

Appendix 12-1

Wildlife Site Characterization Report



Wildlife Site Characterization Report

February 2021

Riverside Solar Project

Prepared For:

AES

Prepared By:

TRC

Liverpool, New York

TABLE OF CONTENTS

1.0	INTRODUCTION	1
1.1	Project Description	1
1.2	Objectives	1
2.0	METHODS	2
3.0	RESULTS	3
3.1	Land Use and Vegetation Cover	3
3.2	Wetlands and Waterbodies	4
3.3	Geographic, Topographic, and Physical Features	7
3.4	Classified Lands	7
3.5	Significant Habitat Areas	8
3.5.1	Grassland Focus Area	8
3.5.2	Core Forest Blocks	8
3.6	Resources of Potential Concern	9
3.6.1	Audubon Important Bird Areas	9
3.6.2	New York State Wildlife Management Areas	9
3.6.3	The Nature Conservancy Nature Preserves	10
3.6.4	Wetlands Reserve Program	11
3.6.5	Wildlife Concentration Areas	11
3.7	Wildlife	12
3.7.1	New York State Listed Species	12
3.7.2	Federally Listed Species	13
3.7.3	Migratory Birds and Eagles	17
3.8	Climate Change	18
4.0	CONCLUSIONS AND RECOMMENDATIONS	20
5.0	REFERENCES	22

TABLES

Table I-1. Required Information Locations in Wildlife Site Characterization Report	iv
Table 3-1. Land Use and Vegetation Cover Types within the Project Area	4
Table 3-2. Delineated Streams within the Project Area	6
Table 3-3. Protected and Classified Lands within the Project Area and Study Area	7
Table 3-4. Special Status Species Potentially Occurring in Project Area	15
Table 3-5. Climate Vulnerability for Listed Species within the Study Area	19

APPENDICES

Appendix A: Figures
Appendix B. Wildlife Inventory Tables
Appendix C. Correspondence

ACRONYMS AND ABBREVIATIONS

Notation	Definition
EAF	Environmental Assessment Form
ECL	Environmental Conservation Law
ECOS	Environmental Conservation Online System
HPSGCN	High Priority Species of Greatest Conservation Need
IBA	Important Bird Area
IPaC	Information for Planning and Consultation
MRLC	Multi-Resolution Land Characteristics Consortium
NLCD	National Land Cover Database
NRCS	Natural Resource Conservation Service
NWI	National Wetlands Inventory
NYBBA	New York Breeding Bird Atlas
NYCRR	New York Codes, Rules, and Regulations
NYNHP	New York Natural Heritage Program
NYS	New York State
NYSBBA	New York Breeding Bird Atlas
NYSDEC	New York State Department of Environmental Conservation
PADUS	Protected Areas Database of the United States
PEM	palustrine emergent wetlands
PFO	palustrine forested wetlands
POI	point of interconnection
Project	Riverside Solar, LLC 100-MW PV Solar Generation Project
Project Area	1,000 acres of leased, private land
PSL	Public Service Law
PSS	palustrine scrub-shrub
Riverside Solar	Riverside Solar, LLC
SE	State Endangered
SGCN	Species of Greatest Conservation Need
SOSC	State Species of Special Concern
ST	State Threatened
Study Area	5-mile buffer around Project Area
SWAP	State Wildlife Action Plan
TNC	The Nature Conservancy
U.S.	United States
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WMA	Wildlife Management Area
WRP	Wetlands Reserve Program
WSCR	Wildlife Site Characterization Report

Table I-1. Required Information Locations in Wildlife Site Characterization Report

Reg Stipulation	Documentation	Located
900-1.3 (g)(1)	At the earliest point possible in the applicant's preliminary project planning, the applicant shall conduct a wildlife site characterization summarizing existing public information on bird, bat, and other species, including, but not limited to, New York's Environmental Assessment Form (EAF) Mapper, New York Natural Heritage Program (NYNHP), USFWS IPaC and ECOS databases, New York's Environmental Resource Mapper, Nature Explorer, and Biodiversity and Wind Siting Mapping Tool, eBird, Audubon Christmas Bird Counts, United States Geological Survey (USGS) breeding bird surveys, the current New York Breeding Bird Atlas III program, New York State Ornithological Association, local birding organizations, Bat Conservation International's database on bat species ranges, New York State Department of Conservation (NYSDEC) bat information.	Section 2.0; Appendix B; Appendix C
900-1.3 (g)(1)(i)	Species documented at the proposed facility, access roads, interconnections, connecting lines, from available data sources. A subset of New York State (NYS) threatened or endangered species identified within the last five (5) years shall be provided.	Section 3.7, Table 3-4
900-1.3 (g)(1)(ii)	For each listed animal species documented from available data sources, provide an evaluation of current habitat suitability for those species at the project site.	Section 3.7, Table 3-4
900-1.3 (g)(1)(iii)	Landscape features and resources of potential concern within five (5) miles of the facility that may function to funnel or concentrate birds and bats, with a focus on NYS threatened or endangered species, during migration or for feeding, breeding, wintering, or roosting activities, such as national wildlife refuges, wildlife management areas, grassland focus areas, core forest blocks (contiguous areas one hundred fifty (150) acres or larger), Audubon Important Bird Areas, high elevation mountaintops, prominent ridgelines, forested riparian areas, known hibernacula, records of caves and mines, or other significant habitat areas.	Sections 3.1 through 3.6
900-1.3 (g)(1)(iv)	Geographical, topographical, and other physical features within five (5) miles of the facility, interconnections, connecting lines, and access roads.	Section 3.3
900-1.3 (g)(1)(v)	National Wetlands Inventory (NWI) and NYSDEC mapped wetlands, streams, waterbodies, state forests, parks, land use, and other available information relevant to siting the facility.	Section 3.2; Appendix A
900-1.3 (g)(1)(vi)	A review of National Audubon Society climate change modeling for listed bird species documented in the wildlife site characterization, and review of other climate change models relevant to listed bird species and other wildlife species documented at the facility site, as available.	Section 3.8

1.0 Introduction

1.1 Project Description

Riverside Solar, LLC (Riverside Solar) proposes the construction of an approximately 100-megawatt photovoltaic solar energy generation project (Project) called “Riverside Solar” in the Towns of Lyme and Brownville, Jefferson County, New York. The Project will be developed on approximately 1,000 acres of leased, private land owned by a number of participating landowners (Project Area) (see Figure 1, Appendix A). The Project Area consists of nine parcels located east of the Village of Chaumont, as well as one additional parcel located approximately seven miles east-northeast of Chaumont. Project facilities will include commercial-scale solar arrays, access roads, buried (and possibly overhead) electric collection lines, and electrical interconnection facilities (i.e., a collection substation and point of interconnection (POI) switchyard). The proposed collection substation and POI switchyard will be located on land within the Project Area.

1.2 Objectives

TRC was contracted by Riverside Solar to characterize wildlife use and areas of critical environmental or regulatory concern that could impact Project development. The purpose of this report is to support the development of an application to the New York State (NYS) Office of Renewable Energy Siting to construct the Project under Section 94-c of the New York Executive Law (New York Codes, Rules and Regulations (NYCRR) Chapter XVIII, Title 19 Part 900, subparts 900-1 through 900-14). This Wildlife Site Characterization Report (WSCR) is intended to meet the requirements of §900-1.3 (g)(1) of that regulation. Information in this report is provided to:

- Characterize wildlife species with the potential to occur within the Project Area by summarizing existing public information on bird, bat, and other species (Wildlife Inventory Tables, Appendix B).
- With respect to NYS threatened or endangered species or Species of Special Concern (SOSC), this wildlife site characterization includes an evaluation of the following within the Project Area:
 - Species observations within the last five years and associated habitat suitability;
 - NWI-identified and NYSDEC-mapped wetlands and waterbodies;
 - Land use and vegetation cover types; and
 - A review of National Audubon Society climate change modeling for listed bird species documented within the Project Area and a review of other climate change models relevant to listed bird species and other wildlife species documented within the Project Area.
- With respect to NYS threatened or endangered species or SOSC, this wildlife site characterization includes an evaluation of the following within the Project Area and 5-mile Study Area:
 - Geographical, topographical, and other physical features including prominent ridgelines and high elevation mountaintops; and

- Landscape features, resources of potential concern, and significant natural communities including Wildlife Management Areas (WMAs), National Wildlife Refuges (NWRs), core forest blocks, Audubon Important Bird Areas (IBAs), known hibernacula, wildlife concentration areas, grassland focus areas, forested riparian areas, and potential roosting habitat.

2.0 Methods

TRC, on behalf of Riverside Solar, conducted both site visits and desktop analyses of the Project Area and a 5-mile Study Area to characterize wildlife species and habitats potentially affected by Project development. The results of the desktop analyses and site visits are described below in Section 3.0. While site visits are not required by 900-1.3(g), because this WSCR is being prepared contemporaneous with ongoing study work at the site as the Project transitions from the requirements under Article 10, information required by the regulations pertinent to this assessment have been included in this report. The publicly available resources used in the desktop analyses are identified in the Section 94-c regulations and listed as follows:

- Google Earth Pro 2020;
- Multi-Resolution Land Characteristics (MRLC) Consortium National Land Cover Database (NLCD);
- New York Ecoregion Maps;
- New York Natural Heritage Program (NYNHP) (Appendix C);
- New York State Department of Environmental Conservation (NYSDEC) Environmental Assessment Form (EAF) Mapper (Appendix C);
- New York State Environmental Resource Mapper (ERM) (Appendix C);
- NYSDEC Animal Species Databases;
- NYSDEC Atlases for Reptiles, Amphibians, and Fish;
- NYSDEC State Wildlife Action Plan (SWAP);
- NYSDEC Grassland Focus Areas mapping;
- NYSDEC Freshwater Wetland mapping;
- NYSDEC Nature Explorer (Appendix C);
- NYSDEC WMAs mapping;
- U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Grassland Focus Areas;
- USDA Ecoregion Maps;
- U.S. Geological Survey (USGS) Protected Areas Database of the United States (PADUS);
- USGS Dexter and Brownville New York 7.5-minute quadrangles;
- U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) mapping;
- USFWS NWRs mapping;
- USFWS Information for Planning and Consultation (IPaC) report;
- USFWS Northern long-eared bat hibernacula and maternity roost tree locations;

- Bat Conservation International's database;
- New York Breeding Bird Atlas (NYBBA);
- Audubon IBAs;
- Audubon Christmas Bird Count;
- National Audubon Society 'Survival By Degrees' climate change model;
- Journal of Fish and Wildlife Management;
- USGS Breeding Bird Survey;
- eBird Database; and
- New York State Ornithological Association.

In addition to the sources utilized during the desktop review, field surveys were conducted within the Project Area for grassland breeding birds, winter raptor use, and wetland and waterbodies (TRC 2020a,b,c). Although not required by Section 94-c regulations for the WSCR, these surveys were conducted in anticipation of a request from the NYSDEC Region 6 Office. Survey results have been submitted to NYSDEC under separate cover. Avian surveys were conducted following the *NYSDEC Draft Survey Protocols for State-listed Breeding Grassland Bird and Wintering Grassland Raptor Species* (TRC 2020a,b). Surveys were conducted from late May through July of 2020 and December 6, 2019 to March 30, 2020, respectively. The results of the surveys (TRC 2020a,b) were reviewed for the presence of NYS listed species (Appendix B).

Delineations for wetlands and waterbodies were performed in accordance with criteria set forth in the 1987 United States Army Corps of Engineers (USACE) Wetlands Delineation Manual (Environmental Laboratory 1987) and the 2012 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0) (USACE 2012).

Information from these surveys is being used to inform facility design which will, once completed, be submitted to the ORES and NYSDEC as part of ongoing Section 94-c pre-application consultation.

3.0 Results

3.1 Land Use and Vegetation Cover

Based on the desktop analysis, land use and vegetation cover within the Project Area is primarily agriculture (83 percent) consisting of cultivated or planted hay or pasture lands and cultivated crops. Some undeveloped natural wooded areas (13 percent) dominated by deciduous forests (7 percent) and herbaceous wetlands (1 percent) occur in the Project Area. Less than 1 percent of the Project Area consists of natural grasslands and shrub/scrub areas (MRLC 2016).

Developed open space and low-intensity land uses associated with existing road and transmission line rights-of-way, residential and commercial developments, and other previously disturbed areas account for less than 1 percent of the Project Area. Several farm buildings and/or rural residences are located within the western parcels of the Project Area, on the north side of Case Road, and one farm residence is located within the easternmost parcel of the Project Area, on the north side of Vaadi Road. Land within the surrounding areas is also

primarily used for agricultural production. The Village of Chaumont, containing residential and commercial developments, is located west of the Project Area. Table 3-1 summarizes land use and vegetation cover types within the Project Area. Figure 4 (Appendix A) illustrates land use and vegetation cover types within the Project Area.

Table 3-1. Land Use and Vegetation Cover Types within the Project Area

Land Use/Vegetation Cover Type	Acres within Project Area	Percentage of Project Area
Open Water	0.0	0%
Developed, Open Space	8.9	1%
Developed, Low Intensity	3.3	0%
Developed, Medium Intensity	0.0	0%
Developed, High Intensity	0.0	0%
Barren Land	0.2	0%
Deciduous Forest	77.6	7%
Evergreen Forest	14.9	1%
Mixed Forest	0.0	0%
Shrub/Scrub	7.3	1%
Grassland/Herbaceous	1.1	0%
Pasture/Hay	787.7	72%
Cultivated Crops	117.7	11%
Woody Wetlands	59.4	5%
Emergent Herbaceous Wetlands	15.1	1%
Total	1,093.3	100%

Source: MRLC 2016.

3.2 Wetlands and Waterbodies

Approximately 35.3 acres of NWI-identified wetlands and 2.4 acres of NYSDEC-identified wetlands occur within the Project Area (USFWS 2020a; NYSDEC 2020a; Figure 4, Appendix A). Based on the results of a wetland delineation survey, a total of 23 wetlands (approximately 104.22 acres) were delineated within the Project Area, including 18 palustrine emergent wetlands, 9 palustrine scrub-shrub wetlands, 3 palustrine forested (PFO) wetlands, and 3 palustrine unconsolidated bottom wetland (TRC 2021). A large state-regulated wetland complex is mapped surrounding the easternmost parcel of the Project Area (Figures 4 and 5, Appendix A).

The Project Area is located within the Chaumont-Perch sub-basin (HUC 04150102), with the western parcels located in the Horse-Creek – Frontal Lake Ontario sub-watershed (HUC 041501020202). The northern portion of the easternmost parcel is situated within the Middle Perch River sub-watershed (HUC 041501020302) and its southern portion within the Lower Perch River sub-watershed (HUC 041501020303) (USEPA 2017).

Nine streams totaling approximately 9,652 linear feet were identified within the Project Area (TRC 2020c). These included one perennial waterway, six intermittent streams, and two streams with ephemeral flow regimes (Table 3-2).

The NYSDEC classifies watersheds more generally within the State of New York. Unlike mapping efforts outlined by the USGS, the NYSDEC uses the definitions of watersheds and drainage basins interchangeably. New York's waters (e.g., lakes, rivers, wetlands, and streams) fall within one of seventeen major drainage basins. The NYSDEC defines these drainage basins or watersheds as an area of land that drains water into a specific body of water within or adjacent to the State of New York and includes networks of rivers, streams, lakes, and the surrounding lands. The NYSDEC-classified watersheds are separated by high elevation geographic features (e.g., mountains, hills, and ridges). Each major drainage basin corresponds to one or more USGS sub-basins (USGS HUC 8-digit codes). The Project Area is located within the Lake Ontario and Minor Tributaries Watershed (NYSDEC 2014).

Two NYSDEC-mapped rivers, the Perch and Chaumont rivers, are located near the Project Area. At its closest point, the Perch River runs approximately 500 feet to the southeast of the easternmost parcel of the Project Area. The Perch River continues to the southwest, emptying into Black River Bay of Lake Ontario about 4.3 miles south of the Project Area. The Chaumont River, at its nearest point to the Project Area, is located approximately 0.8 mile to the northwest of the Project Area. The Chaumont River flows to the south-southwest into Chaumont Bay in Lake Ontario approximately 1.0 mile west of the Project Area. NYSDEC-mapped waterways within the Project Area are listed in Table 3-2, and depicted in Figure 5, Appendix A.

Table 3-2. Delineated Streams within the Project Area

Flow Regime Classification	Linear Feet within Project Area	NYSDEC Stream Name and Regulatory ID	NYSDEC Classification ¹	Potential Jurisdiction	Associated Buffer	Centroid Coordinates
Intermittent	151	N/A	N/A	USACE	-	44.0664 -76.0713
Intermittent	3,272	Unnamed Tributaries to Guffin Creek 847-22	Class C	USACE	-	44.0623 -76.0882
Intermittent	1,256	N/A	N/A	USACE	-	44.0518 -76.1166
Perennial	1,542	Horse Creek 847-22	Class C	USACE	-	44.0690 -76.1171
Ephemeral	45	N/A	N/A	Non-jurisdictional	-	44.0690 -76.1143
Intermittent	582	N/A	N/A	USACE	-	44.0646 -76.1150
Ephemeral	607	N/A	N/A	Non-jurisdictional	-	44.0664 -76.0917
Intermittent	3,661	Unnamed tributaries to Guffin Creek 847-23	Class C	USACE	-	44.0665 -76.0859
Intermittent	79	N/A	N/A	USACE	-	44.0632 -76.0928
Total Stream Length Delineated	11,195					

¹ A classification of Class C indicates that the best use of the water is fishing.
Sources: TRC 2020c; NYSDEC 2021a,b.

3.3 Geographic, Topographic, and Physical Features

The Project Area is relatively flat, ranging from about 280 to 380 feet above mean sea level with a woodlot within the easternmost parcel comprising the highest point within the Project Area. In general, topography slopes gradually down from east to west, towards Lake Ontario.

The Project Area and 5-mile Study Area resides in the Eastern Broadleaf Forest (Continental) Province, within the Eastern Great Lakes Lowlands Level III Ecoregion (83) and Ontario Lowlands Level IV Ecoregion (83c) (Bailey 1995; Bryce et al. 2010; NYS 2020) (Figure 6, Appendix A). Ecoregions are ecosystems of regional extent.

Dominant natural vegetation within these ecoregions includes American elm (*Ulmus americana*), black spruce (*Picea mariana*), green ash (*Fraxinus pennsylvanica*), and swamp white oak (*Quercus bicolor*) in the tree stratum; Morrow's honeysuckle (*Lonicera morrowii*), gray dogwood (*Cornus racemosa*), and black willow (*Salix nigra*) in the shrub stratum; and reed canarygrass (*Phalaris arundinacea*), Kentucky bluegrass (*Poa pratensis*), white clover (*Trifolium repens*), narrowleaf cattail (*Typha angustifolia*), and American vetch (*Vicia americana*) in the herb stratum.

3.4 Classified Lands

Based on the desktop analysis, the Project is located entirely on private land, but crosses properties considered collectively as an Audubon IBA. Table 3-3 summarizes the results of the USGS PADUS findings within the Project Area and 5-mile Study Area (USGS 2020a). Figure 7 (Appendix A) illustrates the locations of protected and classified lands within the Project Area and 5-mile Study Area.

Table 3-3. Protected and Classified Lands within the Project Area and Study Area

Classification	Acres within Project Area	Acres within 5-mile Study Area
Federal		
NRCS Wetlands Reserve Program	0.0	107.8
State		
Ashland Flats Wildlife Management Area (WMA)	0.0	936.5
Brownville WMA	0.0	237.4
Dexter WMA	0.0	588.7
Perch River WMA	0.0	7,532.8
Long Point State Park	0.0	19.5
Other		
The Nature Conservancy (TNC): Jefferson County Alvar Habitat Properties	0.0	209.5
TNC: Chaumont Barrens Preserve	0.0	1,996.8
TNC: Limerick Cedars Preserve	0.0	113.6

Classification	Acres within Project Area	Acres within 5-mile Study Area
TNC: Three Mile Creek Barrens Preserve	0.0	694.0
Audubon IBA: Perch River Complex	12.3	33,450.0
Audubon IBA: Long Point Peninsula	0.0	320.0
Unclassified	1,081.0	67,398.9
Total	1,093.3	106,072.7

Source: USGS 2020a.

3.5 Significant Habitat Areas

Based on the desktop analysis, the Project Area and 5-mile Study Area overlaps two significant habitat areas for wildlife species: a designated Grassland Focus Area and areas containing core forest blocks.

3.5.1 Grassland Focus Area

The Project Area and 5-mile Study Area intersect the St. Lawrence River Valley Grassland Focus Area developed to guide conservation of grassland birds in New York (USDA NRCS 2020a). In 2005, Audubon New York conducted surveys during the breeding season to determine the species composition within each focus area to guide conservation activities. The surveys focused on special status species, such as the Henslow’s sparrow, short-eared owl, and loggerhead shrike. These species were not detected during the surveys, and several other species had relatively low representation in the survey, as was expected based on the population trends for those species and the low numbers of BBA blocks in which those species were documented. The results of the 2005 Grassland Breeding Bird Focus Area Survey were assessed to identify particularly high priority areas at a smaller scale within the Focus Area boundaries. The final compilation of the results indicates the highest priority regions of the state that scored in the highest range of a combined index of abundance and diversity for breeding grassland birds (USDA NRCS 2020a). Locations important for wintering raptors, especially the short-eared owl, should also be considered as highest priority when directing conservation towards highest priority areas.

3.5.2 Core Forest Blocks

Based on a desktop review, approximately 13.7 acres of core forest blocks, or contiguous areas of 150 acres or larger, are located within southeastern portion the Project Area and approximately 17,131 acres of core forest blocks are present within the 5-mile Study Area (Figure 8, Appendix A). Core forest blocks are important for sensitive wildlife including bat species and forest songbirds, which avoid nesting near areas with human disturbance. The fragmentation of large forests by new development reduces or eliminates core forest and is a leading driver of biodiversity loss. Fragmentation decreases forest habitat quality, disrupts wildlife movement, and facilitates the spread of invasive species (NYNHP 2019).

In addition to the core forest blocks, the Project Area contains approximately 21 acres of forested riparian habitat and approximately 8,256 acres of forested riparian habitat within the 5-

mile Study Area (USFWS 2020a). For the purposes of this analysis, forested riparian habitat is defined as NWI-identified PFO wetlands.

3.6 Resources of Potential Concern

The Project Area is located predominantly on private land and overlaps with a small portion (approximately 12 acres) of the Perch River Complex IBA (USGS 202a). As identified in Table 3-3, a number of areas considered important to wildlife exist within the 5-mile Study Area. Resources of potential concern for wildlife within the Project Area and 5-mile Study Area are discussed below.

3.6.1 Audubon Important Bird Areas

The northeast portion of the Project Area intersects the Perch River Complex IBA (Figure 7, Appendix A). The Perch River Complex IBA supports an exceptional wetland bird community with a diverse array of wetland and grassland-associated birds, and one of the largest concentrations of breeding grassland birds in the State of New York. Portions of the Perch River Complex IBA have been designated as a state Bird Conservation Area. Approximately 90 percent of the site is open and shrub habitat, which includes old field/pasture, shrub swamp, successional hardwood, successional shrub, and cropland. Site ownership is a mix of private and state, including approximately 7,862-acre of the NYSDEC-administered Perch River WMA, managed specifically for wildlife conservation (Audubon 2020a). Avian species identified within or adjacent to this area are listed in Appendix B, Table B-1.

The western edge of the 5-mile Study Area overlaps the Point Peninsula IBA (Figure 7, Appendix A), a peninsula extending into Chaumont Bay in Lake Ontario. The Point Peninsula IBA is considered one of the most critical winter concentration areas in the northeast for arctic breeding rough-legged hawks, snowy owls, and short-eared owls and is an important pre-migratory staging area for Caspian terns, common terns, and black terns. Much of this site has lost historic agricultural lands beneficial to grassland birds to succession and development (Audubon 2020b).

3.6.2 New York State Wildlife Management Areas

The primary purposes of NYS WMAs include wildlife species management, wildlife habitat management, and wildlife-dependent recreation (NYSDEC 2020b,c,d). The 5-mile Study Area overlaps the Ashland Flats WMA, Dexter March WMA, Perch River WMA, and Brownville WMA (Figure 7, Appendix A). Each WMA is discussed below; however, publicly available information was not available for the Brownville WMA.

The Ashland Flats WMA overlaps with a small portion of the northwestern portion of the 5-mile Study Area. Ashland Flats is primarily an area of open meadows, second growth, "potholes" wetland habitat, and young forests typical of the Lake Ontario plains. Small game, furbearing mammals, deer, waterfowl, and grassland nesting birds are found on the WMA (NYSDEC 2020b). The WMA was originally acquired to provide wetland habitat for nesting and migratory waterfowl and upland habitat for various game and non-game species. In addition to being important for waterfowl and upland game species, Ashland Flats WMA is considered one of the most important areas in New York for breeding and wintering grassland birds. The WMA is located within St. Lawrence River Valley Grassland Focus Area and is a New York State Bird

Conservation Area (NYSDEC 2016). Several state endangered or threatened species and SGCN use the grassland habitat on the WMA for breeding and/or wintering. Therefore, current management practices at Ashland Flats WMA are aimed at restoring and creating grassland habitat for various bird and wildlife species (NYSDEC 2020b).

The Dexter Marsh WMA is a 1,350-acre marsh considered a popular fish and waterfowl area located in the southern portion of the 5-mile Study Area. Pike, bass, and panfish are found in the shallow to deep water, and a variety of ducks, black terns, shore birds, and marsh waders utilize the sparse cattail marsh which characterizes this Lake Ontario bay (NYSDEC 2020c).

The Perch River WMA is a 7,932-acre parcel located adjacent to the easternmost portion of the Project Area. The Perch River WMA is dominated by wetland and open water habitats, but also offers woodland, early successional, and grassland habitats. The area is well known for its waterfowl and furbearer populations and also supports deer, upland small game, and variety of unique non-game species. Woodcock, ruffed grouse, and turkeys, along with the pheasants that are stocked during the fall, provide diverse opportunities for upland bird hunting. Cottontail rabbits and grey squirrels are also common. Portions of this WMA are zoned as refuge and restricted use. There is no public access allowed in the refuge areas and no public access during most of the spring and summer, but controlled hunting and trapping are allowed during the fall and winter within the restricted use areas (NYSDEC 2020d).

3.6.3 The Nature Conservancy Nature Preserves

The Nature Conservancy Nature Preserves within the 5-mile Study Area include the Jefferson County Alvar Preserves, Chaumont Barrens Nature Preserve, Limerick Cedars Nature Preserve, and Three Mile Creek Barrens Preserve (Figure 7, Appendix A). These properties focus on the preservation of Alvar communities (NYSDEC 2021c). Alvar communities are adapted to survive extreme conditions: shallow soils, regular spring flooding, and summer drought. The Chaumont Barrens Nature is located north of the Project Area and is considered one of the last alvar grasslands in the world, a unique, prairie-like landscape that rests atop a foundation of limestone bedrock. These areas are composed of flat rocky terrain of grasslands, limestone woodlands, cedar forests, pavement barrens and globally-rare plant communities (TNC 2020).

The NYNHP (2020) considers alvar woodlands a resource of potential concern. This community has been documented within the 5-mile Study Area, approximately 0.3 mile north of the Project Area. This terrestrial community is considered a mixed conifer woodland that occurs on shallow soils over limestone bedrock in alvar settings, and usually includes numerous rock outcrops (NYNHP 2014, 2020). The woodland tree canopy consists of a variable mixture of eastern red cedar (*Juniperus virginiana*), northern white cedar (*Thuja occidentalis*), bur oak (*Quercus macrocarpa*), white ash (*Fraxinus americana*), paper birch (*Betula papyrifera*), white pine (*Pinus strobus*), shagbark hickory (*Carya ovata*), hop hornbeam (*Ostrya virginiana*), white spruce (*Picea glauca*), balsam fir (*Abies balsamea*), basswood (*Tilia americana*), American elm (*Ulmus americana*), rock elm (*U. thomasi*), and pin-cherry (*Prunus pensylvanica*). The understory is a mosaic of shrubby patches, exposed pavement, and grassy patches. The most abundant shrub is common juniper (*Juniperus communis*); other characteristic shrubs include buffaloberry (*Shepherdia canadensis*) and bearberry (*Arctostaphylos uva-ursi*). Characteristic herbs include false pennyroyal (*Trichostema brachiatum*), Crawe's sedge (*Carex crawei*), balsam ragwort (*Packera paupercula*), ebony sedge (*Carex eburnea*), and sheathed rush grass

(*Sporobolus vaginiflorus*). Areas of exposed limestone or dolostone pavement are common, usually with a cover of mosses such as tortella moss (*Tortella* spp.) and schistidium moss (*Schistidium* spp.), lichens such as reindeer lichen (*Cladonia rangiferina*) and dog-lichen (*Peltigera canina*), and rock surface algae (*Gloeocapsa alpina*) (NYNHP 2014).

