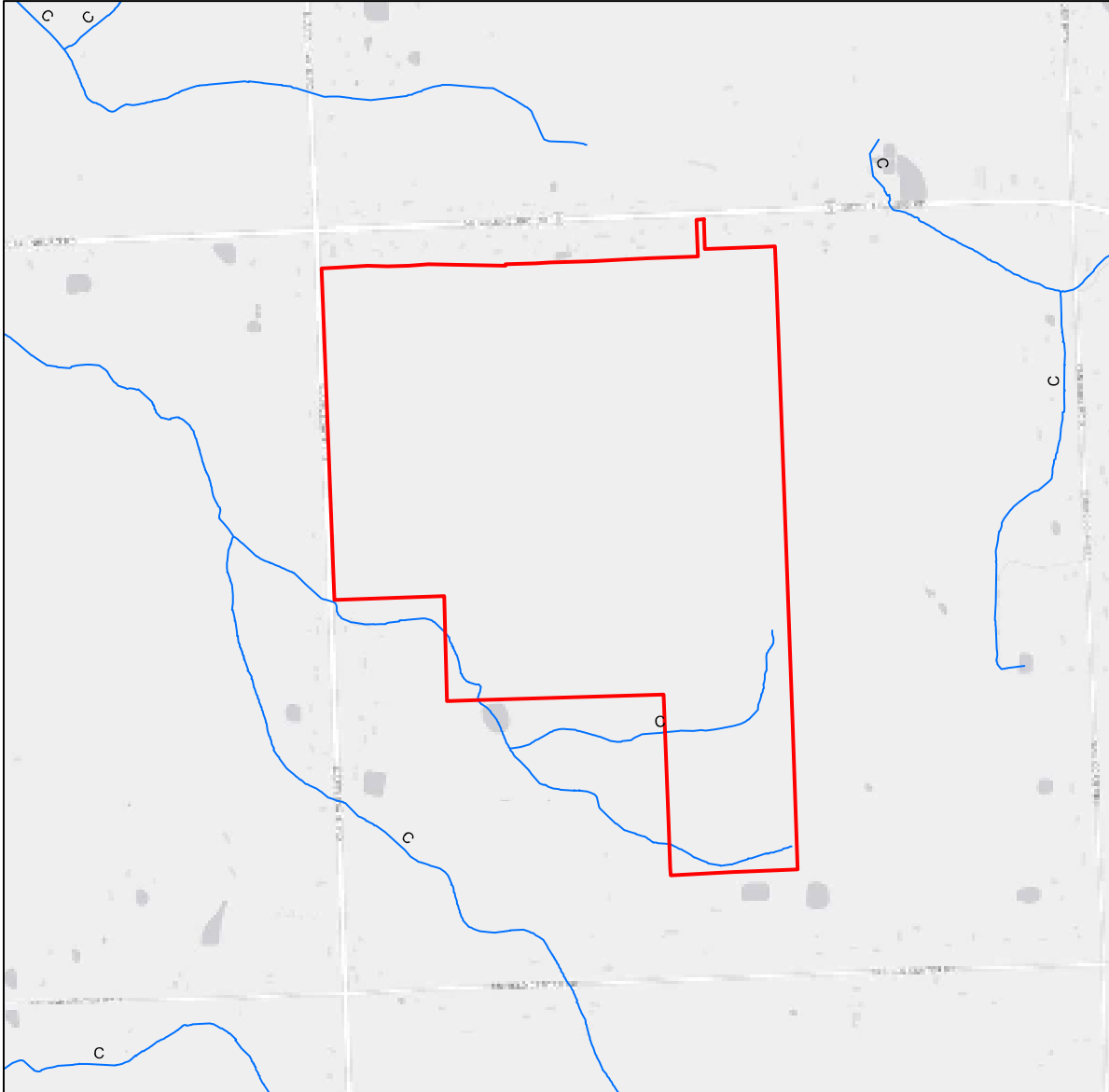
- Study Area
- National Wetland Inventory**
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine

Sources:
1. Study Area: Created by LaBella using information provided by the client.
2. Basemap: ESRI, HERE, Garmin, (c) OpenStreetMap contributors Updated: 2020.