Wildlife associated with this rare upland ecological community includes NYS-listed threatened and endangered species such as the short-eared owl, northern harrier, and upland sandpiper. Other common wildlife species associated with this community include the bobolink (*Dolichonyx oryzivorus*), common yellowthroat (*Geothlypis trichas*), porcupines (*Erethizon dorsatum*), and coyotes (*Canis latrans*) (NYSDEC 2020e; eBird 2020a).

3.6.4 Wetlands Reserve Program

According to the USGS PADUS (2020a), three easements within the Study Area, totaling approximately 107.8 acres, are currently enrolled in the USDA NRCS WRP (Figure 7, Appendix A). The WRP is a voluntary program that offers landowners the opportunity to protect, restore, and enhance wetlands on their property. Under the WRP, landowners enter into a long-term contract/cost-agreement with the NRCS to achieve increased wetland functions and values, along with optimum wildlife habitat, on every acre enrolled in the program (USDA NRCS 2020b).

3.6.5 Wildlife Concentration Areas

A desktop review using NYSDEC's Nature Explorer (2020f,g) identified a winter raptor and waterfowl concentration area within the 5-mile Study Area (Appendix C).

No known locations of bat hibernacula or roost sites are located within the Project Area. According to the computer-generated USFWS IPaC Reports (Appendix C), two federally listed species [Indiana bat (*Myotis sodalist*) and northern long-eared bat (*Myotis septentrionalis*)] were identified as having the potential to occur in the vicinity of the Project and Study Area (USFWS 2020a). No designated critical habitat occurs within or adjacent to the Project (USFWS 2020a). As detailed in Table 3-1, less than 15 percent of the Project Area and less than 30 percent of the 5-mile Study Area includes forests and woodlands that may be capable of providing suitable habitat for bat maternity colonies and roosting habitat. Additionally, existing mines have been located within the 5-mile Study Area (NYSDEC 2020h) (Figure 6, Appendix A). Based on desktop review of the Project Area, known hibernacula for the northern long-eared bat is located approximately 2.0 miles south of the Project Area within the 5-mile Study Area (USFWS 2020b) (Figure 6, Appendix A). Winter occurrence has been documented for this species within the 5-mile Study Area (NYSDEC 2018).

Summary

Based on the desktop analysis, land use is primarily agriculture (83 percent) consisting of cultivated or planted hay, pasture lands, and cultivated crops. Identified wetlands and waterbodies may be considered jurisdictional and subject to regulation pursuant to NYSDEC 900.1-3 (e) and (f), respectively.

The Project Area and 5-mile Study Area intersects the following significant habitat areas or resources of potential concern to wildlife: grassland focus areas, core forest blocks, known hibernacula, and Audubon IBAs.

The Project Area and 5-mile Study Area do not overlap any designated USFWS National Wildlife Refuge easements (USGS 2020a).

3.7 Wildlife

As detailed above in Section 3.1, the majority of the Project Area consists of cultivated crop, pasture, and haylands. The diversity of vegetation communities and land uses within the 5-mile Study Area is greater and supports numerous species of birds, mammals, reptiles, amphibians, and fish in comparison to the Project Area. Lists of species with the potential to occur in the Project Area and 5-mile Study Area based on review of publicly available databases are included in Appendix B, Tables B-1 through B-4. Several of the wildlife species known to, or expected to, occur in the area include federally listed species under the Endangered Species Act, NYS listed as threatened or endangered, NYS species of special concern (SOSC), or NYS species of greatest conservation need (SGCN).

3.7.1 New York State Listed Species

Under 6 NYCRR Part 182, a permit is required for any taking of threatened or endangered species. Taking is defined in the regulations to include not only the direct killing of listed species, but also actions that are expected to result in harm to individuals, including adverse impacts to habitats occupied by listed species. The permit required under existing law (ECL Section 11-0535) and regulations (Part 182) for activities that may result in the take of endangered or threatened species is an incidental take permit. These regulations refer to the permit as an incidental take permit because the "take" authorized by the permit is incidental to (i.e., not the primary purpose of) an otherwise lawful activity. State definitions of NYS listed species are as follows (NYSDEC 2019):

Endangered species are determined by the NYSDEC to be in imminent danger of extinction or extirpation in New York State, or are federally listed as endangered. All such species are protected under New York State ECL 11-0535.

Threatened species are determined by the NYSDEC as likely to become endangered within the foreseeable future in New York State, or are federally listed as threatened. All such species are protected under New York State ECL 11-0535.

SOSC are those native species which are not yet recognized as endangered or threatened, but for which documented evidence exists relating to their continued welfare in New York State. Legislation passed 4 October 2005 gave Protected Wildlife status under ECL 11-0103 to all species listed as Special Concern. Special Concern species may also be protected under other laws.

Table 3-4 identifies five NYS listed threatened or endangered species and nine SOSC documented within the last five years within the Project Area. Suitable habitat for all 14 NYS listed species and SOSC is found within the Project Area and 5-mile Study Area. Additionally, each species has been documented within the Project Area using publicly available databases (Audubon 2020a,c; NYNHP 2019; NYSDEC 2020a,f,g,h,i; USGS 2020b, eBird 2020b; NYBBA III 2020a,b).

Two NYS listed threatened species were documented during the grassland breeding bird surveys (northern harrier and Henslow's sparrow) (Figure 9, Appendix A). The northern harrier was observed on four occasions, with two observations during regular surveys and two

incidentally outside of the prescribed survey window (TRC 2020a). Twelve observations of Henslow's sparrows were documented, including one incidental observation during daytime surveys. These observations are believed to represent six individuals. Henslow's sparrows and northern harriers were also documented during evening surveys. A total of ten observations of Henslow's sparrows were documented from the same three locations where the species was observed during daytime surveys. Harriers were documented during eight of the evening surveys. No nests or nesting behavior were observed for any listed species. Observed Species of Special Concern included the grasshopper sparrow (40 observations) and osprey (4 observations). Evidence of probable breeding was documented for all listed species (*i.e.*, singing males, visiting probable nest sites) except northern harrier. No nests or nesting behavior were observed for any listed species within the Project Area.

Three NYS listed and one SOSC raptor species were observed during the winter raptor surveys (TRC 2020b), including the bald eagle, northern harrier, short-eared owl, and sharp-shinned hawk (Figure 9, Appendix A). There were a total of eight bald eagle observations, eight northern harrier observations, and five short-eared owl observations. One active bald eagle nest was observed outside of, but adjacent to the Project Area, approximately 0.5 mile south of the Project Area along State Route 12E (Figure 9, Appendix A).

3.7.2 Federally Listed Species

Under the ESA, activities that may result in the "take" of a species listed as threatened or endangered are prohibited. Take is defined as the harassment, harm, pursuit, hunting, shooting, wounding, killing, trapping, capture, or collection, as well as modification or degradation of habitat that results in death or injury of these species. According to the computer-generated USFWS IPaC Reports (Appendix C), two federally listed species, Indiana bat (*Myotis sodalists*) and northern long-eared bat (*Myotis septentrionalis*), were identified as having the potential to occur in the vicinity of the Project and Study Area. No designated critical habitat occurs within or adjacent to the Project (USFWS 2020a).

The Indiana bat winters in caves and mines, and hibernates in large, tight clusters that may contain thousands of individuals. In spring, Indiana bats emerge from hibernation and migrate to their summer homes. Females form maternity colonies of up to 100 bats during the summer. These colonies are usually located behind the loose bark of trees, often near tree-lined streams and rivers. Indiana bats give birth to one young in midsummer. Young bats are capable of flight in about a month. Indiana bats feed entirely on night-flying insects, and a colony of bats can consume thousands of insects each summer and fall night, thus accumulating fat reserves that allow the bat to sustain itself during its winter hibernation.

The northern long-eared bat spends winter months hibernating in large caves and mines and the summer/fall months roosting under loose bark or in crevices and hollows in both live trees and snags (dead trees). During the summer, this species roosts either singly or in colonies. Northern long-eared bats seem to be flexible in selecting roosts, choosing roost trees based on suitability to retain bark or provide cavities or crevices (USFWS 2021). Rarely have northern long-eared bats been observed roosting in man-made structures such as sheds or barns (USFWS 2021). Breeding begins in late summer or early fall when males begin swarming near hibernacula (USFWS 2021).

As detailed above in Table 3-1, less than 15 percent of the Project Area and less than 30 percent of the Study Area includes forests and woodlands that may be capable of providing suitable habitat for maternity colonies and roosting habitat. Based on desktop review, no known Indiana bat or northern long-eared bat occurrences or hibernacula have been identified within the Project Area (NYSDEC 2018; USFWS 2020c). A maternity colony for Indiana bats and hibernaculum for northern long-eared bats (NYNHP 2019) (Figure 6, Appendix A), have been documented within the 5-mile Study Area. No known caves have been identified within the Project Area and 5-mile Study Area. Existing mines have been located outside the Project Area, but within the 5-mile Study Area (NYSDEC 2020b) (Figure 6, Appendix A).

Table 3-4. Special Status Species Potentially Occurring in Project Area

Common Name	Scientific Name	Status ¹	Habitat Requirements	Observed within Project Area in Last Five Years	Sources
Henslow's sparrow	<i>Ammodramus henslowii</i>	ST; HPSGCN	Habitat includes fallow, weedy, often moist fields and meadows.	This species has been documented within the Project Area by the NYNHP.	NYNHP 2019; TRC 2020a; eBird 2020b; USGS 2020b
Short-eared Owl	<i>Asio flammeus</i>	SE; HPSGCN	Habitat includes wet meadows, fresh and saltwater marshes, grasslands, shrublands, and agricultural areas.	This species has been documented within the Project Area by the NYNHP.	NYNHP 2019; TRC 2020a,b.
Upland sandpiper	<i>Bartramia longicauda</i>	ST; HPSGCN	Habitat includes grasslands with a mixture of short and tall grasses and forbs.	This species has been documented within 100 yards of the Project Area by the NYNHP.	NYNHP 2019; eBird 2020b; USGS 2020b.
Bald eagle	<i>Haliaeetus leucocephalus</i>	ST; SGCN	Habitat includes undisturbed forested areas near lakes, rivers, or wetlands.	Recent observations for this species have occurred within the Project Area during field surveys. Additionally, this species has been documented within 0.6 mile of the Project area by the NYNHP.	NYNHP 2019; TRC 2020a,b; Audubon 2020a,c; eBird 2020b; NYBBA 2020a,b.
Sharp-shinned hawk	<i>Accipiter striatus</i>	SOSC; SGCN	The sharp-shinned hawk occurs from sea level to almost alpine habitats in mixed, deciduous, and coniferous forests.	High. Recent observations for this species have occurred within the Project Area.	eBird 2020a,b; TRC 2020a
Cooper's hawk	<i>Accipiter cooperii</i>	SOSC; SGCN	Cooper's Hawk habitat consists of mixed, deciduous, and coniferous forests.	High. Recent observations for this species have occurred within the Project Area.	eBird 2020a,b; TRC 2020a
Grasshopper sparrow	<i>Ammodramus savannarum</i>	SOSC; HPSGCN	The Grasshopper Sparrow inhabits open grasslands and prairies.	High. Recent observations for this species have occurred within the Project Area.	USGS 2020; TRC 2020a,b; eBird 2020a,b;
Osprey	<i>Pandion haliaetus</i>	SOSC; SGCN	The Osprey inhabits areas along coastal and inland water bodies. Surrounding habitats may include mature forest, emergent marsh, sparsely-vegetated areas, or pine barrens.	High. Recent observations for this species have occurred within the Project Area.	TRC2020a,b USGS 2020; eBird 2020a,b;
Common loon	<i>Gavia immer</i>	SOSC; SGCN	This species utilizes freshwater lakes and ponds.	High. Recent observations for this species have occurred within the Project Area.	Audubon 2020a,c; eBird 2020a,b
American bittern	<i>Botaurus lentiginosus</i>	SOSC; SGCN	The American bittern inhabits freshwater wetlands.	High. Recent observations for this species have occurred within the Project Area.	Audubon 2020a,c; eBird 2020a,b

Common Name	Scientific Name	Status ¹	Habitat Requirements	Observed within Project Area in Last Five Years	Sources
Common nighthawk	<i>Chordeiles minor</i>	SOSC; SGCN	The common nighthawk will nest on bare substrate such as sand, dirt, gravel, or bare rock. In New York, this species utilizes a variety of open habitats that include coastal dunes and beaches, forest clearings, and gravel roof tops.	High. Recent observations for this species have occurred within the Project Area.	Audubon 2020a,c,d; NYBBA 2020a,b.
Horned lark	<i>Eremophila alpestris</i>	SOSC; HPSGCN	The horned lark inhabits open, agricultural lands.	High. The Project area is dominated by agricultural lands. Recent observations for this species have occurred within the Project Area.	USGS 2020
Vesper sparrow	<i>Pooecetes gramineus</i>	SOSC; HPSGCN	The vesper sparrow is associated with agricultural fields and native prairie.	High. The Project area is dominated by agricultural lands. Recent observations for this species have occurred within the Project Area.	USGS 2020; eBird 2020a,b
Northern harrier	<i>Circus cyaneus</i>	ST; SGCN	Habitat includes open grasslands, shrublands, marshes, and bogs.	Recent observations for this species have occurred within the Project Area during field surveys.	TRC 2020a,b; USGS 2020b; eBird 2020b; NYBBA 2020a,b.

¹ SE: State Endangered; ST: State Threatened; SOSC: Species of Special Concern; SGCN: Species of Greatest Conservation Need; HPSGCN: High Priority Species of Greatest Conservation Need

3.7.3 Migratory Birds and Eagles

Migratory birds nest in the U.S. and Canada during summer months and migrate south to the southern U.S., tropical regions of Mexico, Central or South America, and the Caribbean for the non-breeding season. These species are protected pursuant to the Migratory Bird Treaty Act (MBTA) under U.S. Code 703-711. The MBTA prohibits the take, kill, possession, and transportation of migratory birds, their eggs, and parts except when specifically permitted.

In addition, bald and golden eagles are protected pursuant to the Bald and Golden Eagle Protection Act (BGEPA) under 16 U.S. Code 668-668(d), which prohibits the take and disturbance of individual eagles, their nests, eggs, or parts. As detailed in 3.7.1, bald eagles have been observed within the Project Area and nesting has been documented approximately 0.5 mile south of the Project Area (Figure 9, Appendix A).

In addition to the 14 NYS listed species and SOSC that were documented during the grassland breeding bird surveys, surveyors recorded total of 1,464 grassland bird observations of 68 species occurred within the Project Area during the grassland breeding bird surveys (TRC 2020a). The five most frequently observed species during regular surveys comprised 62.8% of all individuals observed. The most frequently observed species during surveys was the ring-billed gull (*Larus delawarensis*; 226 individuals), comprising 29.7% of all birds observed. Thereafter, the most frequently observed species were the bobolink (*Dolichonyx oryzivorus*), red-winged blackbird (*Agelaius phoeniceus*), savannah sparrow (*Passerculus sandwichensis*), and American goldfinch (*Spinus tristis*). In addition to species detected during regular surveys, 17 species were observed incidentally. Many of these observations were of individuals singing from adjacent wooded areas bordering grassland patches. Species observed incidentally are more representative of the broader community of birds known to breed in New York State and include a number of forest-associated species (e.g., Baltimore oriole (*Icterus galbula*), black-throated green warbler (*Setophaga virens*), eastern wood-pewee (*Contopus virens*), hermit thrush (*Catharus guttatus*).

Snowy owl (*Bubo scandiacus*) was the most commonly observed raptor species during winter raptor surveys for the Project Area, accounting for 20.7% of the stationary raptor observations. Turkey vulture (*Cathartes aura*) and red-tailed hawk (*Buteo jamaicensis*) were the most commonly observed raptor species during the driving surveys, with 12 and 10 observations recorded respectively. An additional 18 non-raptor avian species were documented on the Project Area, though none were listed species.

Overall, raptor use of the Project Area was spatially and temporally distributed throughout the Project Area (Figure 6, Appendix A), though raptor activity was noticeably higher in the western portion of the Project Area and noticeably lower in the month of December. Observations were recorded at all four stationary locations and seven of eight driving route stops. Several state-listed species were documented within the Project Area including wintering grassland raptors. Roosting behavior was not observed for northern harrier. Observations of short-eared owl included activity which may be consistent with roosting behavior, though no roost sites were confirmed.

Summary

Based on a review of publicly available data sources and site visits for the Project Area, 14 NYS listed species and SOSC have been observed within the last five years. Additional NYS listed threatened, endangered, SOSC, Species of Greatest Conservation Need (SGCN), and Species of Potential Conservation Need (SPCN) have the potential to occur within the Project Area and 5-mile Study Area based on the availability of suitable habitat and known range (Appendix B, Tables B-1 through B-4). Based on field survey results and initial correspondence with the NYSDEC (TRC 2020a), additional consultation with the ORES and NYSDEC will be conducted regarding potential occupied habitat for the Henslow's sparrow and northern harrier within the Project Area.

Two federally listed species (Indiana bat and northern long-eared bat) has been identified by the USFWS as potentially occurring within the Project Area (USFS 2020b). No known occurrences or hibernacula has been identified within the Project Area and 5-mile Study Area (USFWS 2020c).

Species observations recorded during field surveys are consistent with documentation of these species within the vicinity of the Project provided by NYSDEC and data available from other publicly available sources (NYBBA III 2020a,b; NYSDEC 2019, 2020c; USGS 2020b; eBird 2020a,b; Audubon 2020b,c; NYSOA 2021) as identified in Appendix B.

Breeding bird surveys have been completed on-site and the results have been submitted to the NYSDEC under separate cover. Suitable nesting, foraging, and winter habitat for migratory birds has been documented within the Project Area and 5-mile Study Area. Bald eagles have been observed and nest within the 5-mile Study Area approximately 0.5 mile south of the Project Area (Figure 9, Appendix A). The bird community observed in the Project Area is composed of species widely distributed in and typical to New York State. Observations were distributed throughout the Project Area, with the highest number of individuals documented in areas of contiguous mixed- and cool-season grasslands.

3.8 Climate Change

The National Audubon Society *Survival by Degrees* climate change model assesses the vulnerability of over 600 avian species to climate change. According to the model, the summer and winter range and distribution of each bird species presented in this document is vulnerable as a result of an increase in ambient air temperature ranging from 1.5-3.0°C. The model results indicate that each species range and distribution will shift, expand, or contract as a result of increased global temperatures. Within Jefferson County, Great Lakes communities will face more and worse algal blooms and pollution overflows as a result of rising temperatures. Threats identified within the 5-mile Study Area include increases in fire weather, spread of urbanization, and an increase in spring heat waves and heavy rain events that can impact nests and young birds (Audubon 2020d).

Table 3-5 includes the climate vulnerability for listed bird species identified as potentially occurring within the 5-mile Study Area. The summer range of arctic birds, boreal birds, coastal eastern forest birds, and waterbirds within the Project area are assigned a high vulnerability ranking, representing a moderate to high loss of habitat for year-round residents and breeding, foraging, and migratory populations. According to Audubon's climate change model, birds with

high to moderate vulnerability may lose more than half their current range and will be forced to search for suitable habitat elsewhere. However, the winter range of these species is assigned a lesser vulnerability ranking, representing a stable, low, to moderate loss of habitat in southern climates where migrating populations spend the winter (Audubon 2020d).

Table 3-5. Climate Vulnerability for Listed Species within the Study Area

Common Name	Seasonal Range within the Study Area	Overall Species Vulnerability Status for each Warming Scenario		
		+1.5 °C	+2.0 °C	+3.0 °C
Henslow's Sparrow	Summer/Breeding Uncommon	High	High	High
Short-eared Owl	Summer/Breeding Uncommon	Moderate	Moderate	Moderate
Upland Sandpiper	Summer/Breeding Uncommon	Stable	Stable	Stable
Bald Eagle	All Seasons Uncommon	Low	Low	Low
Northern Harrier	Summer/Breeding Uncommon	Low	Low	Low
Sharp-Shinned Hawk	Summer/Breeding/All Seasons Uncommon	Low	Moderate	Moderate
Cooper's Hawk	Summer/Breeding/All Seasons Uncommon	Stable	Stable	Stable
Grasshopper Sparrow	Summer/Breeding Uncommon	Stable	Stable	Low
Osprey	Summer/Breeding Uncommon	Stable	Stable	Stable
Common Loon	Summer/Breeding Uncommon	Low	Low	Moderate
American Bittern	Summer/Breeding Common to Uncommon	Stable	Low	Low
Common Nighthawk	Summer/Breeding Uncommon	Stable	Stable	Stable
Horned Lark	All Seasons Common	Low	Low	Low
Vesper Sparrow	Summer/Breeding Uncommon	Low	Moderate	Moderate

Source: Audubon 2020b

Aside from the National Audubon Society *Survival by Degrees* climate change model, no regional- or species-specific climate change models or model results were identified for the wildlife and fish species presented in this document.

Summary

Based on a review of the National Audubon Society *Survival by Degrees* climate change model, nearly half of the listed bird species with the potential to occur within the 5-mile Study Area are moderately to highly vulnerable to increased climate warming scenarios. However, in

conjunction with the Project type and scope, it is unlikely that implementation of the Project would result in a substantial increase (+1.5-3.0°C) in ambient air temperature, by which suitable habitat range and distribution would be affected. While the anticipated cumulative impacts of solar arrays have the potential to cause regional changes in temperature and precipitation by altering the amount of solar radiation absorbed by the Earth or disrupting local airflow patterns (Hu et al. 2015), they also have the potential to reduce and/or replace existing fossil fuel emitting energy systems, thereby reducing carbon emissions. The Project would contribute to a reduction of global carbon emissions, which may result in a lesser global ambient air temperature increase. According to the National Audubon Society, if global ambient air temperatures are limited to 1.5°C above pre-industrial levels, the risk of bird species vulnerability will be lessened in comparison to projections associated with traditional and current fossil fuel emission sources (Audubon 2020d).

No Project-specific climate change models have been developed to date; however, numerous modeling techniques can be applied in the event that species-specific results are required for Project implementation. According to Wilsey et al. (2013), wildlife species range contractions and expansions, population abundance and dynamics, dispersal, gene flow, and phenology can be extrapolated using statistical, algorithmic (empirical), and spatially-explicit population modeling techniques to relate historical climate to current species distributions. Many modeling approaches that estimate historical changes in populations of threatened and endangered species also can be used to simulate future climate-induced changes.

4.0 Conclusions and Recommendations

This document is intended to provide sufficient information to the ORES and NYSDEC to determine whether occupied habitat for NYS listed species exists on site or whether additional surveys are required. Based on this desktop review and field surveys, the following conclusions were identified that should be considered to inform facility design which will, once completed, be submitted to the ORES and NYSDEC as part of the Section 94-c application:

- The Project Area is made up entirely of private lands and is dominated by agriculture land uses (83 percent) consisting of cultivated or planted hay or pasture lands and cultivated crops.
- The Project Area is located entirely on unprotected/unclassified lands. No federal, state, county, or other designated jurisdictions are intersected by the Project Area. The 5-mile Study Area intersects various federal, state, and other designated area including a grassland focus areas, core forest blocks, Audubon IBAs, NYS WMAs, WRP-managed easements, Nature Conservancy Nature Preserves, and wildlife concentration areas.
- Wetlands and waterbodies delineations have been completed for the Project Area.
- Fourteen NYS listed threatened and endangered species and SOSC have been observed within the last five years within the Project Area. Additional consultation with the ORES and NYSDEC is recommended to confirm the location of occupied habitat within the Project Area.
- No known locations of bat hibernacula are located within the Project Area.
- Surveys for grassland breeding birds, winter raptor use, and wetland and waterbodies have been conducted for the Project Area.
- Bald eagle nesting has been documented within 1-mile of the Project Area.

- The development of the Project would not contribute to the effects of climate change portrayed in current models. Instead, the development of the Project would be beneficial in preventing the loss of current wildlife species' ranges within the region.

5.0 References

- Audubon. (2020a). Important Bird Areas. Perch River Complex. Accessed November 22, 2020 from <https://www.audubon.org/important-bird-areas/perch-river-complex>
- Audubon. (2020b). Point Peninsula Important Bird Area. Accessed November 23, 2020 from <https://netapp.audubon.org/iba/Reports/805>.
- Audubon. (2020c). Audubon Christmas Bird Counts. Historical Results by Count. NYWA, Watertown 2020-2020. Accessed November 23, 2020 from <https://www.audubon.org/conservation/science/christmas-bird-count>
- Audubon. (2020d). Survival by Degrees: 389 Bird Species on the Brink. Accessed November 23, 2020 from <https://www.audubon.org/climate/survivalbydegrees>
- Bailey, R.G. (1995). Description of the Ecoregions of the United States. Miscellaneous Publication No. 1391. Second edition, revised. Washington, DC: USDA Forest Service.
- Bat Conservation International (BCI). 2020. Bats by Region. Retrieved November 22, 2020 from https://www.batcon.org/about-bats/bat-profiles/?fwp_location=new-york.
- Bryce, S.A., Griffith, G.E., Omernik, J.M., Edinger, G., Indick, S., Vargas, O., and Carlson, D. (2010). Ecoregions of New York (color poster with map descriptive text, summary tables, and photographs): Reston, Virginia, U.S. geological Survey, map scale 1:1,250,000. Accessed August 12, 2020, from http://ecologicalregions.info/data/ny/NY_front.pdf
- eBird. (2020a). Chaumont Barrens Preserve. Accessed November 22, 2020 from https://ebird.org/india/hotspot/L122968?yr=all&m=&rank=mrec&hs_sortBy=taxon_order&hs_o=
- eBird. (2020b). Rt 179 Substation, Chaumont. Accessed November 22, 2020 from <https://ebird.org/india/hotspot/L3995508>
- Edinger, G.J., Evans, D.J., Gebauer, S., Howard, T.G., Hunt, D.M., and A.M., Olivero. (2014). Ecological Communities of New York State, Second Edition. New York Heritage Program, NYS Department of Environmental Conservation, Albany, NY. (pp. 160).
- Environmental Laboratory. 1987. Corps of Engineers Wetland Delineation Manual. Technical Report Y-87-1. U.S. Army Corps of Engineers: Waterways Experiment Station; Vicksburg, MS.
- Google Earth Pro. (2020). Aerial imagery of 44°00'04.78" N, 76°04'39.49" W. Accessed November 23, 2020.
- Multi-Resolution Land Characteristics (MRLC) Consortium. (2016). MRLC Viewer – All National Land Cover Database (NLCD) 2016 Contiguous United States Land Cover. Accessed September 1, 2020 from <https://www.mrlc.gov/>

- New York Breeding Bird Atlas III (NYBBA III). (2020a). Dexter CW Block. Accessed November 19, 2020 from <https://ebird.org/atlasny/block/44076A1CW>
- NYBBA III. (2020b). Dexter CE Block. Accessed November 19, 2020 from <https://ebird.org/atlasny/block/44076A1CE>
- New York Natural Heritage Program (NYNHP). (2014). Ecological Communities of New York State. Second Edition. A Revised and Expanded Edition of Carol Reschke's Ecological Communities of New York State. March 2014.
- NYNHP. (2019). Data provided by H. Krahlung (NYNHP) to J. Monson-Miller (Geronimo Energy) for the Riverside Solar Project. June 19, 2019.
- NYNHP. (2020). Online Conservation Guide for Alvar woodland. Accessed November 20, 2020 from <https://guides.nynhp.org/alvar-woodland/>
- New York State (NYS). (2020). Boundaries of Ecological Regions of New York State. GIS Data Set. Accessed November 23, 2020 from <https://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1131>.
- New York State Department of Environmental Conservation (NYSDEC). 2014. Lake Ontario and Minor Tributaries Watershed. Accessed on August 11, 2020 from <https://www.dec.ny.gov/lands/48368.html>.
- NYSDEC. (2015). New York State Wildlife Action Plan. September 2015.
- NYSDEC. (2016). Habitat Management Plan for Ashland Flats Wildlife Management Area 2016-2025. Division of Fish, Wildlife, and Marine Resources. Bureau of Wildlife. February 9, 2016.
- NYSDEC. (2018). Northern Long-eared Bat Occurrences by Town. June 28, 2018. Accessed November 20, 2020 from https://www.dec.ny.gov/docs/wildlife_pdf/nlebtowns.pdf
- NYSDEC. (2019). Checklist of Amphibians, Reptiles, Birds, and Mammals of New York State. Including Their Legal Status. NYSDEC Division of Fish and Wildlife. February 2019.
- NYSDEC. (2020a). Environmental Resource Mapper (ERM). Accessed on December 18, 2020 from <https://gisservices.dec.ny.gov/gis/erm/>
- NYSDEC. (2020b). Ashland Flats Wildlife Management Area. Accessed November 23, 2020 from <https://www.dec.ny.gov/outdoor/35474.html>
- NYSDEC. (2020c). Dexter Marsh Wildlife Management Area. Accessed November 23, 2020 from <https://www.dec.ny.gov/outdoor/40663.html>
- NYSDEC. (2020d). Perch River Wildlife Management Area. Accessed November 23, 2020 from <https://www.dec.ny.gov/outdoor/46441.html>
- NYSDEC. (2020e). Chaumont Barrens Preserve. Chaumont, Jefferson County. Watchable Wildlife. Accessed November 20, 2020 from <https://www.dec.ny.gov/outdoor/84700.html>

- NYSDEC. (2020f). Nature Explorer. Project Area Search. Accessed November 21, 2020 from <https://www.dec.ny.gov/natureexplorer/app/>
- NYSDEC. (2020g). Nature Explorer. 5-mile Study Area Search. Accessed November 21, 2020 from <https://www.dec.ny.gov/natureexplorer/app/>
- NYSDEC. (2020h). Downloaded Mining Database. Accessed November 24, 2020 from <https://www.dec.ny.gov/lands/5374.html>
- NYSDEC. (2020i). List of Endangered, Threatened, and Special Concern Fish and Wildlife Species of New York State. Accessed November 19, 2020 from <https://www.dec.ny.gov/animals/7494.html>
- NYSDEC. (2020j). New York Environmental Assessment Form Mapper. Project Area Search. Accessed November 23, 2020 from <https://gisservices.dec.ny.gov/eafmapper/>
- NYSDEC. (2021a). Water Classification. Accessed January 14, 2021 from <http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1118>
- NYSDEC. (2021b). Water Inventory/Priority Waterbodies. Accessed January 14, 2021 from <https://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1117>
- NYSDEC. (2021c). Environmental Resource Mapper (ERM). Accessed on February 5, 2021 from <https://gisservices.dec.ny.gov/gis/erm/>
- New York State Ornithological Association (NYSOA). (2021). Accessed January 10, 2021 from <https://nybirds.org/NYSARC/RecordsSummary.htm>.
- The Nature Conservancy (TNC). (2020). Places We Protect, Chaumont Barrens Preserve. New York. Accessed November 20, 2020 from <https://www.nature.org/en-us/get-involved/how-to-help/places-we-protect/central-chaumont-barrens/>
- TRC. (2020a). Grassland Breeding Bird Survey Report. Riverside Solar Project. August 2020.
- TRC. (2020b). State-Listed Wintering Grassland Raptor Survey Report for the Riverside Solar Project. July 2020. Case No. 19-F-0781. Prepared for: Riverside Solar, LLC. July 2020.
- TRC. (2021). Wetland and Stream Delineation Report, Brookside Solar Project. January 2021.
- U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS). (2020a). Grassland Focus Areas. Accessed November 23, 2020 from https://www.nrcs.usda.gov/wps/portal/nrcs/detail/ny/programs/easements/acep/?cid=nrcs144p2_027088
- USDA NRCS. (2020b). Wetlands Reserve Program. Accessed November 24, 2020 from https://www.nrcs.usda.gov/wps/portal/nrcs/detail/ny/home/?cid=nrcs144p2_027089
- United States Army Corps of Engineers. (2012). Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0). U.S. Army Engineer Research and Development Center, Vicksburg, MS, 162 pp.

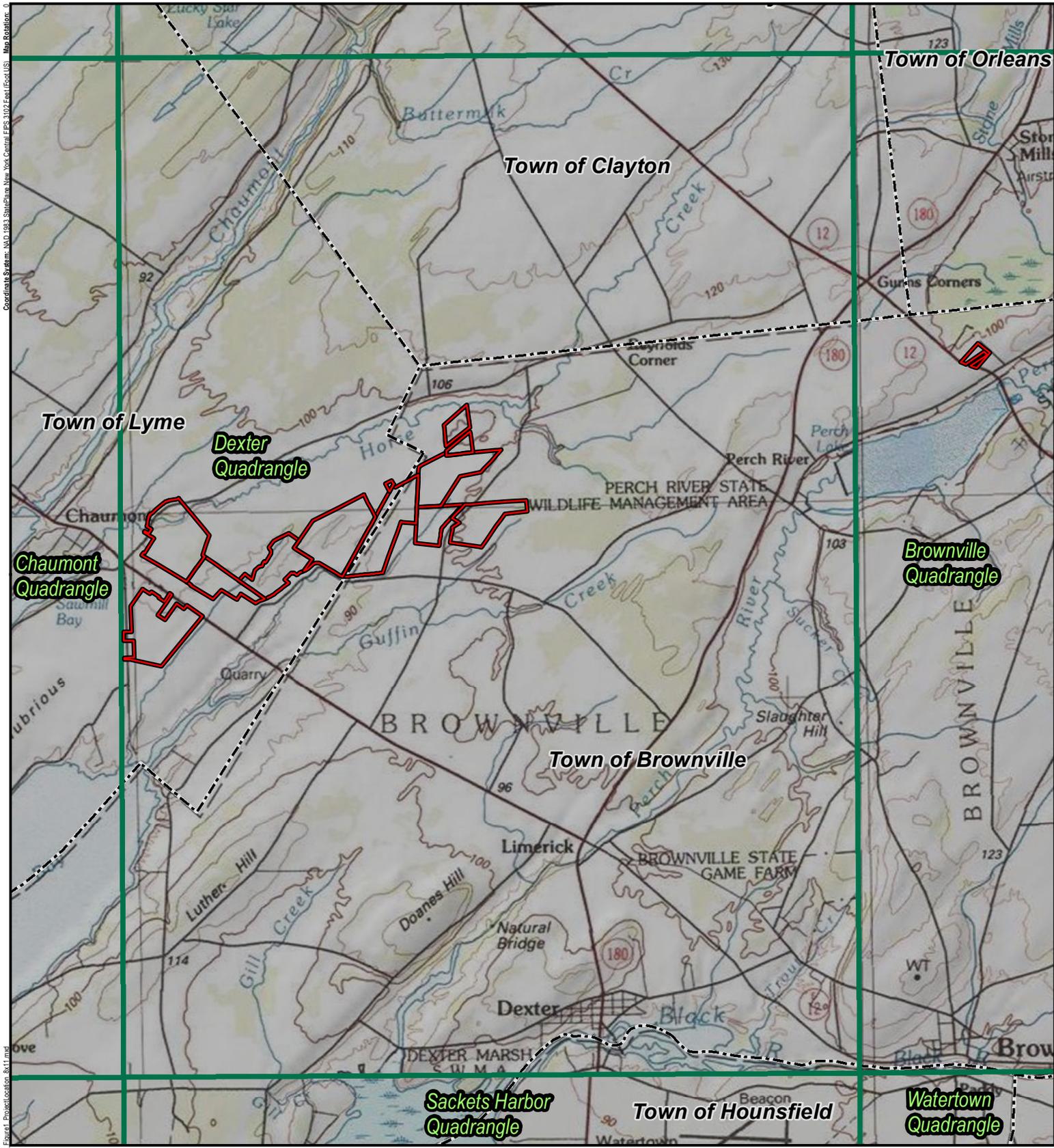
- United States Environmental Protection Agency (USEPA). 2017. WATERS GeoViewer. Accessed August 11-14, 2020 from <https://www.epa.gov/waterdata/waters-geoviewer>
- USFWS. (2020a). National Wetlands Inventory (NWI) Mapper. Accessed August 11, 2020 at: <https://www.fws.gov/wetlands/data/mapper.html>
- USFWS. (2020b). Northern Long-eared Bat Hibernacula and Maternity Roost Tree Location Information. Accessed November 23, 2020 from <https://www.fws.gov/midwest/endangered/mammals/nleb/nhisites.html>
- USFWS. (2020c). Information for Planning and Consultation Report. Accessed March 30, 2020, from <https://ecos.fws.gov/ipac/>.
- U.S. Geological Survey (USGS). (2020a). Protected Areas Database of the United States (PADUS) Version 2.1. Accessed on December 14, 2020 from <https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/science/protected-areas>
- USGS. (2020b). North American Breeding Bird Survey Route – Watertown. Accessed November 22, 2020 from <https://www.mbr-pwrc.usgs.gov/cgi-bin/rtena215.pl?61071&csrfmiddlewaretoken=3YKakk7LxT2ki6NSpl4mstudYCqW02C>
- Wilsey C.B., J.J. Lawler, E.P. Maurer, D. McKenzie, P.A. Townsend, R. Gwozdz, J.A. Freund, K. Hagmann, and K.M. Hutten. (2013). Tools for assessing climate impacts on fish and wildlife. *Journal of Fish and Wildlife Management* 4(1):220-241; el 944-687X. Accessed November from https://www.fs.fed.us/pnw/pubs/journals/pnw_2013_wilsey001.pdf

Appendix A. Figures

Figure Number	Figure Name
1	Project Area Location
2	Study Area Location Area
3	Land Cover in Project Area
4	Wetlands in Project Area
5	NYSDEC Resources in Project Area
6	Ecoregions, Natural Communities, and Hibernacula in Study Area
7	Protected or Classified Lands in Study Area
8	Core Forest Blocks in Study Area
9	Observed Listed Species in Project Area

Coordinate System: NAD 1983 Spheroid: New York Central FIPS 3102 East (Foot US) Map Datum: C

Path: S:\PROJECTS\Geomatics\37322 Riverside Solar\Riverside 3420\CR_Figures\ProjectLocation_8x11.mxd



LEGEND

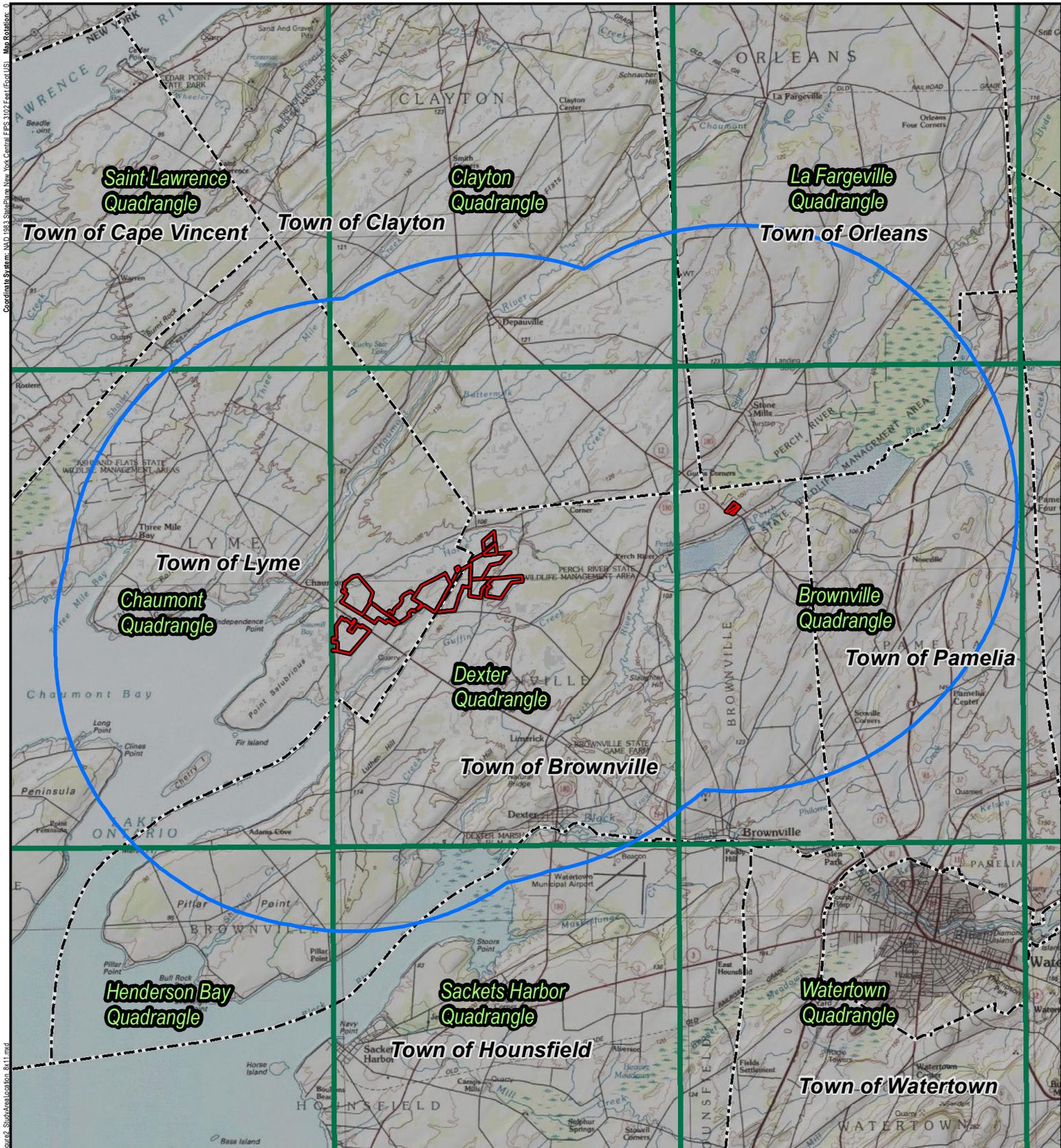
- PROJECT AREA
- USGS 24K QUAD BOUNDARY
- TOWN BOUNDARY

1:70,000
1" = 5,833'

0 0.5 1 Miles

1. BASEMAP IMAGERY FROM ESRI
USA TOPO MAPS MAP SERVICE.

PROJECT	
RIVERSIDE SOLAR LLC TOWNS OF LYME & BROWNVILLE JEFFERSON COUNTY, NY	
TITLE	
PROJECT AREA LOCATION	
DRAWN BY: D. BARLEY	PROJECT NO.: 373222
CHECKED BY: R. BARBER	
APPROVED BY: S. KRANES	
DATE: JANUARY 2021	
FIGURE 1	
TRC 215 GREENFIELD PKWY, STE 102 LIVERPOOL, NY 13088	RIVERSIDE SOLAR



Coordinate System: NAD 1983, StatePlane, New York Central FIPS 3102 Feet (Foot, US), Map Rotation: 0

Path: S:\PROJECTS\Geomatics\37222_Riverside Solar\Riverside_34x20\CR_Fig2_SiteAreaLocation_8x11.mxd



LEGEND

- PROJECT AREA
- 5-MILE STUDY AREA
- USGS 24K QUAD BOUNDARY
- TOWN BOUNDARY

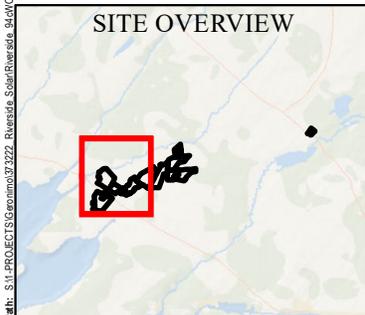
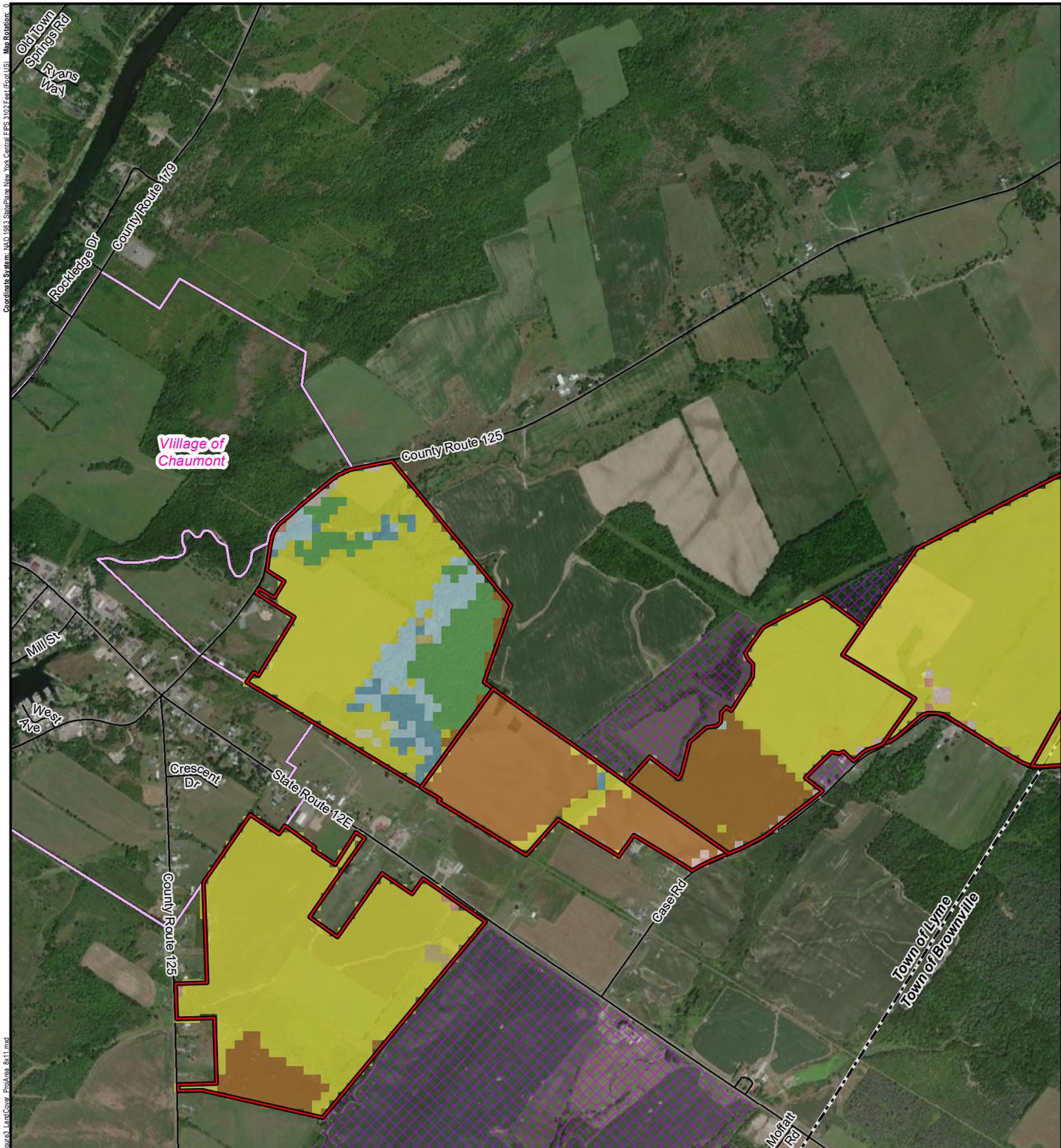
1:150,000
1" = 12,500'

0 1 2 Miles

1. BASEMAP IMAGERY FROM ESRI
*USA TOPO MAPS' MAP SERVICE.

PROJECT: RIVERSIDE SOLAR LLC TOWNS OF LYME & BROWNVILLE JEFFERSON COUNTY, NY	
TITLE: STUDY AREA LOCATION	
DRAWN BY: D. BARLEY	PROJECT NO.: 373222
CHECKED BY: R. BARBER	
APPROVED BY: S. KRANES	
DATE: JANUARY 2021	
FIGURE 2	
215 GREENFIELD PKWY, STE 102 LIVERPOOL, NY 13088	

Coordinate System: NAD 1983 StatePlane New York Central FIPS 3102 East (Foot US) Map Rotation: 0



LEGEND

PROJECT AREA	DECIDUOUS FOREST
NON-LEASED PORTION OF PROJECT PARCEL	SHRUB/SCRUB
VILLAGE BOUNDARY	GRASSLAND/HERBACEOUS
TOWN BOUNDARY	HAY/PASTURE
DEVELOPED, OPEN SPACE	CULTIVATED CROPS
DEVELOPED, LOW INTENSITY	WOODY WETLANDS
BARREN LAND	EMERGENT HERBACEOUS WETLANDS

1:18,000
1" = 1,500'

0 1,000 2,000 Feet

1. BASEMAP IMAGERY FROM ESRI
"WORLD IMAGERY" MAP SERVICE.
2. DATA SOURCES: MRLC 2016.

PROJECT: RIVERSIDE SOLAR LLC
TOWNS OF LYME & BROWNVILLE
JEFFERSON COUNTY, NY

TITLE: LAND COVER IN PROJECT AREA

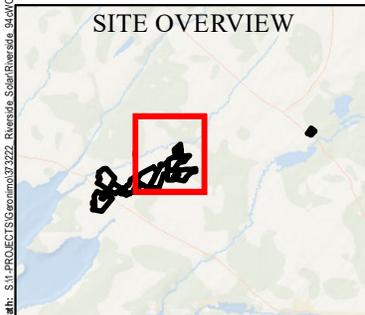
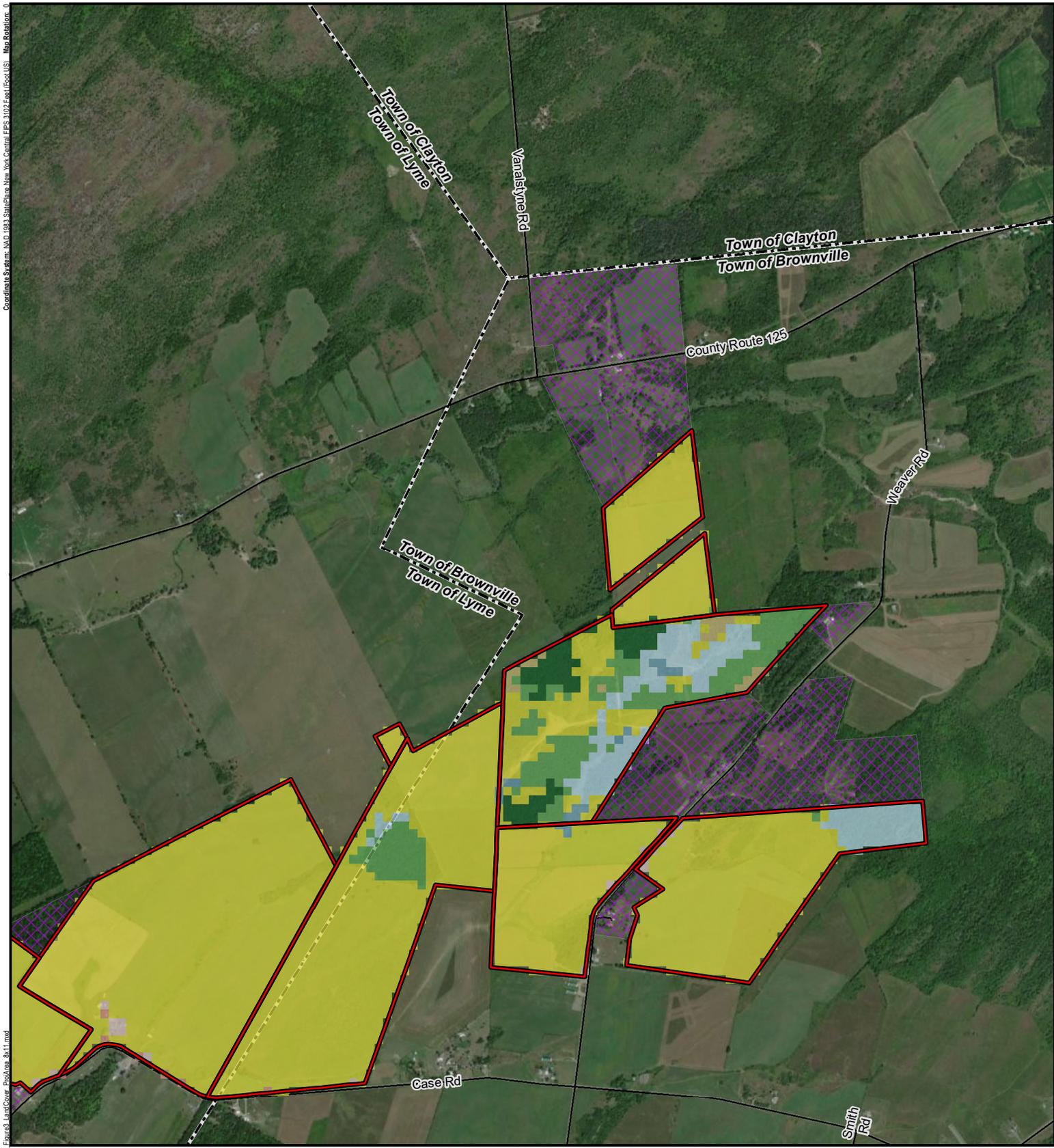
DRAWN BY: D. BARLEY	PROJECT NO.: 373222
CHECKED BY: R. BARBER	
APPROVED BY: S. KRANES	
DATE: JANUARY 2021	

FIGURE 3
SHEET 1 OF 3

TRC
215 GREENFIELD PKWY, STE 102
LIVERPOOL, NY 13088

RIVERSIDE SOLAR

Coordinate System: NAD 1983 StatePlane New York Central FIPS 3102 Feet (Foot US) Map Rotation: 0



LEGEND

PROJECT AREA	EVERGREEN FOREST
NON-LEASED PORTION OF PROJECT PARCEL	SHRUB/SCRUB
TOWN BOUNDARY	HAY/PASTURE
DEVELOPED, OPEN SPACE	WOODY WETLANDS
DEVELOPED, LOW INTENSITY	EMERGENT HERBACEOUS WETLANDS
DECIDUOUS FOREST	

1:18,000
1" = 1,500'