**NWI-Mapped
Resources**

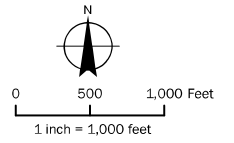
FIGURE 2

LaBella Project No: 2203009
Date: October 2020



**Norbut Solar Farms
Wetland and Stream
Delineation Report**

**Enfield Solar Development
56 Applegate Road S.
Ithaca, NY**



Legend

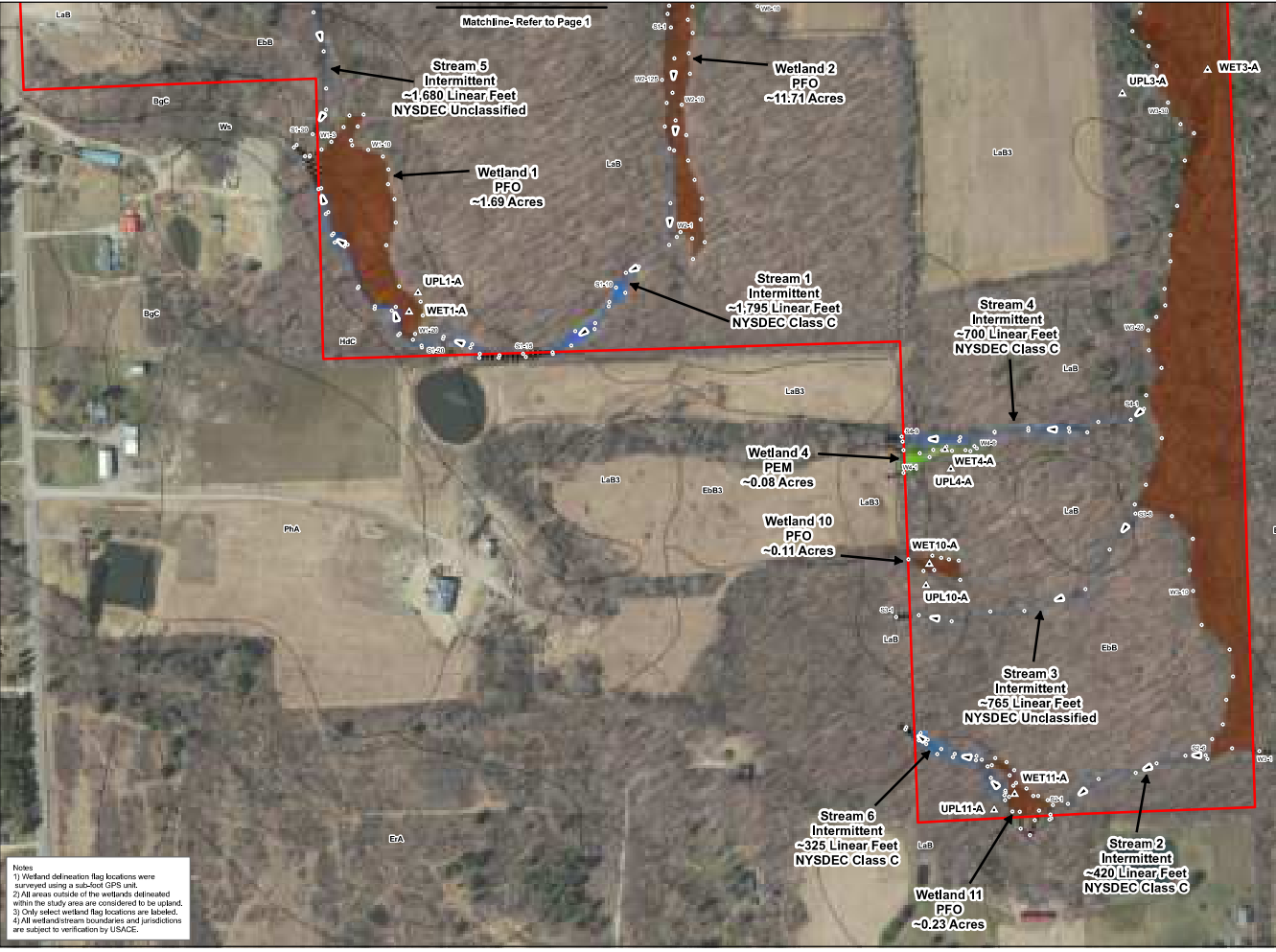
- Study Area
- NYSEDEC-Classified Stream
- NYSEDEC Wetland
- NYSEDEC Wetland 100-Foot Adjacent Area

Sources:
1. Study Area: Created by LaBella using information provided by the client.
2. Basemap: ESRI, HERE, Garmin, (c) OpenStreetMap contributors Updated: 2020.

**NYSDEC-Mapped
Wetlands and
Streams**

FIGURE 3

LaBella Project No: 2203009
Date: October 2020

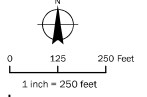


Notes
 1) Wetland delineation flag locations were surveyed using a sub-foot GPS unit.
 2) All areas outside of the wetlands delineated within the study area are considered to be upland.
 3) Only select wetland flag locations are labeled.
 4) All wetland/stream boundaries and jurisdictions are subject to verification by USACE.

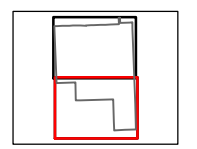


**Norbut Solar Farms
 Wetland and Stream
 Delineation Report
 Enfield Solar
 Development**

**56 Applegate Road S.
 Ithaca, NY**



- Legend**
- Study Area
 - Data Point Location
 - Wetland Flag Location
 - Forested Wetland (PFO)
 - Emergent Wetland (PEM)
 - Intermittent Stream
 - Culvert
 - Approximate Offsite Wetland/Stream Boundary
 - Stream Flow Direction
 - Soil



Source:
 1. Study Area, created by LaBella from information provided by the client.
 2. BaseMap: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community 2023.
 3. Wetland flag data were obtained from the NYSDEC on the Soil Data to Wetland Delineation (SWD) website.

**Wetland and
 Stream
 Delineation Survey
 FIGURE 5**