0 1,000 2,000 Feet

1. BASEMAP IMAGERY FROM ESRI
"WORLD IMAGERY" MAP SERVICE.
2. DATA SOURCES: MRLC 2016.

PROJECT: RIVERSIDE SOLAR LLC
TOWNS OF LYME & BROWNVILLE
JEFFERSON COUNTY, NY

TITLE: LAND COVER IN PROJECT AREA

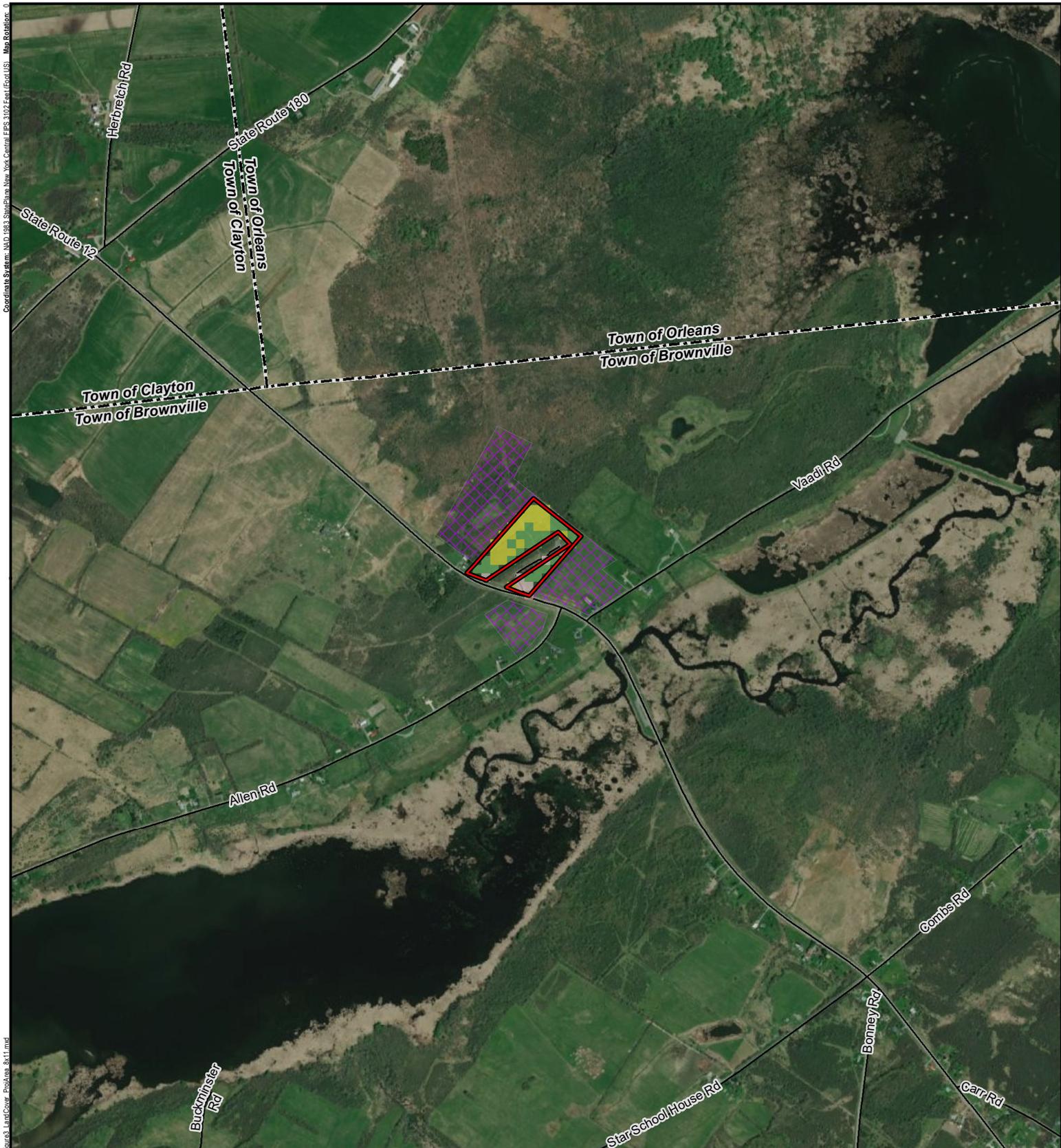
DRAWN BY: D. BARLEY	PROJECT NO.: 373222
CHECKED BY: R. BARBER	
APPROVED BY: S. KRANES	
DATE: JANUARY 2021	

FIGURE 3
SHEET 2 OF 3

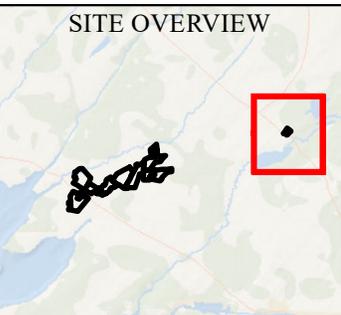
TRC
215 GREENFIELD PKWY, STE 102
LIVERPOOL, NY 13088

RIVERSIDE SOLAR

Path: S:\PROJECTS\Geomatics\2022 Riverside Solar\Riverside 3420\CR_Figures\LandCover_ProArea_8x11.mxd



Coordinate System: NAD 1983 StatePlane New York Central FIPS 3102 Feet (Foot US) Map Resolution: 0
 Path: S:\PROJECTS\Geomatics\2022_Riverside Solar\Riverside_3420\CR_Figures\LandCover_ProArea_8x11.mxd



LEGEND

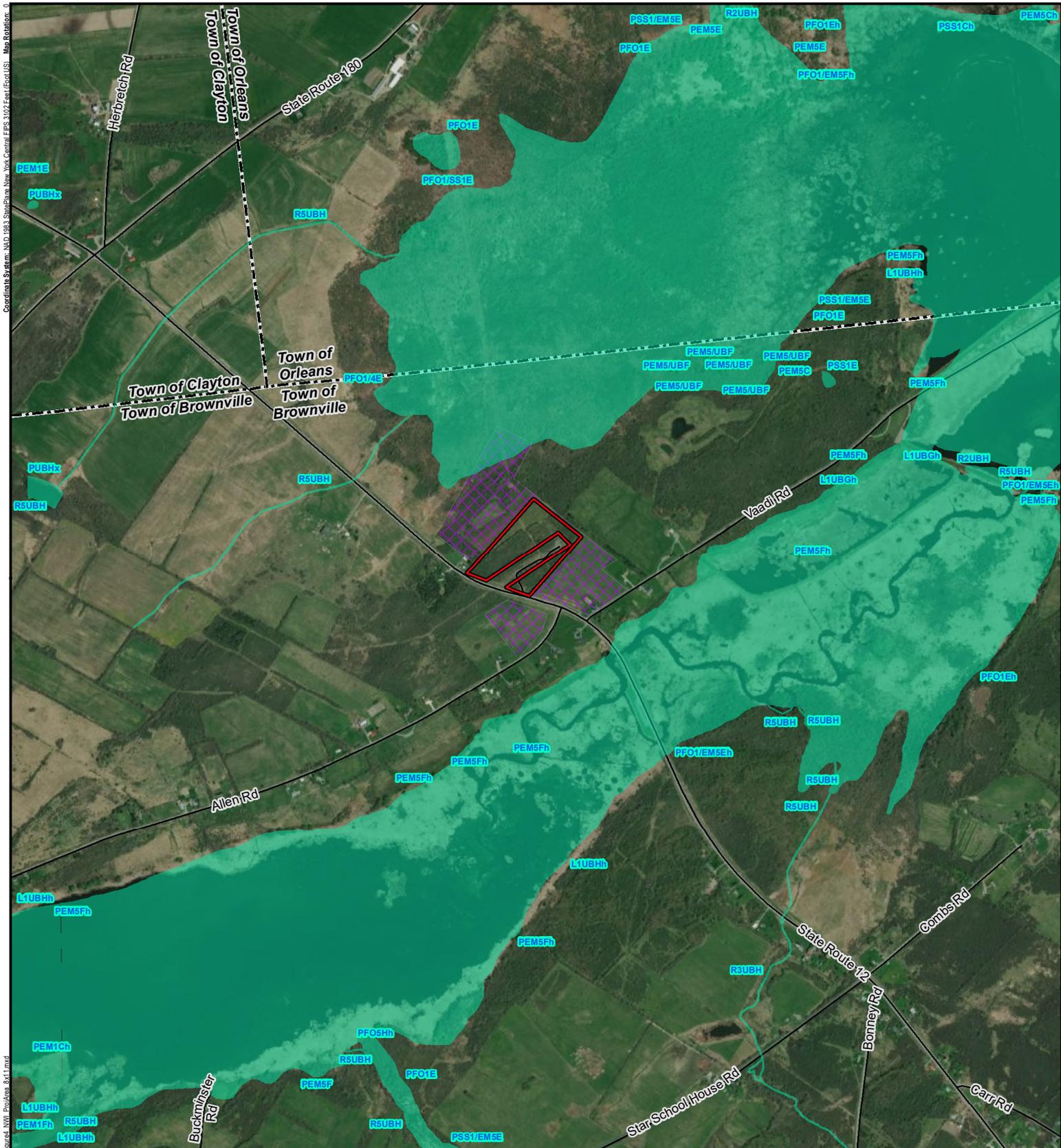
- PROJECT AREA
- NON-LEASED PORTION OF PROJECT PARCEL
- TOWN BOUNDARY
- DEVELOPED, OPEN SPACE
- DEVELOPED, LOW INTENSITY
- DECIDUOUS FOREST
- HAY/PASTURE

1:18,000
1" = 1,500'

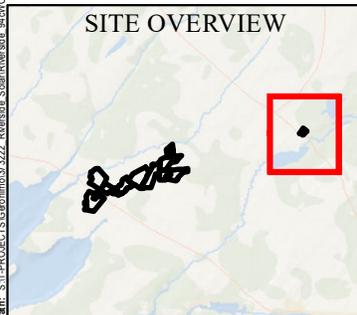
1. BASEMAP IMAGERY FROM ESRI
"WORLD IMAGERY" MAP SERVICE.
2. DATA SOURCES: MRLC 2016.

N
0 1,000 2,000
Feet

PROJECT: RIVERSIDE SOLAR LLC TOWNS OF LYME & BROWNVILLE JEFFERSON COUNTY, NY	
TITLE: LAND COVER IN PROJECT AREA	
DRAWN BY: D. BARLEY CHECKED BY: R. BARBER APPROVED BY: S. KRANES DATE: JANUARY 2021	PROJECT NO.: 373222
FIGURE 3 SHEET 3 OF 3	
 215 GREENFIELD PKWY, STE 102 LIVERPOOL, NY 13088	



Path: S:\PROJECTS\Geomatics\2022_Riverside Solar\Riverside_942\CPR_Figures\NW1_010Area_8x11.mxd
 Coordinate System: NAD_1983_StatePlane_New_York_Central_FIPS_3102_East_Foot_US - Map Rotation: 0

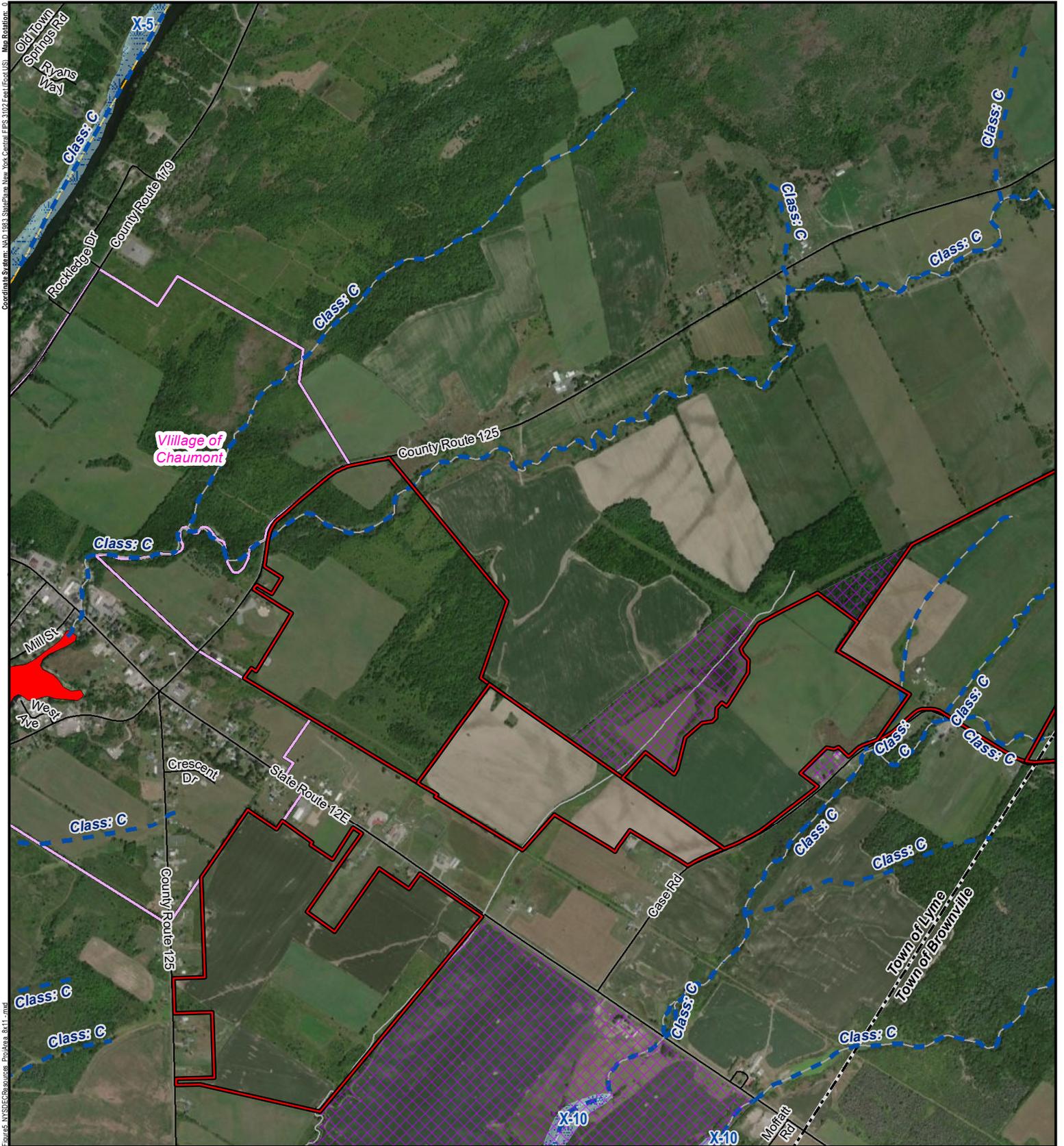


LEGEND

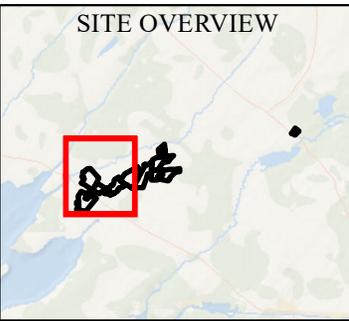
- PROJECT AREA
- NON-LEASED PORTION OF PROJECT PARCEL
- TOWN BOUNDARY
- WETLANDS (NWI)

1:18,000
 1" = 1,500'

RIVERSIDE SOLAR LLC TOWNS OF LYME & BROWNVILLE JEFFERSON COUNTY, NY	
NWI RESOURCES IN PROJECT AREA	
DRAWN BY: D. BARLEY CHECKED BY: R. BARBER APPROVED BY: S. KRANES DATE: JANUARY 2021	PROJECT NO.: 373222 FIGURE 4 SHEET 3 OF 3
215 GREENFIELD PKWY, STE 102 LIVERPOOL, NY 13088	



Coordinate System: NAD 1983 StatePlane New York Central FIPS 3102 Feet (Foot US) Map Rotation: 0
 Path: S:\PROJECTS\Geomatics\37322 Riverside Solar\Riverside 34x0\CR_Figures\NYSDEC\resources\ProjArea_8x11.mxd



LEGEND

PROJECT AREA	LAKE-RESERVOIR SEGMENT
NON-LEASED PORTION OF PROJECT PARCEL	IMPAIRED SEGMENT
WATERBODIES (NYSDEC)	
WETLANDS (NYSDEC)	

NYSDEC PRIORITY WATERBODIES LIST:

RIVER-STREAM SEGMENT	MINOR IMPACTS
UNASSESSED	

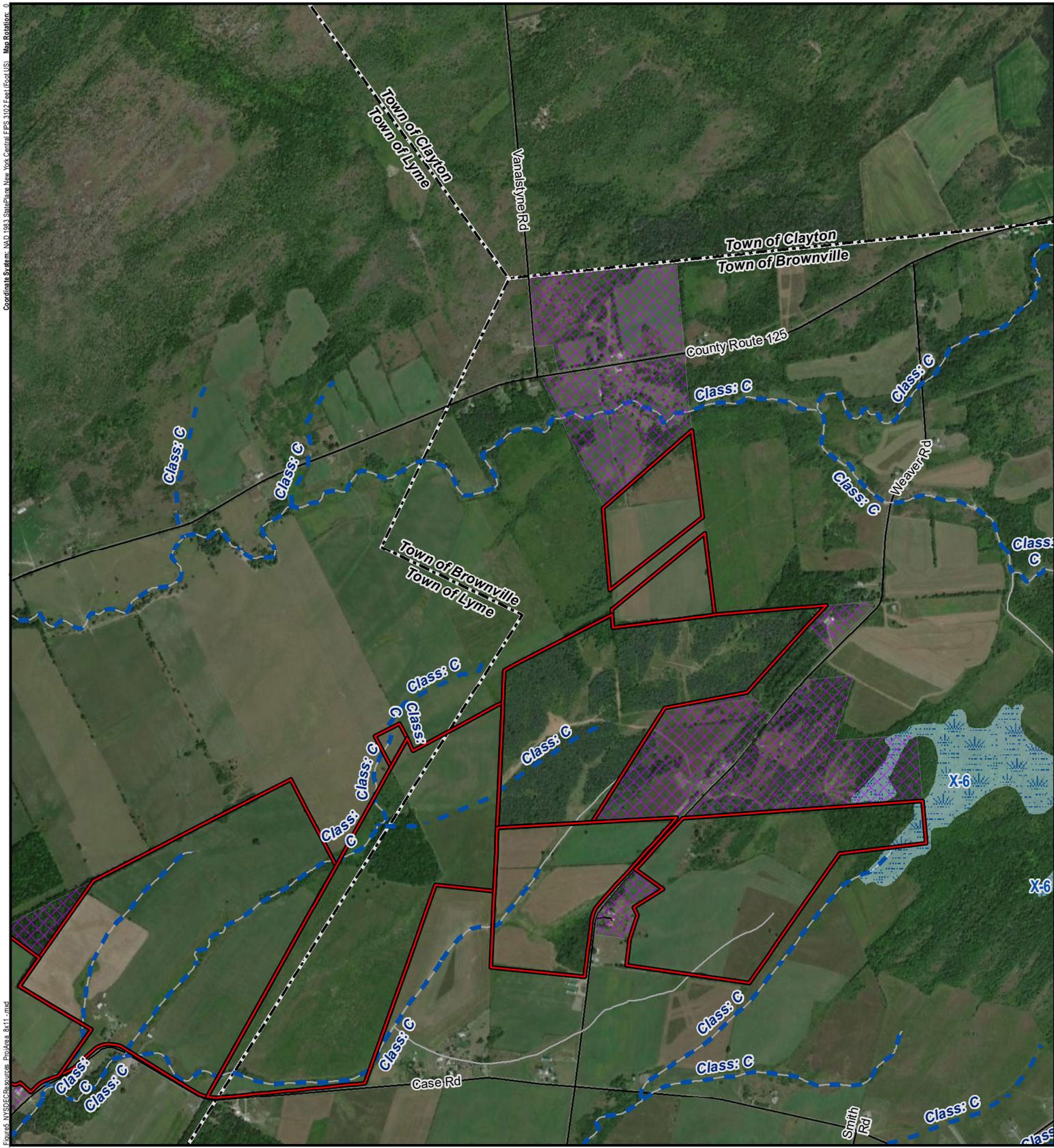
1:18,000
1" = 1,500'

0 1,000 2,000 Feet

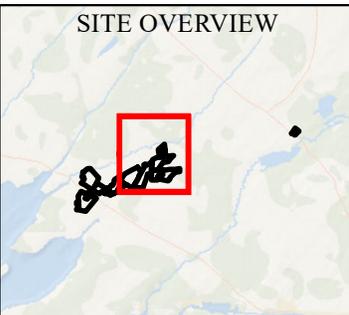
1. BASEMAP IMAGERY FROM ESRI "WORLD IMAGERY" MAP SERVICE
2. DATA SOURCES: NYSDEC 2020.

PROJECT: RIVERSIDE SOLAR LLC TOWNS OF LYME & BROWNVILLE JEFFERSON COUNTY, NY	
TITLE: NYSDEC RESOURCES IN PROJECT AREA	
DRAWN BY: D. BARLEY	PROJECT NO.: 373222
CHECKED BY: R. BARBER	
APPROVED BY: S. KRANES	
DATE: JANUARY 2021	
FIGURE 5 SHEET 1 OF 3	
215 GREENFIELD PKWY, STE 102 LIVERPOOL, NY 13088	

Coordinate System: NAD_1983_StatePlane_New_York_Central_FIPS_3102 Feet (Foot, US) Map Rotation: 0



Path: S:\PROJECTS\Geomatics\2022_Riverside Solar\Riverside_94\0\CR_Figures\NYSDECResources_7toArea_8x11.mxd



LEGEND

- PROJECT AREA
- NON-LEASED PORTION OF PROJECT PARCEL
- WATERBODIES (NYSDEC)
- WETLANDS (NYSDEC)

NYSDEC PRIORITY WATERBODIES LIST:
 RIVER-STREAM SEGMENT
 UNASSESSED

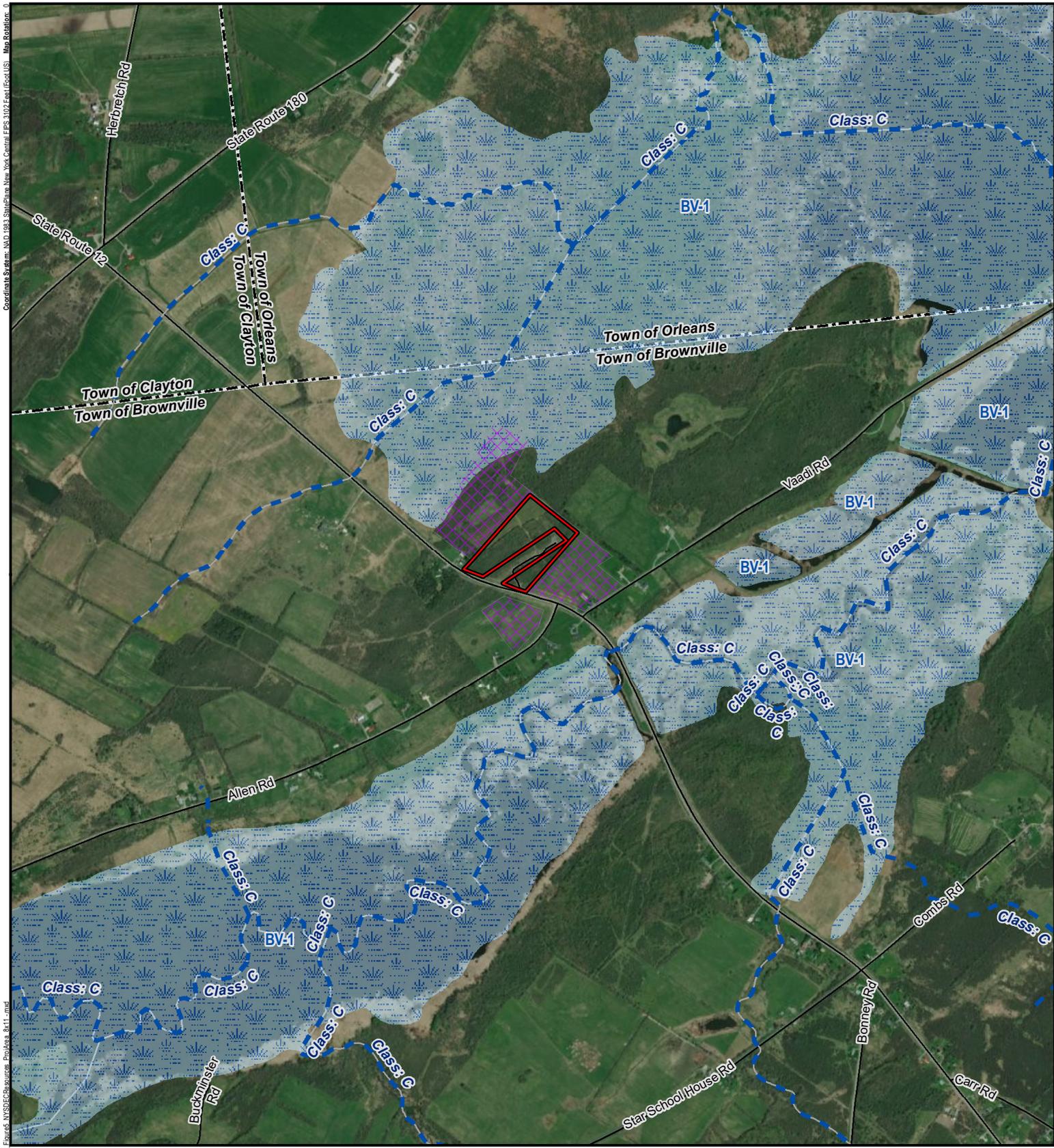
1:18,000
 1" = 1,500'

0 1,000 2,000 Feet

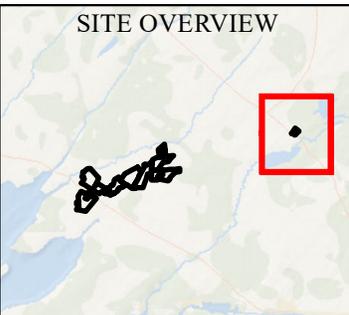
1. BASEMAP IMAGERY FROM ESRI
 "WORLD IMAGERY" MAP SERVICE
 2. DATA SOURCES: NYSDEC 2020.

PROJECT	
RIVERSIDE SOLAR LLC TOWNS OF LYME & BROWNVILLE JEFFERSON COUNTY, NY	
TITLE	
NYSDEC RESOURCES IN PROJECT AREA	
DRAWN BY:	D. BARLEY PROJECT NO.: 373222
CHECKED BY:	R. BARBER
APPROVED BY:	S. KRANES
DATE:	JANUARY 2021
 215 GREENFIELD PKWY, STE 102 LIVERPOOL, NY 13088	 FIGURE 5 SHEET 2 OF 3

Coordinate System: NAD 1983 StatePlane New York Central FIPS 3102 Feet US (Foot US) Map Rotation: 0



Path: S:\PROJECTS\Geomatics\3222 Riverside Solar\Riverside_342\CR_Figures\NYSDECResources_ProjArea_8x11.mxd



LEGEND

- PROJECT AREA
- NON-LEASED PORTION OF PROJECT PARCEL
- WATERBODIES (NYSDEC)
- WETLANDS (NYSDEC)

NYSDEC PRIORITY WATERBODIES LIST:
RIVER-STREAM SEGMENT

- UNASSESSED

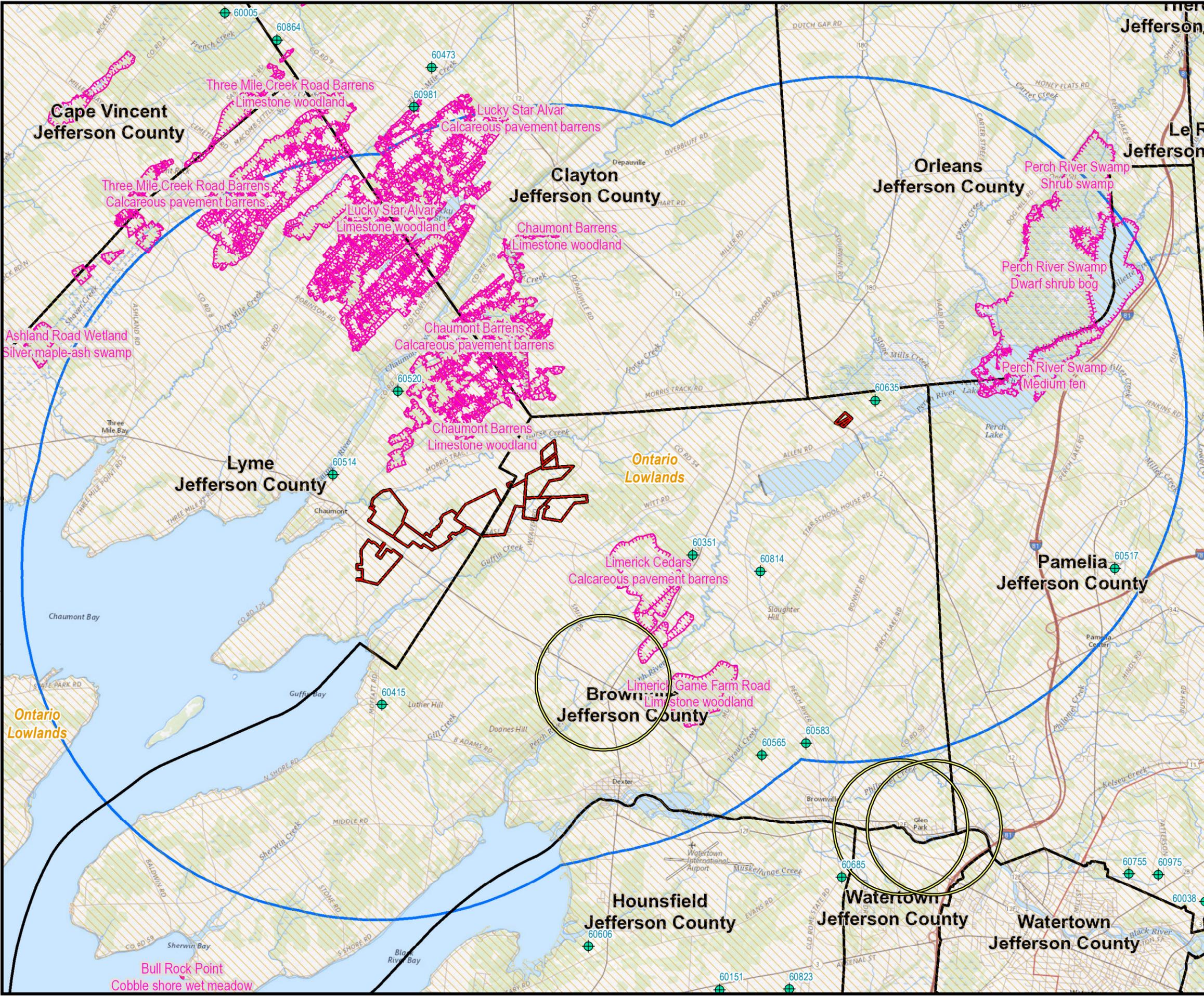
1:18,000
1" = 1,500'

0 1,000 2,000 Feet

1. BASEMAP IMAGERY FROM ESRI
"WORLD IMAGERY" MAP SERVICE
2. DATA SOURCES: NYSDEC 2020.

RIVERSIDE SOLAR LLC TOWNS OF LYME & BROWNVILLE JEFFERSON COUNTY, NY	
NYSDEC RESOURCES IN PROJECT AREA	
DRAWN BY:	D. BARLEY
CHECKED BY:	R. BARBER
APPROVED BY:	S. KRANES
DATE:	JANUARY 2021
PROJECT NO.:	373222
 215 GREENFIELD PKWY, STE 102 LIVERPOOL, NY 13088	FIGURE 5 SHEET 3 OF 3

TRC - GIS
 Coordinate System: NAD 1983 StatePlane New York East FIPS 3101 Feet (Foot US)
 Map Rotation: 0
 Plot Date: 1/21/2021, 16:23:45 PM by DBARLEY -- LAYOUT: ANSIB(11"x17")
 Path: S:\1-PROJECTS\Geronimo\373222 Riverside Solar\Riverside_94cWCR\Figure6_EcoregionsNHP_StudyArea_11x17.mxd



LEGEND

- PROJECT AREA
- 5-MILE STUDY AREA
- + NYSDEC MAPPED MINES AND QUARRIES
- NEW YORK STATE ECOREGIONS
- SIGNIFICANT NATURAL COMMUNITIES
- APPROXIMATE LOCATION OF KNOWN NLEB HIBERNACULA

- NOTES**
1. ALL DATA GATHERED FROM THE FOLLOWING SOURCES: NYSDEC, NYSGIS, NYNHP, USFWS, TRC.
 2. BASEMAP IMAGERY FROM USGS 'NATIONAL MAP', ESRI/USGS 2020.



N



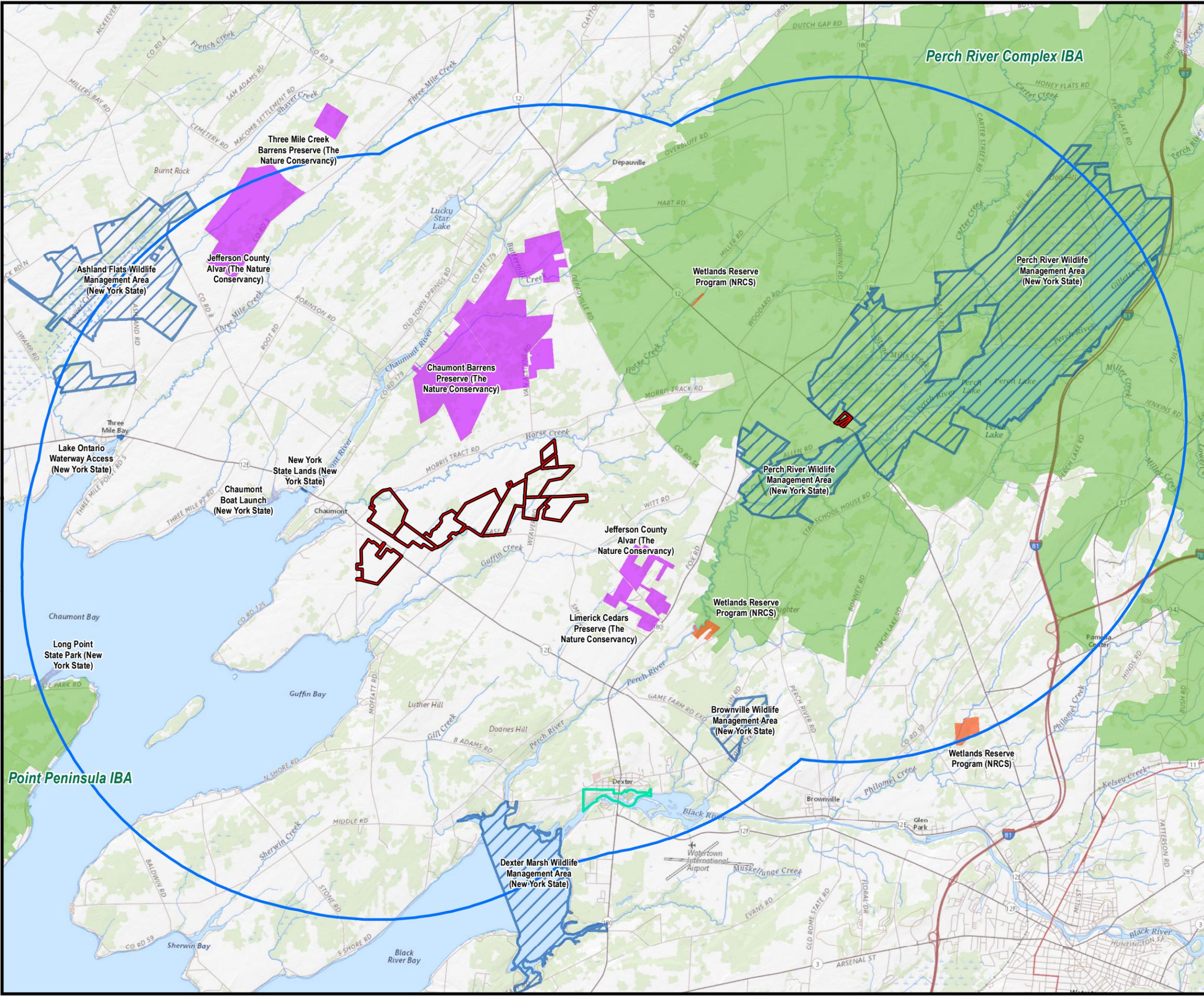
0 3,000 6,000
Feet

1" = 7,500'
1:90,000



PROJECT: RIVERSIDE SOLAR LLC TOWNS OF LYME & BROWNVILLE JEFFERSON COUNTY, NY	
TITLE: ECOREGIONS, NATURAL COMMUNITIES, AND HIBERNACULA IN STUDY AREA	
DRAWN BY:	D. BARLEY
CHECKED BY:	R. BARBER
APPROVED BY:	S. KRANES
DATE:	JANUARY 2021
PROJ NO.:	373222
FIGURE 6	
	
215 GREENFIELD PKWY, STE 102 LIVERPOOL, NY 13088	
FILE NO.:	Riverside_94cWCR_Figure6_EcoregionsNHP_StudyArea_11x17.mxd

TRC - GIS
 Coordinate System: NAD 1983 StatePlane New York East FIPS 3101 Feet (Foot US)
 Map Rotation: 0
 Plot Date: 1/21/2021, 16:24:48 PM by DBARLEY -- LAYOUT: ANSIB(11"x17")
 Path: S:\PROJECTS\Geronimo\373222 Riverside Solar\Riverside_94cWCR_Figure7_ProtectedLands_StudyArea_11x17.mxd



LEGEND

- PROJECT AREA
- 5-MILE STUDY AREA
- NATURAL RESOURCES CONSERVATION SERVICE (NRCS)
- NON-GOVERNMENTAL ORGANIZATION
- OTHER STATE (NHP, DOT, HS, ETC.)
- STATE PARK AND RECREATION
- LOCAL MUNICIPAL LAND
- JOINT, OTHER, UNKNOWN
- LOCAL WATERFRONT REVITALIZATION PROGRAM (LWRP) BOUNDARY
- NATIONAL AUDUBON SOCIETY DESIGNATED IMPORTANT BIRD AREA (IBA)

- NOTES**
1. ALL DATA GATHERED FROM THE FOLLOWING SOURCES: USGS 2020, NYSGIS, NYSDEC, AUDOBON, TRC.
 2. BASEMAP IMAGERY FROM USGS 'NATIONAL MAP', ESRI/USGS 2020.
 3. THERE ARE NO DESIGNATED STATE CRITICAL ENVIRONMENTAL AREAS, OR USFWS WILDLIFE REFUGES IN THE STUDY AREA.

N
↓

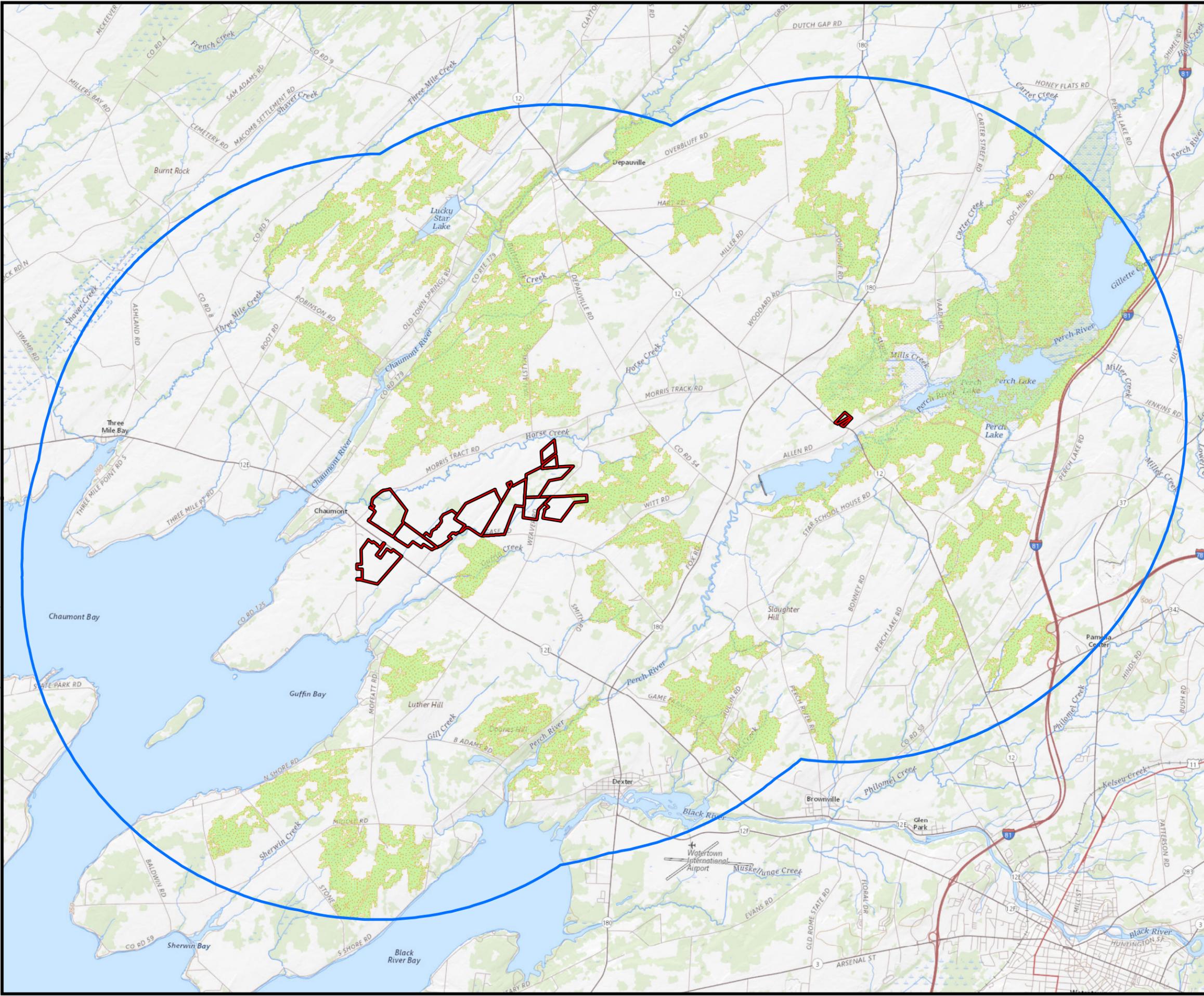
0 3,000 6,000
Feet

1" = 7,500'
1:90,000



PROJECT: RIVERSIDE SOLAR LLC TOWNS OF LYME & BROWNVILLE JEFFERSON COUNTY, NY	
TITLE: PROTECTED OR CLASSIFIED LANDS IN STUDY AREA	
DRAWN BY: D. BARLEY	PROJ NO.: 373222
CHECKED BY: R. BARBER	FIGURE 7
APPROVED BY: S. KRANES	
DATE: JANUARY 2021	
215 GREENFIELD PKWY, STE 102 LIVERPOOL, NY 13088	
FILE NO.: Riverside_94cWCR_Figure7_ProtectedLands_StudyArea_11x17.mxd	

TRC - GIS
 Coordinate System: NAD 1983 StatePlane New York East FIPS 3101 Feet (Foot US)
 Map Rotation: 0
 Plot Date: 1/21/2021, 16:11:48 PM by DBARLEY -- LAYOUT: ANS1_B(11"x17")
 Path: S:\1-PROJECTS\Geronimo\373222 Riverside Solar\Riverside_94c\WCR_Figure8_CoreForest_StudyArea_11x17.mxd



LEGEND

-  PROJECT AREA
-  5-MILE STUDY AREA
-  CORE FOREST BLOCKS

NOTES

1. ALL DATA GATHERED FROM THE FOLLOWING SOURCES: MRLC 2016.
2. CORE FOREST DEFINED AS CONTIGUOUS AREAS OF AT LEAST 150 ACRES IN SIZE IDENTIFIED AS FOREST OR WOODY WETLANDS.
3. BASEMAP IMAGERY FROM USGS 'NATIONAL MAP', ESRI/USGS 2020.



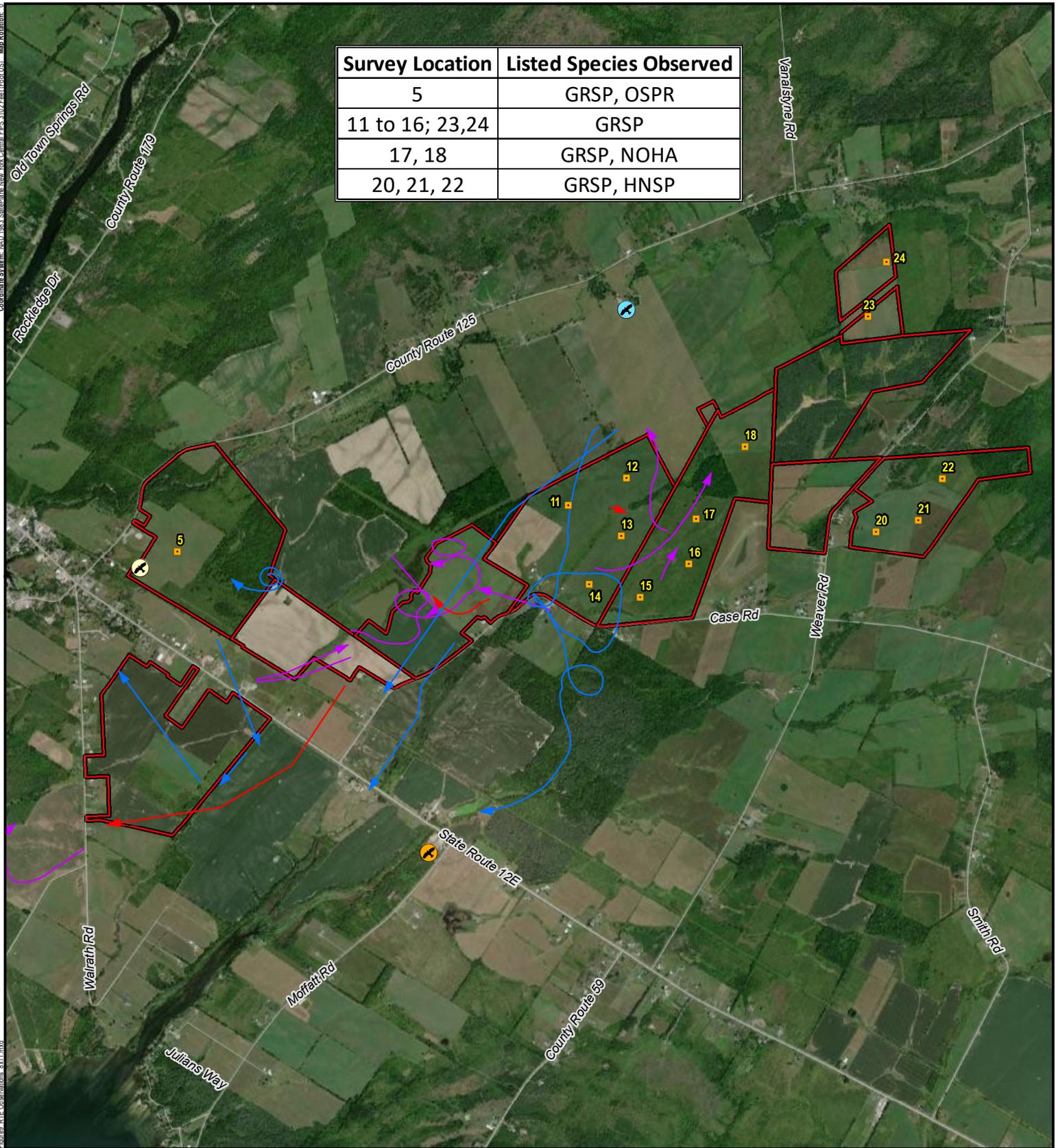
0 3,000 6,000
 Feet
 1" = 7,500'
 1:90,000



PROJECT:		RIVERSIDE SOLAR LLC TOWNS OF LYME & BROWNVILLE JEFFERSON COUNTY, NY	
TITLE:		CORE FOREST BLOCKS IN STUDY AREA	
DRAWN BY:	D. BARLEY	PROJ NO.:	373222
CHECKED BY:	R. BARBER	FIGURE 8	
APPROVED BY:	S. KRANES		
DATE:	JANUARY 2021		
		215 GREENFIELD PKWY, STE 102 LIVERPOOL, NY 13088	
FILE NO.:		Riverside_94c\WCR_Figure8_CoreForest_StudyArea_11x17.mxd	

Coordinate System: NAD_1983_StatePlane_New_York_Central_FIPS_3102_Feet_US (Foot, US); Map Rotation: 0
 Path: S:\PROJECTS\Geomatics\373222_Riverside Solar\Riverside_3420\CR_Figures RTE Observations_8x11.mxd

Survey Location	Listed Species Observed
5	GRSP, OSPR
11 to 16; 23,24	GRSP
17, 18	GRSP, NOHA
20, 21, 22	GRSP, HNRP



LEGEND

- PROJECT AREA
- OSPREY NEST
- BALD EAGLE NEST
- BALD EAGLE PERCH
- SURVEY POINT WHERE LISTED SPECIES OBSERVED

FLIGHT PATHS

- BALD EAGLE
- NORTHERN HARRIER
- SHORT-EARED OWL

1. BASEMAP IMAGERY FROM ESRI
 "WORLD IMAGERY" MAP SERVICE
 2. OBSERVATIONS BY TRC STAFF DURING WINTER RAPTOR SURVEYS, WINTER 2019-2020, AND BREEDING BIRD SURVEYS, 2020.
 3. NO LISTED SPECIES OBSERVATIONS IN THE EASTERN BLOCK OF THE PROJECT AREA.

1:30,000 1" = 2,500' 0 1,500 3,000 Feet

PROJECT: RIVERSIDE SOLAR LLC
 TOWNS OF LYME & BROWNVILLE
 JEFFERSON COUNTY, NY

TITLE: **OBSERVED LISTED SPECIES
 IN PROJECT AREA**

DRAWN BY: D. BARLEY PROJECT NO.: 373222
 CHECKED BY: A. KAILAS
 APPROVED BY: S. KRANES
 DATE: JANUARY 2021

FIGURE 9

TRC
 215 GREENFIELD PKWY, STE 102
 LIVERPOOL, NY 13088

RIVERSIDE SOLAR

Appendix B. Wildlife Inventory Tables

Table B-1 Avian Species Potentially Occurring within the Project Area and 5-mile Study Area

Table B-2 Mammal Species Potentially Occurring within the Project Area and 5-mile Study Area

Table B-3 Fish Species Potentially Occurring within the Project Area and 5-mile Study Area

Table B-4 Reptile and Amphibian Species Potentially Occurring within the Project Area and 5-mile Study Area

Table B-1. Avian Species Potentially Occurring within the Riverside Solar Project Study Area

Common Name	Scientific Name and Family	Species Status	Observed on-site by TRC Biologists	Observed on-site during avian surveys	USFWS online database (IPaC)	USGS Breeding Bird Survey	NYS Breeding Bird Atlas III	Audubon IBAs and Christmas Bird Count	eBird	NYSDEC Threatened, Endangered, SOC Lists	Species distribution range in the NYSDEC SWAP
Swans, Geese and Ducks	Anatidae										
Canada Goose	<i>Branta canadensis</i>		X	X		X	X	X	X		
Bufflehead	<i>Bucephala albeola</i>						X				
Trumpeter Swan	<i>Cygnus buccinator</i>						X				
Tundra Swan	<i>Cygnus columbianus</i>							X			
Wood Duck	<i>Aix sponsa</i>		X	X		X	X				
Red-breasted Merganser	<i>Mergus serrator</i>							X			
Common Merganser	<i>Mergus merganser</i>					X		X			
Hooded Merganser	<i>Lophodytes cucullatus</i>						X				
Common Goldeneye	<i>Bucephala clangula</i>	SGCN						X			X
Greater Scaup	<i>Aythya marila</i>	SGCN						X			
Lesser Scaup	<i>Aythya affinis</i>	SGCN					X				X
Green-winged Teal	<i>Anas crecca</i>						X				
Blue-winged Teal	<i>Spatula discors</i>	SGCN					X		X		X
Ring-necked Duck	<i>Aythya collaris</i>						X				
Northern Pintail	<i>Anas acuta</i>	SGCN					X				X
Northern Shoveler	<i>Spatula clypeata</i>						X				
American Black Duck	<i>Anas rubripes</i>	HPSGCN				X	X	X	X	X	X
American Wigeon	<i>Mareca americana</i>						X				
Mallard	<i>Anas platyrhynchos</i>		X	X		X	X	X	X		
Partridges, Grouse, & Turkeys	Phasianidae										
Ring-necked Pheasant	<i>Phasianus colchicus</i>					X		X	X		
Gray Partridge	<i>Perdix perdix</i>					X					
Ruffed Grouse	<i>Bonasa umbellus</i>	SGCN	X	X		X			X		X
Wild Turkey	<i>Meleagris gallopavo</i>		X	X		X	X	X	X		
Loons	Gaviidae										
Common Loon	<i>Gavia immer</i>	SOSC; SGCN						X	X	X	X
Grebes	Podicipedidae										
Pied-billed Grebe	<i>Podilymbus podiceps</i>	SGCN				X	X				X
Cormorants	Phalacrocoracidae										
Double-crested Cormorant	<i>Phalacrocorax auritus</i>						X		X		
Bitterns, Herons, & Allies	Ardeidae										
American Bittern	<i>Botaurus lentiginosus</i>	SOSC; SGCN				X				X	X
Black-crowned Night-Heron	<i>Nycticorax nycticorax</i>	SGCN				X			X		X
Great Blue Heron	<i>Ardea herodias</i>		X	X		X	X	X	X		
Great Egret	<i>Ardea alba</i>	SGCN					X				
Green Heron	<i>Butorides virescens</i>					X					
Vultures	Cathartidae										
Turkey Vulture	<i>Cathartes aura</i>		X	X		X	X		X		
Kites, Eagles, Hawks, & Allies	Accipitridae										
Bald Eagle	<i>Haliaeetus leucocephalus</i>	ST; SGCN	X	X	X		X	X	X		X
Broad-winged Hawk	<i>Buteo platypterus</i>								X		
Northern Harrier	<i>Circus cyaneus</i>	ST; SGCN	X	X		X	X		X		X
Sharp-shinned Hawk	<i>Accipiter striatus</i>	SOSC; SGCN	X	X					X		
Cooper's Hawk	<i>Accipiter cooperii</i>	SOSC; SGCN	X	X				X	X	X	

Table B-1. Avian Species Potentially Occurring within the Riverside Solar Project Study Area

Common Name	Scientific Name and Family	Species Status	Observed on-site by TRC Biologists	Observed on-site during avian surveys	USFWS online database (IPaC)	USGS Breeding Bird Survey	NYS Breeding Bird Atlas III	Audubon IBAs and Christmas Bird Count	eBird	NYS DCE Threatened, Endangered, SOC Lists	Species distribution range in the NYS DEC SWAP
Rough-legged Hawk	<i>Buteo lagopus</i>		X	X							
Red-shouldered Hawk	<i>Buteo lineatus</i>	SOSC; SGCN						X			
Northern Goshawk	<i>Accipiter gentilis</i>	SOSC; SGCN								X	X
Red-tailed Hawk	<i>Buteo jamaicensis</i>		X	X		X	X	X			
Caracaras & Falcons	Falconidae										
Merlin	<i>Falco columbarius</i>		X	X			X	X			
American Kestrel	<i>Falco sparverius</i>	SGCN	X	X		X	X	X			X
Rails, Gallinules, & Coots	Rallidae										
Virginia Rail	<i>Rallus limicola</i>					X					
Common Gallinule	<i>Gallinula galeata</i>					X	X				
Plovers & Lapwings	Charadriidae										
Semipalmated Plover	<i>Charadrius semipalmatus</i>						X				
Killdeer	<i>Charadrius vociferus</i>					X	X		X		
Sandpipers, Phalaropes, & Allies	Scolopacidae										
Greater Yellowlegs	<i>Tringa melanoleuca</i>	SGCN					X				
Lesser Yellowlegs	<i>Tringa flavipes</i>				X		X				
Short-billed Dowitcher	<i>Limnodromus griseus</i>						X				
American Woodcock	<i>Scolopax minor</i>	SGCN	X	X			X		X		X
Wilson's Snipe	<i>Gallinago delicata</i>					X	X		X		
Least Sandpiper	<i>Calidris minutilla</i>						X				
Semipalmated Sandpiper	<i>Calidris pusilla</i>	HPSGCN					X				X
Buff-breasted Sandpiper	<i>Tryngites subruficollis</i>	HPSGCN						X		X	
Upland Sandpiper	<i>Bartramia longicauda</i>	ST; HPSGCN				X		X			X
Solitary Sandpiper	<i>Tringa solitaria</i>						X				
Spotted Sandpiper	<i>Actitis macularius</i>					X	X		X		
Skuas, Gulls, Terns, & Skimmers	Laridae										
Herring Gull	<i>Larus argentatus</i>					X	X	X	X		
Common Tern	<i>Sterna hirundo</i>	SGCN					X				X
Caspian Tern	<i>Hydroprogne caspia</i>	SGCN					X		X		X
Black Tern	<i>Chlidonias niger</i>	SE, HPSGCN						X			X
Great Black-backed Gull	<i>Larus marinus</i>							X			
Little Gull	<i>Hydrocoloeus minutus</i>	HPSGCN								X	
Ring-billed Gull	<i>Larus delawarensis</i>		X	X		X	X	X	X		
Pigeons & Doves	Columbidae										
Rock Pigeon	<i>Columba livia</i>		X	X		X		X	X		
Mourning Dove	<i>Zenaidura macroura</i>		X	X		X	X	X	X		
Cuckoos, Roadrunners, & Anis	Cuculidae										
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	SGCN	X			X			X		X
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>				X	X			X		
Typical Owls	Strigidae										
Eastern Screech-Owl	<i>Megascops asio</i>					X			X		
Snowy Owl	<i>Bubo scandiacus</i>		X	X	X			X			
Short-eared Owl	<i>Asio flammeus</i>	SE; HPSGCN	X	X							X
Northern Saw-whet Owl	<i>Aegolius acadicus</i>								X		
Barred owl	<i>Strix varia</i>						X		X		
Long-eared Owl	<i>Asio otus</i>	SGCN						X			X

Table B-1. Avian Species Potentially Occurring within the Riverside Solar Project Study Area

Common Name	Scientific Name and Family	Species Status	Observed on-site by TRC Biologists	Observed on-site during avian surveys	USFWS online database (IPaC)	USGS Breeding Bird Survey	NYS Breeding Bird Atlas III	Audubon IBAs and Christmas Bird Count	eBird	NYSDEC Threatened, Endangered, SOC Lists	Species distribution range in the NYSDEC SWAP
Great Horned Owl	<i>Bubo virginianus</i>		X	X		X		X	X		
Goatsuckers	Caprimulgidae										
Eastern Whip-poor-will	<i>Antrostomus vociferus</i>	SOSC; HPSGCN			X		X			X	X
Common Nighthawk	<i>Chordeiles minor</i>	SOSC; HPSGCN								X	X
Swifts	Apodidae										
Chimney Swift	<i>Chaetura pelagica</i>					X			X		
Hummingbirds	Trochilidae										
Ruby-throated Hummingbird	<i>Archilochus colubris</i>					X	X		X		
Kingfishers	Alcedinidae										
Belted Kingfisher	<i>Megaceryle alcyon</i>					X	X		X		
Woodpeckers & Allies	Picidae										
Red-bellied Woodpecker	<i>Melanerpes carolinus</i>		X	X		X		X	X		
Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	SOSC; HPSGCN				X				X	X
Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>					X			X		
Downy Woodpecker	<i>Picoides pubescens</i>					X		X	X		
Hairy Woodpecker	<i>Picoides villosus</i>					X			X	X	
Northern Flicker	<i>Colaptes auratus</i>					X	X	X	X		
Pileated Woodpecker	<i>Dryocopus pileatus</i>					X	X	X	X		
Tyrant Flycatchers	Tyrannidae										
Eastern Wood-Pewee	<i>Contopus virens</i>		X	X		X			X		
Acadian Flycatcher	<i>Empidonax vireescens</i>					X					
Alder Flycatcher	<i>Empidonax alnorum</i>					X	X		X		
Willow Flycatcher	<i>Empidonax traillii</i>					X			X		
Olive-sided Flycatcher	<i>Contopus cooperi</i>								X		
Least Flycatcher	<i>Empidonax minimus</i>					X			X		
Eastern Phoebe	<i>Sayornis phoebe</i>					X	X		X		
Great Crested Flycatcher	<i>Myiarchus crinitus</i>					X			X		
Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>								X		
Eastern Kingbird	<i>Tyrannus tyrannus</i>					X	X		X		
Shrikes	Laniidae										
Northern Shrike	<i>Lanius borealis</i>							X			
Vireos	Vireonidae										
Yellow-throated Vireo	<i>Vireo flavifrons</i>					X			X		
Blue-headed Vireo	<i>Vireo solitarius</i>					X			X		
Warbling Vireo	<i>Vireo gilvus</i>					X			X		
Red-eyed Vireo	<i>Vireo olivaceus</i>					X	X		X		
Jays, Magpies, & Crows	Corvidae										
Blue Jay	<i>Cyanocitta cristata</i>		X	X		X	X	X	X		
Common Raven	<i>Corvus corax</i>		X	X				X	X		
American Crow	<i>Corvus brachyrhynchos</i>		X	X		X	X	X	X		
Larks	Alaudidae										
Horned Lark	<i>Eremophila alpestris</i>	SOSC; HPSGCN				X				X	X
Swallows	Hirundinidae										
Tree Swallow	<i>Tachycineta bicolor</i>					X	X		X		
Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>					X			X		
Bank Swallow	<i>Riparia riparia</i>					X			X		
Purple Martin	<i>Progne subis</i>		X	X		X	X		X		

Table B-1. Avian Species Potentially Occurring within the Riverside Solar Project Study Area

Common Name	Scientific Name and Family	Species Status	Observed on-site by TRC Biologists	Observed on-site during avian surveys	USFWS online database (IPaC)	USGS Breeding Bird Survey	NYS Breeding Bird Atlas III	Audubon IBAs and Christmas Bird Count	eBird	NYS DCE Threatened, Endangered, SOC Lists	Species distribution range in the NYS DEC SWAP
Barn Swallow	<i>Hirundo rustica</i>					X	X	X			
Chickadees & Titmice	Paridae										
Black-capped Chickadee	<i>Poecile atricapillus</i>		X	X		X	X	X			
Tufted Titmouse	<i>Baeolophus bicolor</i>					X		X			
Nuthatches	Sittidae										
Red-breasted Nuthatch	<i>Sitta canadensis</i>							X			
White-breasted Nuthatch	<i>Sitta carolinensis</i>					X	X	X			
Creepers	Certhiidae										
Brown Creeper	<i>Certhia americana</i>							X			
Wrens	Troglodytidae										
House Wren	<i>Troglodytes aedon</i>					X	X	X			
Winter Wren	<i>Troglodytes hiemalis</i>					X		X			
Marsh Wren	<i>Cistothorus palustris</i>		X	X		X	X	X			
Kinglets	Regulidae										
Golden-crowned Kinglet	<i>Regulus satrapa</i>							X			
Ruby-crowned Kinglet	<i>Regulus calendula</i>							X			
Thrushes	Turdidae										
Eastern Bluebird	<i>Sialia sialis</i>					X		X			
Veery	<i>Catharus fuscescens</i>					X		X			
Swainson's Thrush	<i>Catharus ustulatus</i>							X			
Hermit Thrush	<i>Catharus guttatus</i>		X	X	X			X			
Wood Thrush	<i>Hylocichla mustelina</i>	SGCN				X		X			X
American Robin	<i>Turdus migratorius</i>		X	X		X	X	X			
Mockingbirds, Thrashers, & Allies	Mimidae										
Gray Catbird	<i>Dumetella carolinensis</i>					X	X	X			
Northern Mockingbird	<i>Mimus polyglottos</i>							X			
Brown Thrasher	<i>Toxostoma rufum</i>	HPSGCN				X	X	X		X	X
Starlings & Allies	Sturnidae										
European Starling	<i>Sturnus vulgaris</i>		X	X		X	X	X			
Waxwings	Bombycillidae										
Bohemian Waxwing								X			
Cedar Waxwing	<i>Bombycilla cedrorum</i>					X	X	X			
Wood Warblers	Parulidae										
Blue-winged Warbler	<i>Vermivora pinus</i>	SGCN	X	X		X	X	X			X
Golden-winged Warbler	<i>Vermivora chrysoptera</i>	SOC; HPSGCN			X	X		X		X	X
Canada Warbler	<i>Cardellina canadensis</i>	HPSGCN				X		X			X
Yellow Warbler	<i>Dendroica petechia</i>					X	X	X			
Yellow-rumped Warbler	<i>Setophaga coronata</i>					X		X			
Cerulean Warbler	<i>Dendroica cerulea</i>	SGCN			X			X			X
Chestnut-sided Warbler	<i>Dendroica pensylvanica</i>		X	X		X		X			
Black-and-White Warbler	<i>Mniotilta varia</i>					X	X	X			
Nashville Warbler	<i>Leiothlypis ruficapilla</i>					X		X			
Tennessee Warbler	<i>Leiothlypis peregrina</i>	SGCN						X			
Backpoll Warbler	<i>Setophaga striata</i>							X			
Blackburnian Warbler	<i>Setophaga fusca</i>							X			
Black-throated Green Warbler	<i>Setophaga virens</i>		X	X		X		X			
Black-throated Blue Warbler	<i>Setophaga caerulescens</i>	SGCN						X			X

Table B-1. Avian Species Potentially Occurring within the Riverside Solar Project Study Area

Common Name	Scientific Name and Family	Species Status	Observed on-site by TRC Biologists	Observed on-site during avian surveys	USFWS online database (IPaC)	USGS Breeding Bird Survey	NYS Breeding Bird Atlas III	Audubon IBAs and Christmas Bird Count	eBird	NYS DCE Threatened, Endangered, SOC Lists	Species distribution range in the NYS DEC SWAP
Palm Warbler	<i>Setophaga palmarum</i>							X			
American Redstart	<i>Setophaga ruticilla</i>				X			X			
Ovenbird	<i>Seiurus aurocapilla</i>				X	X		X			
Northern Parula	<i>Setophaga americana</i>							X			
Northern Waterthrush	<i>Parkesia noveboracensis</i>				X						
Louisiana Waterthrush	<i>Parkesia motacilla</i>							X			
Bay-breasted Warbler	<i>Setophaga castanea</i>			X				X			
Prairie Warbler	<i>Setophaga discolor</i>					X		X			
Pine Warbler	<i>Setophaga pinus</i>	SGCN						X			X
Magnolia Warbler	<i>Setophaga magnolia</i>							X			
Cape May Warbler	<i>Setophaga tigrina</i>							X			
Mourning Warbler	<i>Oporornis philadelphia</i>							X			
Common Yellowthroat	<i>Geothlypis trichas</i>				X	X		X			
Hooded Warbler	<i>Wilsonia citrina</i>							X			
Tanagers	Thraupidae										
Scarlet Tanager	<i>Piranga olivacea</i>	SGCN	X	X	X			X			X
Towhees, Buntings, Sparrows, & Allies	Emberizidae										
Eastern Towhee	<i>Pipilo erythrophthalmus</i>				X	X		X			
Field Sparrow	<i>Spizella pusilla</i>				X	X		X			
Vesper Sparrow	<i>Poocetes gramineus</i>	SOC; HPSGCN			X			X		X	X
Savannah Sparrow	<i>Passerculus sandwichensis</i>		X	X	X			X			
Henslow's Sparrow	<i>Ammodramus henslowii</i>	ST; HPSGCN	X	X	X			X			
Grasshopper Sparrow	<i>Ammodramus savannarum</i>	SOC; HPSGCN	X	X	X			X		X	X
Song Sparrow	<i>Melospiza melodia</i>				X	X	X	X			
Swamp Sparrow	<i>Melospiza georgiana</i>				X	X					
Grosbeaks & Buntings	Cardinalidae										
Northern Cardinal	<i>Cardinalis cardinalis</i>		X	X	X	X	X	X			
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>				X			X			
Indigo Bunting	<i>Passerina cyanea</i>				X			X			
Blackbirds	Icteridae										
Bobolink	<i>Dolichonyx oryzivorus</i>	HPSGCN	X	X	X	X	X	X		X	X
Red-winged Blackbird	<i>Agelaius phoeniceus</i>		X	X	X	X		X			
Rusty Blackbird	<i>Euphagus carolinus</i>	HP						X			
Eastern Meadowlark	<i>Sturnella magna</i>	HPSGCN	X	X	X	X		X		X	X
Common Grackle	<i>Quiscalus quiscula</i>				X	X	X	X			
Brown-headed Cowbird	<i>Molothrus ater</i>				X			X			
Baltimore Oriole	<i>Icterus galbula</i>		X	X	X			X			
Finches	Fringillidae										
Purple Finch	<i>Carpodacus purpureus</i>				X	X		X			
House Finch	<i>Carpodacus mexicanus</i>				X		X	X			
Evening Grosbeak	<i>Coccothraustes vespertinus</i>							X			
Pine Grosbeak	<i>Pinicola enucleator</i>							X			
Pine Siskin	<i>Spinus pinus</i>							X			
American Goldfinch	<i>Carduelis tristis</i>		X	X	X	X	X	X			
Old World Sparrows	Passeridae										

Table B-1. Avian Species Potentially Occurring within the Riverside Solar Project Study Area

Common Name	Scientific Name and Family	Species Status	Observed on-site by TRC Biologists	Observed on-site during avian surveys	USFWS online database (IPaC)	USGS Breeding Bird Survey	NYS Breeding Bird Atlas III	Audubon IBAs and Christmas Bird Count	eBird	NYSDEC Threatened, Endangered, SOC Lists	Species distribution range in the NYSDEC SWAP
American Tree Sparrow	<i>Spizelloides arborea</i>							X	X		
Dark-eyed Junco	<i>Junco hyemalis</i>							X	X		
White-throated Sparrow	<i>Zonotrichia albicollis</i>				X			X	X		
House Sparrow	<i>Passer domesticus</i>				X			X	X		
Longspurs	Calcariidae										
Snow Bunting	<i>Plectrophenax nivalis</i>		X	X							
New World Sparrows	Passerellidae										
Chipping Sparrow	<i>Spizella passerina</i>				X				X		
Lincoln's Sparrow	<i>Melospiza lincolni</i>								X		
Clay-colored Sparrow	<i>Spizella pallida</i>								X		
White-crowned Sparrow	<i>Zonotrichia leucophrys</i>								X		
Gnatcatcher	Poliopitidae										
Blue-gray Gnatcatcher	<i>Poliopitila caerulea</i>								X		
Ospreys	Pandionidae										
Osprey	<i>Pandion haliaetus</i>	SOC; SGCN	X	X			X		X	X	

Table B-2. Mammal Species Potentially Occurring within the Riverside Solar Project Study Area

Common Name	Scientific Name and Family	Species Status	Observed on-site by TRC Biologists	Observed on-site during avian surveys	USFWS online database (PaC)	NYSDEC Mammals Range Maps and Descriptions	Bat Conservation International	Species distribution range in the NYSDEC SWAP
Deer	Cervidae							
White-tailed Deer	<i>Odocoileus virginianus</i>		X			X		
Squirrels	Sciuridae							
Easter Gray Squirrel	<i>Sciurus carolinensis</i>		X			X		
Northern flying squirrel	<i>Glaucomys sabrinus</i>					X		
Groundhog	<i>Marmota monax</i>					X		
Eastern Chipmunk	<i>Tamias striatus</i>		X			X		
Rabbits and Hares	Leporidae							
Eastern Cottontail	<i>Sylvilagus floridanus</i>		X			X		
Weasels	Mustelidae							
American Mink	<i>Neovison vison</i>					X		
Least Weasel	<i>Mustela nivalis</i>							X
River Otter	<i>Lontra canadensis</i>							X
Long-tailed weasel	<i>Mustela frenata</i>					X		
Fisher	<i>Pekania pennanti</i>					X		
Racoons	Procyonidae							
Eastern Raccoon	<i>Procyon lotor lotor</i>		X			X		
New World porcupines	Erethizontidae							
North American Porcupine	<i>Erethizon dorsatum</i>					X		
Canids	Canidae							
Coyote	<i>Canis latrans</i>		X			X		
Gray Fox	<i>Urocyon cinereoargenteus</i>					X		
Red Fox	<i>Vulpes vulpes</i>		X			X		
Felids	Felidae							
Bobcat	<i>Lynx rufus</i>					X		
Possoms	Didelphidae							
Virginia Opossum	<i>Didelphis virginiana</i>					X		
Beavers	Castoridae							
American Beaver	<i>Castor canadensis</i>		X			X		
Muskrats	Cricetidae							
Muskrats	<i>Ondatra zibethicus</i>					X		
Skunk and stink badgers	Mephitidae							
Striped Skunk	<i>Mephitis mephitis</i>					X		
Shrews	Soricidae							
North American Least Shrew	<i>Cryptotis parva</i>							X

Table B-2. Mammal Species Potentially Occurring within the Riverside Solar Project Study Area

Common Name	Scientific Name and Family	Species Status	Observed on-site by TRC Biologists	Observed on-site during avian surveys	USFWS online database (PaC)	NYSDEC Mammals Range Maps and Descriptions	Bat Conservation International	Species distribution range in the NYSDEC SWAP
American Pygmy Shrew	<i>Sorex hoyi</i>							X
Moles	Talpidae							
Hairy-tailed Mole	<i>Parascalops breweri</i>							X
Sar-nosed Mole	<i>Condylura cristata</i>							X
Eastern Mole	<i>Scalopus aquaticus</i>							X
Mice	Mus							
White-footed Deermouse	<i>Peromyscus leucopus</i>							X
Bats								
Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT; ST					X	X
Little Brown Bat	<i>Myotis lucifugus</i>	HPSGCN				X	X	X
Eastern Pipistrelle	<i>Perimyotis subflavus</i>	HPSGCN				X		X
Big Brown Bat	<i>Eptesicus fuscus</i>						X	
Eastern Small-footed Bat	<i>Myotis leibii</i>	SOSC; SGCN				X		X
Eastern Red Bat	<i>Lasiurus borealis</i>	SGCN					X	X
Silver-haired Bat	<i>Lasionycteris noctivagans</i>	SGCN					X	X
Hoary Bat	<i>Lasiurus cinereus</i>	SGCN					X	X
Indiana Myotis	<i>Myotis sodalis</i>	FE; SE					X	X

Table B-3. Fish Species Potentially Occurring within the Riverside Solar Project Study Area

Common Name	Scientific Name and Family	Status	Observed on-site by TRC Biologists	Observed on-site during avian surveys	USFWS online database (IPaC)	NYSDEC Statewide Fisheries Database/Fish Atlas Maps of New York	Species distribution range in the NYSDEC SWAP
Lampreys	Petromyzontidae						
Sea Lamprey	<i>Petromyzon marinus</i>					X	
Sturgeons	Acipenseridae						
Lake Sturgeon*	<i>Acipenser fulvescens</i>					X	
Gars	Lepisosteidae						
Longnose Gar	<i>Lepisosteus osseus</i>					X	
Bowfins	Amiidae						
Bowfin	<i>Amia calva</i>					X	
Codfish	Gadidae						
Burbot	<i>Lota lota</i>					X	
Freshwater Eels	Anguillidae						
American Eel	<i>Anguilla rostrata</i>	HPSGCN				X	X
Herrings	Clupeidae						
Alewife*	<i>Alosa pseudoharengus</i>					X	
Gizzard Shad	<i>Dorosoma cepedianum</i>					X	
Minnows and Carps	Cyprinidae						
Central Stoneroller	<i>Campostoma anomalum</i>					X	
Goldfish	<i>Carassius auratus</i>					X	
Northern Redbelly Dace	<i>Phoxinus eos</i>					X	
Redside Dace	<i>Clinostomus elongatus</i>					X	
Spotfin Shiner	<i>Cyprinella spiloptera</i>					X	
Common Carp	<i>Cyprinus carpio</i>					X	
Cutlip Minnow	<i>Exoglossum maxillingua</i>					X	
Eastern Silvery Minnow	<i>Hybognathus regis</i>					X	
Common Shiner	<i>Luxilus cornutus</i>					X	
Allegheny Pearl Dace	<i>Margariscus margarita</i>					X	
Northern Pearl Dace	<i>Margariscus nachtriebi</i>					X	
Golden Shiner	<i>Notemigonus crysoleucas</i>					X	
Bridle Shiner	<i>Notropis bifrenatus</i>					X	
Emerald Shiner	<i>Notropis atherinoides</i>					X	
Satinfish Shiner	<i>Cyprinella analostana</i>					X	
Blackchin Shiner	<i>Notropis heterodon</i>	HPSGCN				X	X
Blacknose Shiner	<i>Notropis heterolepis</i>					X	

Table B-3. Fish Species Potentially Occurring within the Riverside Solar Project Study Area

Common Name	Scientific Name and Family	Status	Observed on-site by TRC Biologists	Observed on-site during avian surveys	USFWS online database (IPaC)	NYSDEC Statewide Fisheries Database/Fish Atlas Maps of New York	Species distribution range in the NYSDEC SWAP
Spottail Shiner	<i>Notropis hudsonius</i>					X	
Sand Shiner	<i>Notropis stramineus</i>					X	
Bluntnose Minnow	<i>Pimephales notatus</i>					X	
Fathead Minnow	<i>Pimephales promelas</i>					X	
Eastern Blacknose Dace	<i>Rhinichthys atratulus</i>					X	
Longnose Dace	<i>Rhinichthys cataractae</i>					X	
Creek Chub	<i>Semotilus atromaculatus</i>					X	
Fallfish	<i>Semotilus corporalis</i>					X	
Suckers	Catostomidae						
Quillback	<i>Carpiodes cyprinus</i>					X	
Longnose Sucker*	<i>Catostomus catostomus</i>	HPSGCN				X	
White Sucker	<i>Catostomus commersonii</i>					X	
Northern Hog Sucker	<i>Hypentelium nigricans</i>					X	
Spotted Sucker	<i>Minytrema melanops</i>					X	
Greater Redhorse	<i>Moxostoma valenciennesi</i>					X	
Catfishes	Ictaluridae						
Yellow Bullhead	<i>Ameiurus natalis</i>					X	
Brown Bullhead	<i>Ameiurus nebulosus</i>					X	
Channel Catfish	<i>Ictalurus punctatus</i>					X	
Stonecat	<i>Noturus flavus</i>					X	
Tadpole Madtom	<i>Noturus gyrinus</i>					X	
Margined Madtom	<i>Noturus insignis</i>					X	
Smelts	Osmeridae						
Rainbow Smelt	<i>Osmerus mordax</i>					X	
Trouts	Salmonidae						
Cisco*	<i>Coregonus artedi</i>					X	
Lake Whitefish*	<i>Coregonus clupeaformis</i>					X	
Coho Salmon*	<i>Oncorhynchus kisutch</i>					X	
Rainbow Trout*	<i>Oncorhynchus mykiss</i>					X	
Chinook Salmon*	<i>Oncorhynchus tshawytscha</i>					X	
Atlantic Salmon	<i>Salmo salar</i>					X	
Brown Trout	<i>Salmo trutta</i>					X	
Brook Trout	<i>Salvelinus fontinalis</i>					X	

Table B-3. Fish Species Potentially Occurring within the Riverside Solar Project Study Area

Common Name	Scientific Name and Family	Status	Observed on-site by TRC Biologists	Observed on-site during avian surveys	USFWS online database (IPaC)	NYSDEC Statewide Fisheries Database/Fish Atlas Maps of New York	Species distribution range in the NYSDEC SWAP
Pikes and Mudminnows	Esocidae						
Grass Pickerel	<i>Esox americanus vermiculatus</i>					X	
Northern Pike	<i>Esox lucius</i>					X	
Chain Pickerel	<i>Esox niger</i>					X	
Central Mudminnow	<i>Umbra limi</i>					X	
New World Silversides	Atherinopsidae						
Brook Silverside	<i>Labidesthes sicculus</i>					X	
Topminnows	Fundulidae						
Banded Killifish	<i>Fundulus diaphanus</i>					X	
Sticklebacks	Gasterosteidae						
Brook Stickleback	<i>Culaea inconstans</i>					X	
Threespine Stickleback*	<i>Gasterosteus aculeatus</i>	HPSGCN				X	
Temperate Bass	Moronidae						
White Perch	<i>Morone americana</i>					X	
White Bass*	<i>Morone chrysops</i>					X	
Sunfishes	Centrarchidae						
Rock Bass	<i>Ambloplites rupestris</i>					X	
Pumpkinseed	<i>Lepomis gibbosus</i>					X	
Bluegill	<i>Lepomis macrochirus</i>					X	
Smallmouth Bass	<i>Micropterus dolomieu</i>					X	
Largemouth Bass	<i>Micropterus salmoides</i>					X	
White Crappie	<i>Pomoxis annularis</i>					X	
Black Crappie	<i>Pomoxis nigromaculatus</i>					X	
Perches	Percidae						
Iowa Darter	<i>Etheostoma exile</i>					X	
Fantail Darter	<i>Etheostoma flabellare</i>					X	
Tessellated Darter	<i>Etheostoma olmstedi</i>					X	
Sauger	<i>Sander canadensis</i>	HPSGCN				X	X
Yellow Perch	<i>Perca flavescens</i>					X	
Logperch	<i>Percina caprodes</i>					X	
Walleye	<i>Sander vitreus</i>					X	
Drums	Sciaenidae						
Freshwater Drum	<i>Aplodinotus grunniens</i>					X	
Gobies	Gobiidae						
Round Goby	<i>Neogobius melanostomus</i>					X	

Table B-4. Reptile and Amphibian Species Potentially Occurring within the Riverside Solar Project Study Area

Reptiles

Common Name	Scientific Name and Family	Species Status	Observed on-site by TRC Biologists	Observed on-site during avian surveys	USFWS online database (IPaC)	NYSDCE Threatened, Endangered, SOC Lists	NYS Amphibian & Reptile Atlas Project	NatureServe	Species distribution range in the NYSDEC SWAP
Snapping Turtles	Chelydridae								
Common Snapping Turtle	<i>Chelydra s. serpentina</i>						X		
Terrapins, Pond Turtles, Marsh Turtles	Emydidae								
Painted Turtle	<i>Chrysemys picta</i>						X		
Blandings Turtle	<i>Emydoidea blandingii</i>	ST				X	X		
Spotted Turtle	<i>Clemmys guttata</i>	SOSC; SGCN				X		X	
Colubrids	Colubridae								
Northern Water Snake	<i>Nerodia s. sipedon</i>						X		
Northern Redbelly Snake	<i>Storeria occipitomaculata</i>						X		
Northern Brown Snake	<i>Storeria dekayi</i>						X		
Northern Ringneck Snake	<i>Diadophis punctatus</i>						X		
Common Garter Snake	<i>Thamnophis sirtalis</i>						X		
Eastern Ribbon Snake	<i>Thamnophis sauritus</i>	SGCN					X		
Smooth Green Snake	<i>Liochlorophis vernalis</i>	SGCN					X		
Black Rat Snake	<i>Elaphe o. obsoleta</i>						X		
Lungless Salamanders	Plethodontidae								
Blue Spotted Salamander	<i>Ambystoma laterale x jeffersonianum</i>						X		
Common Mudpuppy	<i>Necturus maculosus</i>						X		
Jefferson Salamander	<i>Ambystoma jeffersonianum x laterale</i>						X		
Red-spotted Newt	<i>Notophthalmus viridescens</i>						X		
Northern Red-back Salamander	<i>Plethodon c. cinereus</i>						X		
True Toads	Bufonidae								
Eastern American Toad	<i>Bufo a. americanus</i>						X		
Tree Frogs	Hylidae								
Gray Treefrog	<i>Hyla vesicolor</i>						X		
Western Chorus Frog	<i>Pseudacris triseriata</i>						X		
Northern Spring Peeper	<i>Pseudacris c. crucifer</i>						X		
True Frogs	Ranidae								
Green Frog	<i>Rana clamitans melanota</i>						X		
Bullfrog	<i>Rana catesbeiana</i>						X		
Pickerel Frog	<i>Rana palustris</i>						X		
Wood Frog	<i>Rana sylvatica</i>						X		
Northern Leopard Frog	<i>Rana pipiens</i>						X		

Table B-4. Reptile and Amphibian Species Potentially Occurring within the Riverside Solar Project Study Area

Amphibians

Common Name	Scientific Name and Family	Status	Observed on-site by TRC Biologists	Observed on-site during avian surveys	USFWS online database (IPaC)	NYS Amphibian & Reptile Atlas Project	Species distribution range in the NYSDEC SWAP	NYS Herpetology Database, NYSDEC
Lungless Salamanders	Plethodontidae							
Allegheny Dusky Salamander	<i>Desmognathus ochrophaeus</i>				X			
Northern red-back Salamander	<i>Plethodon c. cinereus</i>				X			
Jefferson Salamander	<i>Ambystoma jeffersonianum</i>	SOC; SGCN			X	X	X	
Blue-spotted Salamander	<i>Ambystoma laterale</i>	SOC; SGCN			X		X	
Common Mudpuppy	<i>Necturus maculosus</i>				X	X		
True Toads	Bufo							
Eastern American Toad	<i>Bufo a. americanus</i>				X			
Tree Frogs	Hylidae							
Boreal Chorus Frog	<i>Pseudacris maculata</i>					X		
Western Chorus Frog	<i>Pseudacris triseriata</i>					X		
Northern Spring Peeper	<i>Pseudacris c. crucifer</i>				X			
True Frogs	Ranidae							
Green Frog	<i>Rana clamitans melanota</i>				X			
Northern Leopard Frog	<i>Rana pipiens</i>				X			

Appendix C. Correspondence

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Fish and Wildlife, New York Natural Heritage Program
625 Broadway, Fifth Floor, Albany, NY 12233-4757
P: (518) 402-8935 | F: (518) 402-8925
www.dec.ny.gov

June 19, 2019

Jenny Monson-Miller
Geronimo Energy
7650 Edinborough Way, Suite 725
Minneapolis, MN 55435

Re: Riverside Solar Project

County: Jefferson Town/City: Brownville, Lyme

Dear Ms. Monson-Miller:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to the above project.

Enclosed is a report of rare or state-listed animals and plants, and significant natural communities that our database indicates occur in the vicinity of the project site.

For most sites, comprehensive field surveys have not been conducted; the enclosed report only includes records from our database. We cannot provide a definitive statement as to the presence or absence of all rare or state-listed species or significant natural communities. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other sources may be required to fully assess impacts on biological resources.

Our database is continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

The presence of the plants and animals identified in the enclosed report may result in this project requiring additional review or permit conditions. For further guidance, and for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the NYS DEC Region 6 Office, Division of Environmental Permits at dep.r6@dec.ny.gov, (315) 785-2245.

Sincerely,



Heidi Krahlting
Environmental Review Specialist
New York Natural Heritage Program



The following state-listed animals have been documented at or in the vicinity of the project site.

The following list includes animals that are listed by NYS as Endangered, Threatened, or Special Concern; and/or that are federally listed or are candidates for federal listing.

For information about any permit considerations for your project, please contact the Permits staff at the NYSDEC Region 6 Office at dep.r6@dec.ny.gov, (315) 785-2245.

Birds

<i>COMMON NAME</i>	<i>SCIENTIFIC NAME</i>	<i>NY STATE LISTING</i>	<i>FEDERAL LISTING</i>
--------------------	------------------------	-------------------------	------------------------

The following species have been documented at the project site.

Henslow's Sparrow <i>Breeding</i>	<i>Ammodramus henslowii</i>	Threatened	875
Short-eared Owl <i>Nonbreeding</i>	<i>Asio flammeus</i>	Endangered	12233

The following species has been documented within 100 yards of the project site.

Upland Sandpiper <i>Breeding</i>	<i>Bartramia longicauda</i>	Threatened	10960
--	-----------------------------	------------	-------

The following species has been documented within 0.6 mile of the project site.

Bald Eagle <i>Breeding</i>	<i>Haliaeetus leucocephalus</i>	Threatened	15083
--------------------------------------	---------------------------------	------------	-------

Mammals

<i>COMMON NAME</i>	<i>SCIENTIFIC NAME</i>	<i>NY STATE LISTING</i>	<i>FEDERAL LISTING</i>
--------------------	------------------------	-------------------------	------------------------

The following species has been documented within 2 miles of the project site. Additional locations have been documented within 2.5 miles. Individual animals may travel 2.5 miles from documented locations. The main impact of concern is the cutting or removal of potential roost trees.

Indiana Bat <i>Maternity colony</i>	<i>Myotis sodalis</i>	Endangered	Endangered	11657
---	-----------------------	------------	------------	-------

The following species has been documented within 3 miles of the project site. Individual animals may travel 5 miles from documented locations. The main impact of concern is the cutting or removal of potential roost trees.

Northern Long-eared Bat <i>Hibernaculum</i>	<i>Myotis septentrionalis</i>	Threatened	Threatened	14159
---	-------------------------------	------------	------------	-------

This report only includes records from the NY Natural Heritage database.

If any rare plants or animals are documented during site visits, we request that information on the observations be provided to the New York Natural Heritage Program so that we may update our database.

Information about many of the listed animals in New York, including habitat, biology, identification, conservation, and management, are available online in Natural Heritage's Conservation Guides at www.guides.nynhp.org, and from NYSDEC at www.dec.ny.gov/animals/7494.html.



The following significant natural community has been documented in the vicinity of the project site.

We recommend that potential impacts of the proposed project on this community be addressed as part of any environmental assessment or review conducted as part of the planning, permitting and approval process, such as reviews conducted under SEQR. Final requirements of the project to avoid, minimize, or mitigate potential impacts are determined by the lead permitting agency or the government body approving the project.

The following natural community is considered significant from a statewide perspective by the NY Natural Heritage Program. By meeting specific, documented criteria, the NY Natural Heritage Program considers this community occurrence to have high ecological and conservation value.

<i>COMMON NAME</i>	<i>SCIENTIFIC NAME</i>	<i>NY STATE LISTING</i>	<i>HERITAGE CONSERVATION STATUS</i>
Upland/Terrestrial Communities			
Alvar Woodland			High Quality Occurrence of Rare Community Type and Globally Rare

Documented within 0.3 mile north of the project site. This is a large diverse area, with some portions a little disturbed.

839

This report only includes records from the NY Natural Heritage database. For most sites, comprehensive field surveys have not been conducted, and we cannot provide a definitive statement as to the presence or absence of all rare or state-listed species. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other sources may be required to fully assess impacts on biological resources.

If any rare plants or animals are documented during site visits, we request that information on the observations be provided to the New York Natural Heritage Program so that we may update our database.

Information about many of the rare animals and plants in New York, including habitat, biology, identification, conservation, and management, are available online in Natural Heritage's Conservation Guides at www.guides.nynhp.org, from NatureServe Explorer at www.natureserve.org/explorer, and from USDA's Plants Database at <http://plants.usda.gov/index.html> (for plants).

November 23, 2020 | 6:30 pm

Information on Novel Coronavirus

Coronavirus is still active in New York. We have to be smart. Wear a mask, maintain six feet distance in public and download the official New York State exposure notification app, COVID Alert NY.

GET THE FACTS >

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION



Environmental Resource Mapper

Topographical

[Using this map](#)

Search

Tools

Layers and Legend

All Layers

 Unique Geological Features

 Waterbody Classifications for Rivers/Streams 

 Waterbody Classifications for Lakes

 State Regulated Freshwater Wetlands
(Outside of the Adirondack Park)

 State Regulated Wetland Checkzone 

 Significant Natural Communities

 Natural Communities Near This Location 

 Rare Plants or Animals

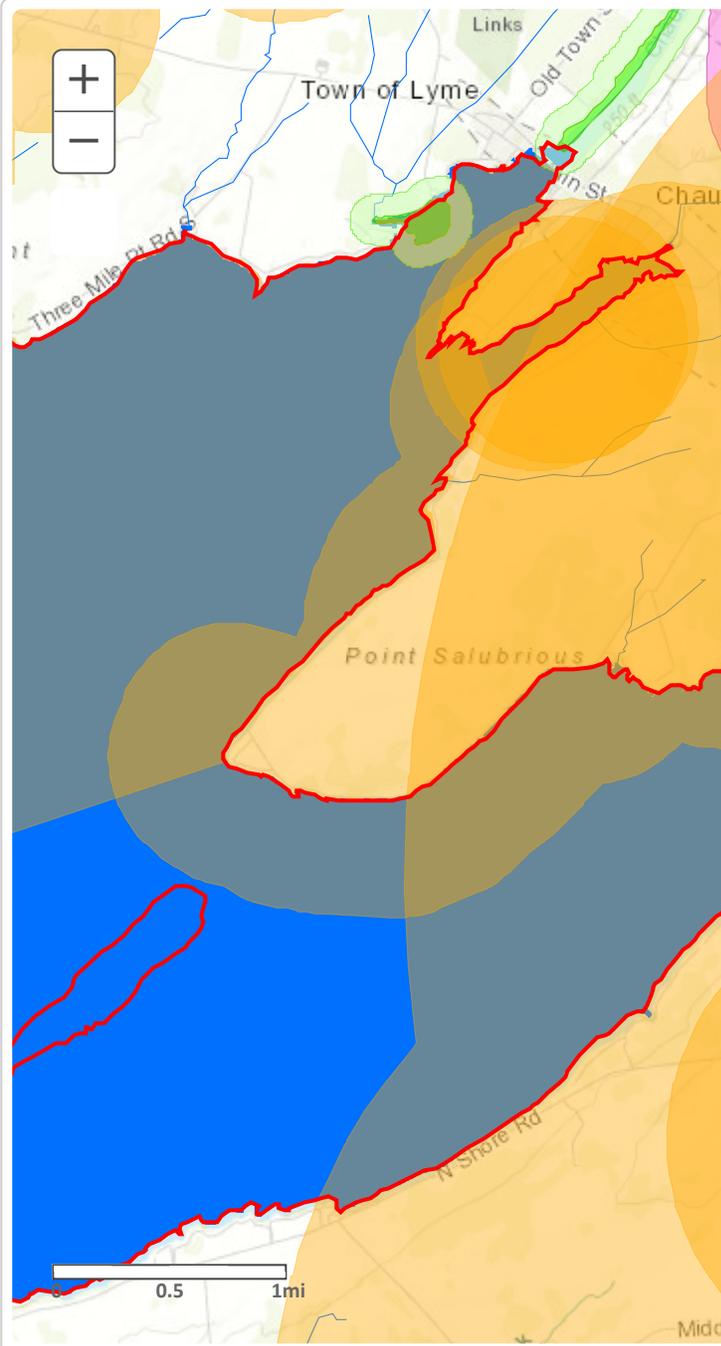
Other Wetland Layers

Reference Layers

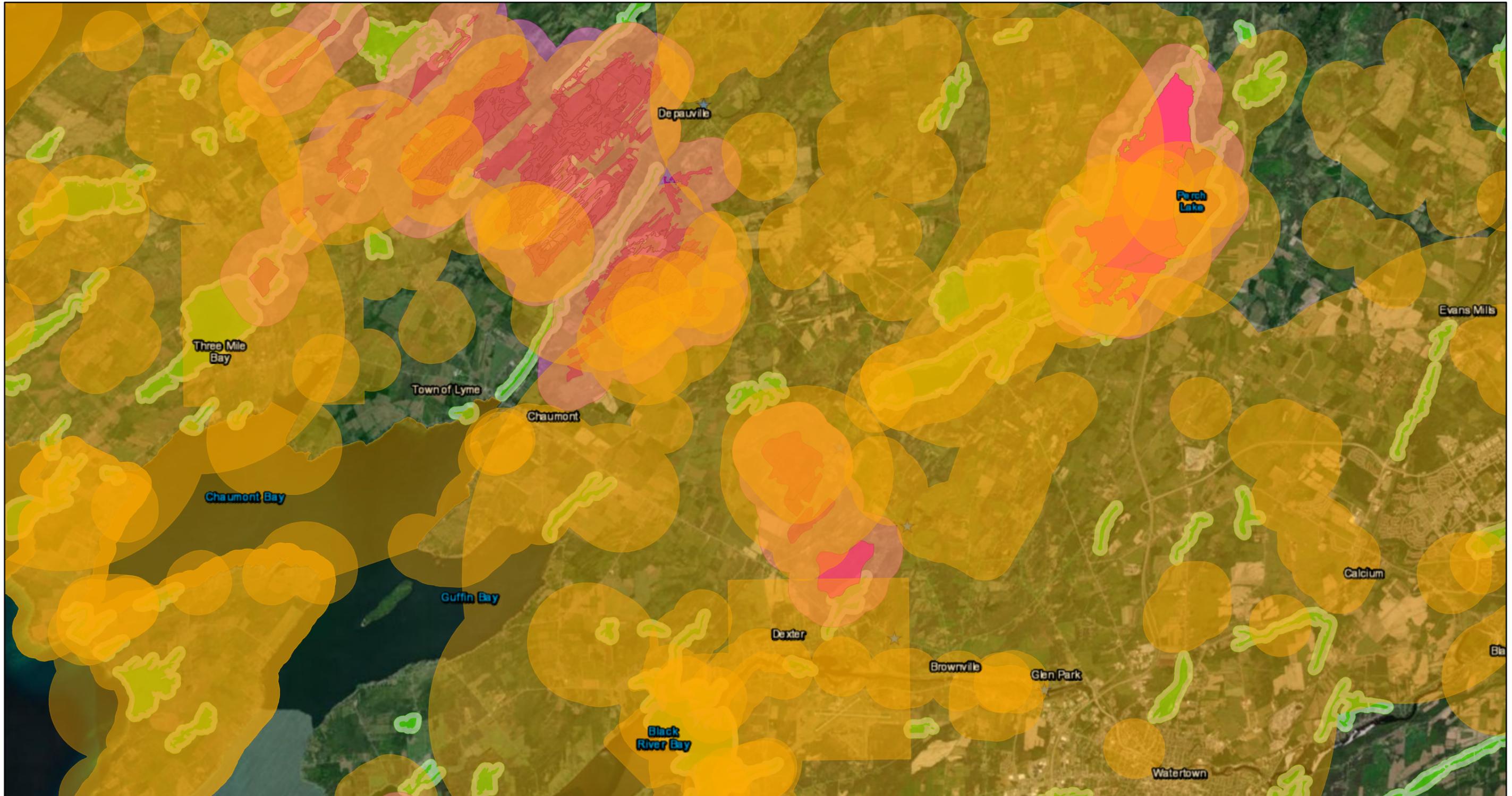
Tell Me More...

Need A Permit?

Contacts

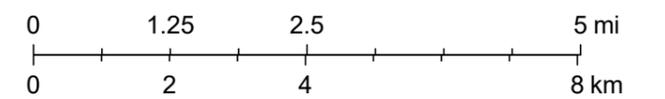


Riverside Solar Project



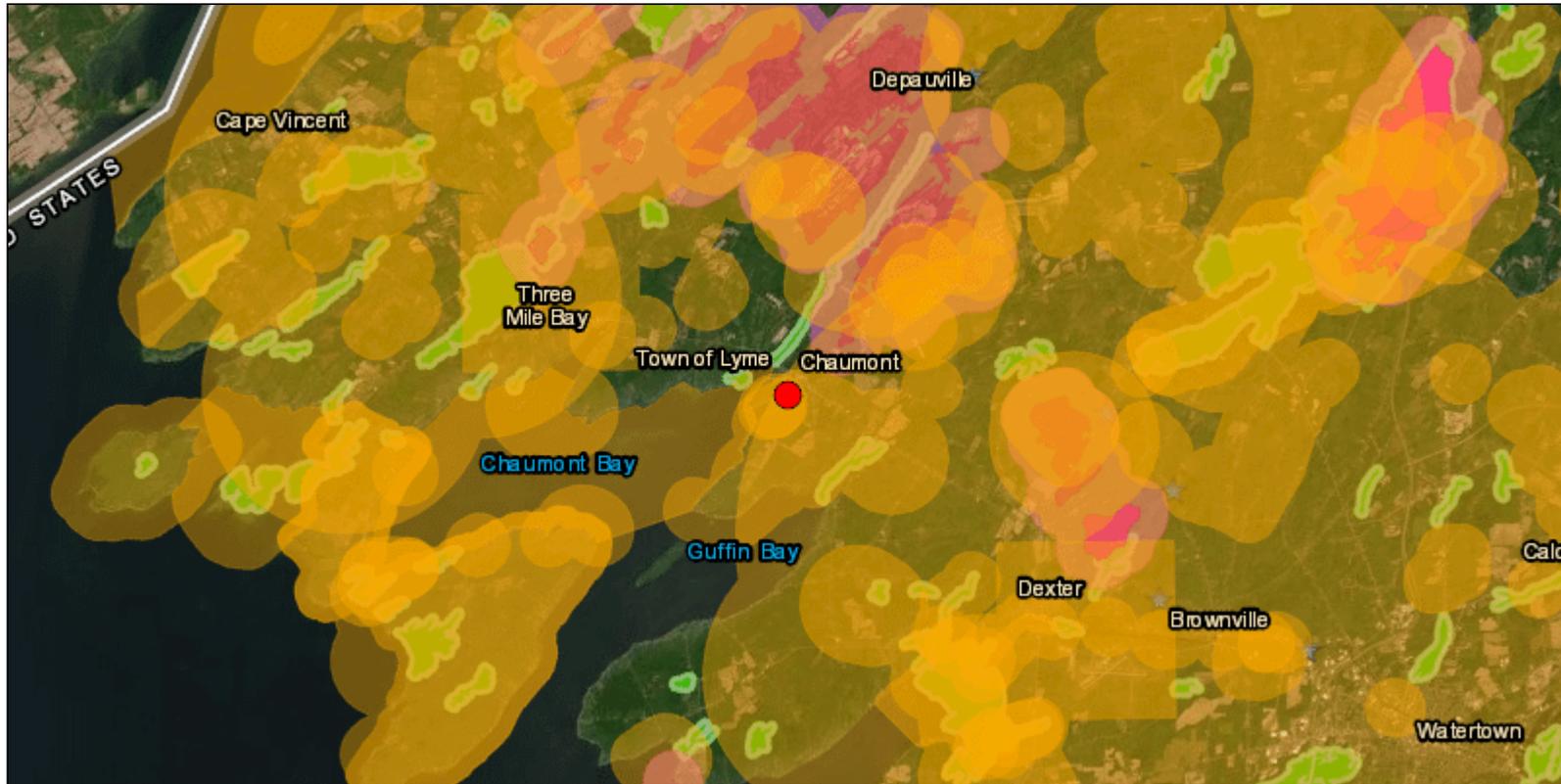
February 5, 2021

1:144,448



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

Environmental Resource Mapper



The coordinates of the point you clicked on are:

UTM 18

Easting: 409186.4372016565

Northing: 4879443.903715733

Longitude/Latitude

Longitude: -76.13389587402206

Latitude: 44.06254765036579

The approximate address of the point you clicked on is:

Chaumont, New York

County: Jefferson

Town: Lyme

Village: Chaumont
USGS Quad: CHAUMONT

DEC Region

Region 6:

(Western Adirondacks/Eastern Lake Ontario) Herkimer, Jefferson, Lewis, Oneida and St. Lawrence counties. For more information visit <http://www.dec.ny.gov/about/613.html>.

Waterbody Classifications for Rivers/Streams

Regulation: 847-23
Standard: C
Classification: C

Waterbody Classifications for Lakes

Regulation: 847-4
Standard: A
Classification: A

Rare Plants and Rare Animals

This location is in the vicinity of Bridle Shiner – Not Listed by NYS

This location is in the vicinity of Blackchin Shiner – Not Listed by NYS

This location is in the vicinity of Animals Listed as Endangered or Threatened - Contact NYSDEC Regional Office

This location is in the vicinity of Bats Listed as Endangered or Threatened -- Contact NYSDEC Regional Office

National Wetlands Inventory

Attribute: undefined
Type: undefined

Acres: undefined

Attribute: undefined

Type: undefined

Acres: undefined

Attribute: undefined

Type: undefined

Acres: undefined

Attribute: undefined

Type: undefined

Acres: undefined

For more information about the National Wetlands Inventory wetlands visit <http://www.fws.gov/wetlands/>

If your project or action is within or near an area with a rare animal, a permit may be required if the species is listed as endangered or threatened and the department determines the action may be harmful to the species or its habitat.

If your project or action is within or near an area with rare plants and/or significant natural communities, the environmental impacts may need to be addressed.

The presence of a unique geological feature or landform near a project, unto itself, does not trigger a requirement for a NYS DEC permit. Readers are advised, however, that there is the chance that a unique feature may also show in another data layer (ie. a wetland) and thus be subject to permit jurisdiction.

Please refer to the "Need a Permit?" tab for permit information or other authorizations regarding these natural resources.

Disclaimer: If you are considering a project or action in, or near, a wetland or a stream, a NYS DEC permit may be required. The Environmental Resources Mapper does not show all natural resources which are regulated by NYS DEC, and for which permits from NYS DEC are required. For example, Regulated Tidal Wetlands, and Wild, Scenic, and Recreational Rivers, are currently not included on the maps.

Full Environmental Assessment Form
Part 1 - Project and Setting

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either “Yes” or “No”. If the answer to the initial question is “Yes”, complete the sub-questions that follow. If the answer to the initial question is “No”, proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the applicant or project sponsor to verify that the information contained in Part 1 is accurate and complete.

A. Project and Applicant/Sponsor Information.

Name of Action or Project:		
Project Location (describe, and attach a general location map):		
Brief Description of Proposed Action (include purpose or need):		
Name of Applicant/Sponsor:		Telephone:
		E-Mail:
Address:		
City/PO:	State:	Zip Code:
Project Contact (if not same as sponsor; give name and title/role):		Telephone:
		E-Mail:
Address:		
City/PO:	State:	Zip Code:
Property Owner (if not same as sponsor):		Telephone:
		E-Mail:
Address:		
City/PO:	State:	Zip Code:

B. Government Approvals

B. Government Approvals, Funding, or Sponsorship. (“Funding” includes grants, loans, tax relief, and any other forms of financial assistance.)

Government Entity	If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Counsel, Town Board, or Village Board of Trustees <input type="checkbox"/> Yes <input type="checkbox"/> No		
b. City, Town or Village Planning Board or Commission <input type="checkbox"/> Yes <input type="checkbox"/> No		
c. City, Town or Village Zoning Board of Appeals <input type="checkbox"/> Yes <input type="checkbox"/> No		
d. Other local agencies <input type="checkbox"/> Yes <input type="checkbox"/> No		
e. County agencies <input type="checkbox"/> Yes <input type="checkbox"/> No		
f. Regional agencies <input type="checkbox"/> Yes <input type="checkbox"/> No		
g. State agencies <input type="checkbox"/> Yes <input type="checkbox"/> No		
h. Federal agencies <input type="checkbox"/> Yes <input type="checkbox"/> No		
<p>i. Coastal Resources.</p> <p><i>i.</i> Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><i>ii.</i> Is the project site located in a community with an approved Local Waterfront Revitalization Program? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><i>iii.</i> Is the project site within a Coastal Erosion Hazard Area? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>		

C. Planning and Zoning

C.1. Planning and zoning actions.

Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed? Yes No

- **If Yes**, complete sections C, F and G.
- **If No**, proceed to question C.2 and complete all remaining sections and questions in Part 1

C.2. Adopted land use plans.

a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located? Yes No

If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? Yes No

b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway; Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?) Yes No

If Yes, identify the plan(s):

c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan? Yes No

If Yes, identify the plan(s):

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. Yes No
If Yes, what is the zoning classification(s) including any applicable overlay district?

b. Is the use permitted or allowed by a special or conditional use permit? Yes No

c. Is a zoning change requested as part of the proposed action? Yes No

If Yes,

i. What is the proposed new zoning for the site? _____

C.4. Existing community services.

a. In what school district is the project site located? _____

b. What police or other public protection forces serve the project site?

c. Which fire protection and emergency medical services serve the project site?

d. What parks serve the project site?

D. Project Details

D.1. Proposed and Potential Development

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)?

b. a. Total acreage of the site of the proposed action? _____ acres
b. Total acreage to be physically disturbed? _____ acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? _____ acres

c. Is the proposed action an expansion of an existing project or use? Yes No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % _____ Units: _____

d. Is the proposed action a subdivision, or does it include a subdivision? Yes No
If Yes,

i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)

ii. Is a cluster/conservation layout proposed? Yes No

iii. Number of lots proposed? _____

iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____

e. Will the proposed action be constructed in multiple phases? Yes No

i. If No, anticipated period of construction: _____ months

ii. If Yes:

- Total number of phases anticipated _____
- Anticipated commencement date of phase 1 (including demolition) _____ month _____ year
- Anticipated completion date of final phase _____ month _____ year

• Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases: _____

f. Does the project include new residential uses? Yes No
 If Yes, show numbers of units proposed.

	<u>One Family</u>	<u>Two Family</u>	<u>Three Family</u>	<u>Multiple Family (four or more)</u>
Initial Phase	_____	_____	_____	_____
At completion	_____	_____	_____	_____
of all phases	_____	_____	_____	_____

g. Does the proposed action include new non-residential construction (including expansions)? Yes No
 If Yes,

i. Total number of structures _____

ii. Dimensions (in feet) of largest proposed structure: _____ height; _____ width; and _____ length

iii. Approximate extent of building space to be heated or cooled: _____ square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? Yes No
 If Yes,

i. Purpose of the impoundment: _____

ii. If a water impoundment, the principal source of the water: Ground water Surface water streams Other specify: _____

iii. If other than water, identify the type of impounded/contained liquids and their source.

iv. Approximate size of the proposed impoundment. Volume: _____ million gallons; surface area: _____ acres

v. Dimensions of the proposed dam or impounding structure: _____ height; _____ length

vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete):

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? Yes No
 (Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite)
 If Yes:

i. What is the purpose of the excavation or dredging? _____

ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?

- Volume (specify tons or cubic yards): _____
- Over what duration of time? _____

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them.

iv. Will there be onsite dewatering or processing of excavated materials? Yes No
 If yes, describe. _____

v. What is the total area to be dredged or excavated? _____ acres

vi. What is the maximum area to be worked at any one time? _____ acres

vii. What would be the maximum depth of excavation or dredging? _____ feet

viii. Will the excavation require blasting? Yes No

ix. Summarize site reclamation goals and plan: _____

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? Yes No
 If Yes:

i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): _____

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:

iii. Will the proposed action cause or result in disturbance to bottom sediments? Yes No

If Yes, describe: _____

iv. Will the proposed action cause or result in the destruction or removal of aquatic vegetation? Yes No

If Yes:

- acres of aquatic vegetation proposed to be removed: _____
- expected acreage of aquatic vegetation remaining after project completion: _____
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access): _____
- proposed method of plant removal: _____
- if chemical/herbicide treatment will be used, specify product(s): _____

v. Describe any proposed reclamation/mitigation following disturbance: _____

c. Will the proposed action use, or create a new demand for water? Yes No

If Yes:

i. Total anticipated water usage/demand per day: _____ gallons/day

ii. Will the proposed action obtain water from an existing public water supply? Yes No

If Yes:

- Name of district or service area: _____
- Does the existing public water supply have capacity to serve the proposal? Yes No
- Is the project site in the existing district? Yes No
- Is expansion of the district needed? Yes No
- Do existing lines serve the project site? Yes No

iii. Will line extension within an existing district be necessary to supply the project? Yes No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____
- Source(s) of supply for the district: _____

iv. Is a new water supply district or service area proposed to be formed to serve the project site? Yes No

If Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- Proposed source(s) of supply for new district: _____

v. If a public water supply will not be used, describe plans to provide water supply for the project: _____

vi. If water supply will be from wells (public or private), what is the maximum pumping capacity: _____ gallons/minute.

d. Will the proposed action generate liquid wastes? Yes No

If Yes:

i. Total anticipated liquid waste generation per day: _____ gallons/day

ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each): _____

iii. Will the proposed action use any existing public wastewater treatment facilities? Yes No

If Yes:

- Name of wastewater treatment plant to be used: _____
- Name of district: _____
- Does the existing wastewater treatment plant have capacity to serve the project? Yes No
- Is the project site in the existing district? Yes No
- Is expansion of the district needed? Yes No

• Do existing sewer lines serve the project site? Yes No
 • Will a line extension within an existing district be necessary to serve the project? Yes No
 If Yes:
 • Describe extensions or capacity expansions proposed to serve this project: _____

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? Yes No
 If Yes:
 • Applicant/sponsor for new district: _____
 • Date application submitted or anticipated: _____
 • What is the receiving water for the wastewater discharge? _____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge or describe subsurface disposal plans):

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction? Yes No
 If Yes:
 i. How much impervious surface will the project create in relation to total size of project parcel?
 _____ Square feet or _____ acres (impervious surface)
 _____ Square feet or _____ acres (parcel size)
 ii. Describe types of new point sources. _____

iii. Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)?

 • If to surface waters, identify receiving water bodies or wetlands: _____

 • Will stormwater runoff flow to adjacent properties? Yes No

iv. Does the proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? Yes No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? Yes No
 If Yes, identify:
 i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)

 ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

 iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? Yes No
 If Yes:
 i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) Yes No
 ii. In addition to emissions as calculated in the application, the project will generate:
 • _____ Tons/year (short tons) of Carbon Dioxide (CO₂)
 • _____ Tons/year (short tons) of Nitrous Oxide (N₂O)
 • _____ Tons/year (short tons) of Perfluorocarbons (PFCs)
 • _____ Tons/year (short tons) of Sulfur Hexafluoride (SF₆)
 • _____ Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflouorocarbons (HFCs)
 • _____ Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? Yes No
 If Yes:
 i. Estimate methane generation in tons/year (metric): _____
 ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? Yes No
 If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust): _____

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? Yes No
 If Yes:
 i. When is the peak traffic expected (Check all that apply): Morning Evening Weekend
 Randomly between hours of _____ to _____.
 ii. For commercial activities only, projected number of truck trips/day and type (e.g., semi trailers and dump trucks): _____
 iii. Parking spaces: Existing _____ Proposed _____ Net increase/decrease _____
 iv. Does the proposed action include any shared use parking? Yes No
 v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe: _____
 vi. Are public/private transportation service(s) or facilities available within 1/2 mile of the proposed site? Yes No
 vii. Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? Yes No
 viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? Yes No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? Yes No
 If Yes:
 i. Estimate annual electricity demand during operation of the proposed action: _____
 ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other): _____
 iii. Will the proposed action require a new, or an upgrade, to an existing substation? Yes No

l. Hours of operation. Answer all items which apply.
 i. During Construction:
 • Monday - Friday: _____
 • Saturday: _____
 • Sunday: _____
 • Holidays: _____
 ii. During Operations:
 • Monday - Friday: _____
 • Saturday: _____
 • Sunday: _____
 • Holidays: _____

m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? Yes No
 If yes:
 i. Provide details including sources, time of day and duration:

ii. Will the proposed action remove existing natural barriers that could act as a noise barrier or screen? Yes No
 Describe: _____

n. Will the proposed action have outdoor lighting? Yes No
 If yes:
 i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? Yes No
 Describe: _____

o. Does the proposed action have the potential to produce odors for more than one hour per day? Yes No
 If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures: _____

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? Yes No
 If Yes:
 i. Product(s) to be stored _____
 ii. Volume(s) _____ per unit time _____ (e.g., month, year)
 iii. Generally, describe the proposed storage facilities: _____

q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? Yes No
 If Yes:
 i. Describe proposed treatment(s):

ii. Will the proposed action use Integrated Pest Management Practices? Yes No

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? Yes No
 If Yes:
 i. Describe any solid waste(s) to be generated during construction or operation of the facility:
 • Construction: _____ tons per _____ (unit of time)
 • Operation : _____ tons per _____ (unit of time)
 ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:
 • Construction: _____

 • Operation: _____

 iii. Proposed disposal methods/facilities for solid waste generated on-site:
 • Construction: _____

 • Operation: _____

s. Does the proposed action include construction or modification of a solid waste management facility? Yes No
 If Yes:
 i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____
 ii. Anticipated rate of disposal/processing:
 • _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
 • _____ Tons/hour, if combustion or thermal treatment
 iii. If landfill, anticipated site life: _____ years

t. Will the proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? Yes No
 If Yes:
 i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____

 ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

 iii. Specify amount to be handled or generated _____ tons/month
 iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____

 v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? Yes No
 If Yes: provide name and location of facility: _____

 If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility:

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.
 i. Check all uses that occur on, adjoining and near the project site.
 Urban Industrial Commercial Residential (suburban) Rural (non-farm)
 Forest Agriculture Aquatic Other (specify): _____
 ii. If mix of uses, generally describe:

b. Land uses and covertypes on the project site.

Land use or Covertypes	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces			
• Forested			
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)			
• Agricultural (includes active orchards, field, greenhouse etc.)			
• Surface water features (lakes, ponds, streams, rivers, etc.)			
• Wetlands (freshwater or tidal)			
• Non-vegetated (bare rock, earth or fill)			
• Other Describe: _____ _____			

c. Is the project site presently used by members of the community for public recreation? Yes No
i. If Yes: explain: _____

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? Yes No
If Yes,
i. Identify Facilities:

e. Does the project site contain an existing dam? Yes No
If Yes:
i. Dimensions of the dam and impoundment:

- Dam height: _____ feet
- Dam length: _____ feet
- Surface area: _____ acres
- Volume impounded: _____ gallons OR acre-feet

ii. Dam's existing hazard classification: _____
iii. Provide date and summarize results of last inspection:

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? Yes No
If Yes:
i. Has the facility been formally closed? Yes No

- If yes, cite sources/documentation: _____

ii. Describe the location of the project site relative to the boundaries of the solid waste management facility:

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? Yes No
If Yes:
i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred:

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? Yes No
If Yes:
i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: Yes No
 Yes – Spills Incidents database Provide DEC ID number(s): _____
 Yes – Environmental Site Remediation database Provide DEC ID number(s): _____
 Neither database
ii. If site has been subject of RCRA corrective activities, describe control measures: _____

iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? Yes No
If yes, provide DEC ID number(s): _____
iv. If yes to (i), (ii) or (iii) above, describe current status of site(s):

v. Is the project site subject to an institutional control limiting property uses? Yes No

- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? Yes No
- Explain: _____

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? _____ feet

b. Are there bedrock outcroppings on the project site? Yes No
 If Yes, what proportion of the site is comprised of bedrock outcroppings? _____%

c. Predominant soil type(s) present on project site: _____ %
 _____ %
 _____ %

d. What is the average depth to the water table on the project site? Average: _____ feet

e. Drainage status of project site soils: Well Drained: _____ % of site
 Moderately Well Drained: _____ % of site
 Poorly Drained _____ % of site

f. Approximate proportion of proposed action site with slopes: 0-10%: _____ % of site
 10-15%: _____ % of site
 15% or greater: _____ % of site

g. Are there any unique geologic features on the project site? Yes No
 If Yes, describe: _____

h. Surface water features.

i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? Yes No

ii. Do any wetlands or other waterbodies adjoin the project site? Yes No
 If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.

iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? Yes No

iv. For each identified regulated wetland and waterbody on the project site, provide the following information:

- Streams: Name _____ Classification _____
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name _____ Approximate Size _____
- Wetland No. (if regulated by DEC) _____

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? Yes No
 If yes, name of impaired water body/bodies and basis for listing as impaired: _____

i. Is the project site in a designated Floodway? Yes No

j. Is the project site in the 100-year Floodplain? Yes No

k. Is the project site in the 500-year Floodplain? Yes No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? Yes No
 If Yes:
 i. Name of aquifer: _____

m. Identify the predominant wildlife species that occupy or use the project site: _____ _____ _____	
n. Does the project site contain a designated significant natural community? <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes: <i>i.</i> Describe the habitat/community (composition, function, and basis for designation): _____ _____ <i>ii.</i> Source(s) of description or evaluation: _____ <i>iii.</i> Extent of community/habitat: <ul style="list-style-type: none"> • Currently: _____ acres • Following completion of project as proposed: _____ acres • Gain or loss (indicate + or -): _____ acres 	
o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes: <i>i.</i> Species and listing (endangered or threatened): _____ _____ _____	
p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes: <i>i.</i> Species and listing: _____ _____	
q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, give a brief description of how the proposed action may affect that use: _____ _____	
E.3. Designated Public Resources On or Near Project Site	
a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, provide county plus district name/number: _____	
b. Are agricultural lands consisting of highly productive soils present? <input type="checkbox"/> Yes <input type="checkbox"/> No <i>i.</i> If Yes: acreage(s) on project site? _____ <i>ii.</i> Source(s) of soil rating(s): _____	
c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes: <i>i.</i> Nature of the natural landmark: <input type="checkbox"/> Biological Community <input type="checkbox"/> Geological Feature <i>ii.</i> Provide brief description of landmark, including values behind designation and approximate size/extent: _____ _____ _____	
d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes: <i>i.</i> CEA name: _____ <i>ii.</i> Basis for designation: _____ <i>iii.</i> Designating agency and date: _____	

<p>e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If Yes:</p> <p style="margin-left: 20px;">i. Nature of historic/archaeological resource: <input type="checkbox"/> Archaeological Site <input type="checkbox"/> Historic Building or District</p> <p style="margin-left: 20px;">ii. Name: _____</p> <p style="margin-left: 20px;">iii. Brief description of attributes on which listing is based: _____</p>
<p>f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>g. Have additional archaeological or historic site(s) or resources been identified on the project site? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If Yes:</p> <p style="margin-left: 20px;">i. Describe possible resource(s): _____</p> <p style="margin-left: 20px;">ii. Basis for identification: _____</p>
<p>h. Is the project site within five miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If Yes:</p> <p style="margin-left: 20px;">i. Identify resource: _____</p> <p style="margin-left: 20px;">ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): _____</p> <p style="margin-left: 20px;">iii. Distance between project and resource: _____ miles.</p>
<p>i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If Yes:</p> <p style="margin-left: 20px;">i. Identify the name of the river and its designation: _____</p> <p style="margin-left: 20px;">ii. Is the activity consistent with development restrictions contained in 6NYCRR Part 666? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>

F. Additional Information

Attach any additional information which may be needed to clarify your project.

If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

I certify that the information provided is true to the best of my knowledge.

Applicant/Sponsor Name _____ Date _____

Signature _____ Title _____



Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources in order to obtain data not provided by the Mapper. Digital data is not a substitute for agency determinations.



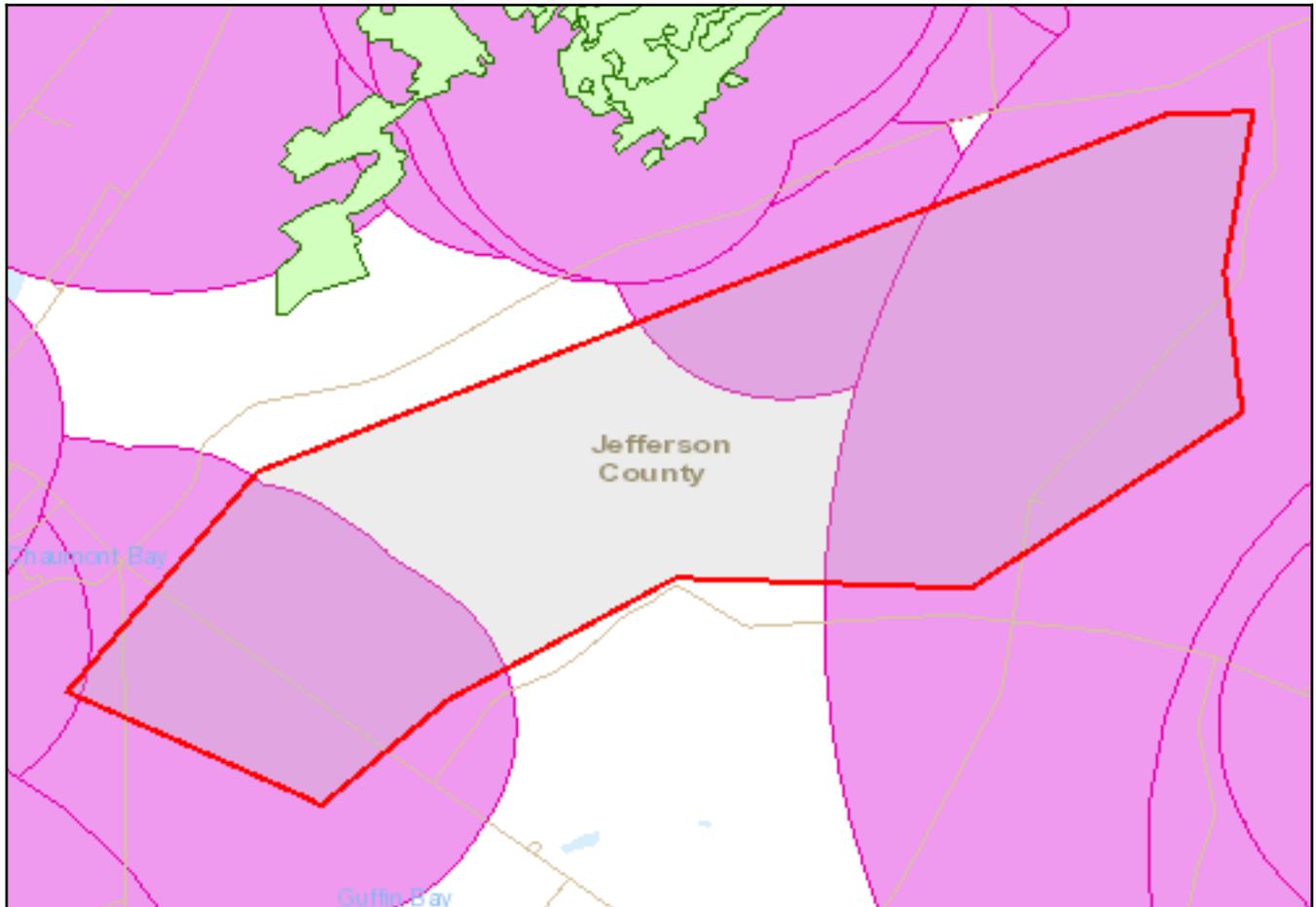
B.i.i [Coastal or Waterfront Area]	No
B.i.ii [Local Waterfront Revitalization Area]	No
C.2.b. [Special Planning District]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.iii [Within 2,000' of DEC Remediation Site]	No
E.2.g [Unique Geologic Features]	Yes
E.2.g [Unique Geologic Features]	Route 180 - Limerick
E.2.h.i [Surface Water Features]	Yes
E.2.h.ii [Surface Water Features]	Yes
E.2.h.iii [Surface Water Features]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
E.2.h.iv [Surface Water Features - Stream Name]	847-23, 847-26
E.2.h.iv [Surface Water Features - Stream Classification]	C
E.2.h.iv [Surface Water Features - Wetlands Name]	Federal Waters
E.2.h.v [Impaired Water Bodies]	No
E.2.i. [Floodway]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.

E.2.j. [100 Year Floodplain]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.2.k. [500 Year Floodplain]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.2.l. [Aquifers]	No
E.2.n. [Natural Communities]	Yes
E.2.n.i [Natural Communities - Name]	Alvar Pavement Grassland, Alvar Woodland
E.2.n.i [Natural Communities - Acres]	596.0, 93.0
E.2.o. [Endangered or Threatened Species]	Yes
E.2.o. [Endangered or Threatened Species - Name]	Northern Long-eared Bat, Bald Eagle, Crawe's Sedge, Golden Corydalis, Prairie Dropseed, Mountain Death Camas, Goldie's Starwort, Alpine Willow-herb, Back's Sedge, Carolina Whitlow Grass, Purple Rock Cress, Lindley's Aster, Prairie Smoke, Listed Plant – contact NY Natural Heritage, Loggerhead Shrike, Indiana Bat
E.2.p. [Rare Plants or Animals]	Yes
E.2.p. [Rare Plants or Animals - Name]	Olympia Marble
E.3.a. [Agricultural District]	Yes
E.3.a. [Agricultural District]	JEFF002
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	No
E.3.e. [National or State Register of Historic Places or State Eligible Sites]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.3.f. [Archeological Sites]	Yes
E.3.i. [Designated River Corridor]	No

New York Nature Explorer

User Defined Results Report

Criteria: Selected Map Area



Common Name	Subgroup	Distribution Status	Year Last Documente	Protection Status		Conservation Rank	
				State	Federal	State	Global

Animal: Fish

Blackchin Shiner	Minnows, Shiners, Suckers	Recently Confirmed	2018			S2	G5
<i>Notropis heterodon</i>							

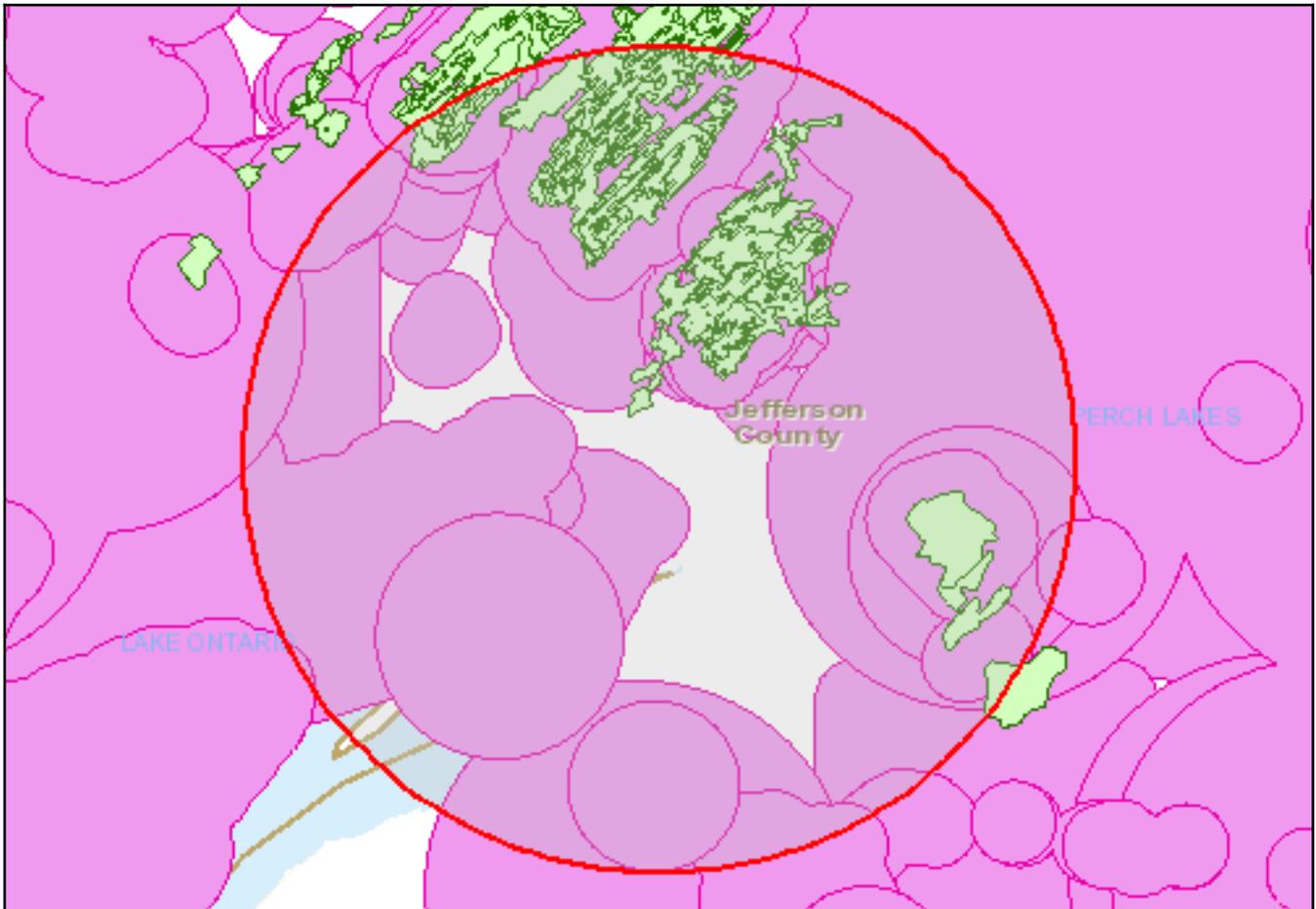
Note: Restricted plants and animals may also have also been documented in one or more of the Towns or Cities in which your user-defined area is located, but are not listed in these results. This application does not provide information at the level of Town or City on state-listed animals and on other sensitive animals and plants. A list of the restricted animals and plants documented at the corresponding county level can be obtained via the County link(s) on the original User Defined Search Results page. Any individual plant or animal on this county's restricted list may or may not occur in this particular user-defined area.

This list only includes records of rare species and significant natural communities from the databases of the NY Natural Heritage Program. This list is not a definitive statement about the presence or absence of all plants and animals, including rare or state-listed species, or of all significant natural communities. For most areas, comprehensive field surveys have not been conducted, and this list should not be considered a substitute for on-site surveys.

New York Nature Explorer

User Defined Results Report

Criteria: Selected Map Area



Common Name	Subgroup	Distribution Status	Year Last Documente	Protection Status		Conservation Rank	
				State	Federal	State	Global

Animal: Fish

Blackchin Shiner	Minnows, Shiners, Suckers	Recently Confirmed	2018			S2	G5
<i>Notropis heterodon</i>							

Animal: Butterflies and Moths

A Geometrid Moth	Moths	Recently Confirmed	1996			S1	G4
<i>Digrammia denticulata</i>							
A Noctuid Moth	Moths	Recently Confirmed	1996			S1	G3G4Q
<i>Chytonix ruperti</i>							
A Notodontid Moth	Moths	Recently Confirmed	1996			S1	G4
<i>Paectes abrostolella</i>							

New York Nature Explorer

Common Name	Subgroup	Distribution Status	Year Last Documente	Protection Status		Conservation Rank	
				State	Federal	State	Global
A Notodontid Moth <i>Orthodes obscura</i>	Moths	Recently Confirmed	1996			S1?	G4
Anna Tiger Moth <i>Grammia anna</i>	Moths	Recently Confirmed	1996			SU	G5
Dark-ribboned Wave <i>Leptostales rubromarginaria</i>	Moths	Recently Confirmed	2014			SU	GNR
Honey-streak <i>Digrammia mellistrigata</i>	Moths	Recently Confirmed	1996			SU	G4G5
Imperial Moth <i>Eacles imperialis imperialis</i>	Moths	Recently Confirmed	1996			SU	G5T5
Olympia Marble <i>Euchloe olympia</i>	Butterflies and Skippers	Recently Confirmed	2005	Special Concern		S1	G5

Animal: Animal Assemblages

Raptor Winter Concentration Area <i>Raptor Winter Concentration Area</i>	Animal Assemblages	Historically Confirmed	1987			SNRN	GNR
Waterfowl Winter Concentration Area <i>Waterfowl Winter Concentration Area</i>	Animal Assemblages	Recently Confirmed	1994			S3S4N	GNR

Plant: Flowering Plants

Alpine Willow-herb <i>Epilobium hornemannii ssp. hornemannii</i>	Other Flowering Plants	Historically Confirmed	1987	Endangered		S1	G5T5
American Dragonhead <i>Dracocephalum parviflorum</i>	Other Flowering Plants	Historically Confirmed	1986	Endangered		S1	G5
Autumnal Water-starwort <i>Callitriche hermaphroditica</i>	Other Flowering Plants	Historically Confirmed	1931	Endangered		S1	G5
Back's Sedge <i>Carex backii</i>	Sedges	Recently Confirmed	2012	Threatened		S2S3	G5
Carolina Whitlow Grass <i>Tomostima reptans</i>	Other Flowering Plants	Historically Confirmed	1983	Threatened		S2	G5
Cork Elm <i>Ulmus thomasii</i>	Other Flowering Plants	Recently Confirmed	1995	Threatened		S2S3	G5

New York Nature Explorer

Common Name	Subgroup	Distribution Status	Year Last Documente	Protection Status		Conservation Rank	
				State	Federal	State	Global
Crawe's Sedge <i>Carex crawei</i>	Sedges	Recently Confirmed	2012	Threatened		S2	G5
False Hop Sedge <i>Carex lupuliformis</i>	Sedges	Possible but not Confirmed	1986	Threatened		S2	G4
Golden Corydalis <i>Corydalis aurea ssp. aurea</i>	Other Flowering Plants	Recently Confirmed	1996	Threatened		S2	G5T5
Goldie's Starwort <i>Stellaria longipes ssp. longipes</i>	Other Flowering Plants	Recently Confirmed	1996	Threatened		S2	G5T5
Lindley's Aster <i>Symphyotrichum ciliolatum</i>	Asters, Goldenrods and Daisies	Recently Confirmed	1995	Endangered		S1	G5
Mountain Death Camas <i>Anticlea elegans var. glauca</i>	Other Flowering Plants	Recently Confirmed	2012	Threatened		S2	G5T4T5
Northern Wild Comfrey <i>Andersonglossum boreale</i>	Other Flowering Plants	Historically Confirmed	1949	Endangered		S1S2	G5T4T5
Prairie Dropseed <i>Sporobolus heterolepis</i>	Grasses	Recently Confirmed	2012	Threatened		S2	G5
Prairie Redroot <i>Ceanothus herbaceus</i>	Other Flowering Plants	Recently Confirmed	1995	Endangered		S1	G5
Prairie Smoke <i>Geum triflorum var. triflorum</i>	Other Flowering Plants	Recently Confirmed	1997	Threatened		S2	G5T5
Prairie Wedge Grass <i>Sphenopholis obtusata</i>	Grasses	Recently Confirmed	1994	Endangered		S1	G5
Purple Rock Cress <i>Boechera grahamii</i>	Other Flowering Plants	Recently Confirmed	1995	Threatened		S2	G5
Rough Avens <i>Geum virginianum</i>	Other Flowering Plants	Possible but not Confirmed	1986	Threatened		S2	G5
Rough Pennyroyal <i>Hedeoma hispida</i>	Other Flowering Plants	Historically Confirmed	1986	Threatened		S2S3	G5
Side-oats Grama <i>Bouteloua curtipendula var. curtipendula</i>	Grasses	Recently Confirmed	1995	Endangered		S2	G5T5
Wiry Panic Grass <i>Panicum flexile</i>	Grasses	Recently Confirmed	1996	Rare		S3	G5

New York Nature Explorer

Common Name	Subgroup	Distribution Status	Year Last Documente	Protection Status		Conservation Rank	
				State	Federal	State	Global

Plant: Mosses

Curving Feather Moss <i>Pseudocalliergon turgescens</i>	Other Mosses	Recently Confirmed	1997			S1	G4G5
--	--------------	--------------------	------	--	--	----	------

Natural Community: Uplands

Alvar Pavement Grassland <i>Alvar pavement grassland</i>	Open Uplands	Recently Confirmed	1997			S2	G2
Alvar Woodland <i>Alvar woodland</i>	Barrens and Woodlands	Recently Confirmed	1997			S2	G2?
Wet Alvar Grassland <i>Wet alvar grassland</i>	Open Uplands	Recently Confirmed	2009			S1	G2

Note: Restricted plants and animals may also have also been documented in one or more of the Towns or Cities in which your user-defined area is located, but are not listed in these results. This application does not provide information at the level of Town or City on state-listed animals and on other sensitive animals and plants. A list of the restricted animals and plants documented at the corresponding county level can be obtained via the County link(s) on the original User Defined Search Results page. Any individual plant or animal on this county's restricted list may or may not occur in this particular user-defined area.

This list only includes records of rare species and significant natural communities from the databases of the NY Natural Heritage Program. This list is not a definitive statement about the presence or absence of all plants and animals, including rare or state-listed species, or of all significant natural communities. For most areas, comprehensive field surveys have not been conducted, and this list should not be considered a substitute for on-site surveys.

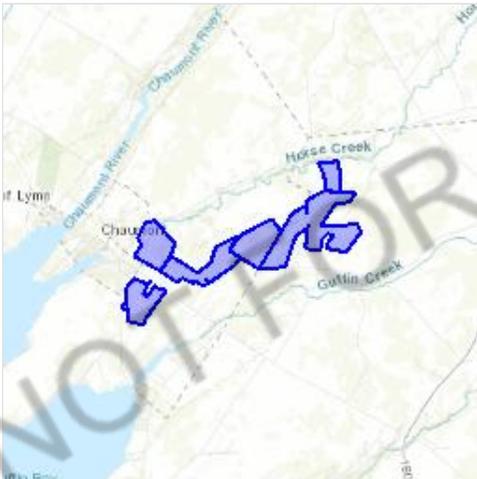
IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Jefferson County, New York



Local office

New York Ecological Services Field Office

☎ (607) 753-9334

📅 (607) 753-9699

3817 Luker Road
Cortland, NY 13045-9385

<http://www.fws.gov/northeast/nyfo/es/section7.htm>

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information.
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME

STATUS

Indiana Bat *Myotis sodalis*

Endangered

There is **final** critical habitat for this species. Your location is outside the critical habitat.

<https://ecos.fws.gov/ecp/species/5949>

Northern Long-eared Bat *Myotis septentrionalis*

Threatened

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/9045>

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the

Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Dec 1 to Aug 31
Black-billed Cuckoo <i>Coccyzus erythrophthalmus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399	Breeds May 15 to Oct 10
Bobolink <i>Dolichonyx oryzivorus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Jul 31
Cerulean Warbler <i>Dendroica cerulea</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/2974	Breeds Apr 20 to Jul 20
Eastern Whip-poor-will <i>Antrostomus vociferus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Aug 20

Golden-winged Warbler <i>Vermivora chrysoptera</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8745	Breeds May 1 to Jul 20
Henslow's Sparrow <i>Ammodramus henslowii</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3941	Breeds May 1 to Aug 31
Lesser Yellowlegs <i>Tringa flavipes</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Prairie Warbler <i>Dendroica discolor</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31
Snowy Owl <i>Bubo scandiacus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Wood Thrush <i>Hylocichla mustelina</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

- To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
- The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

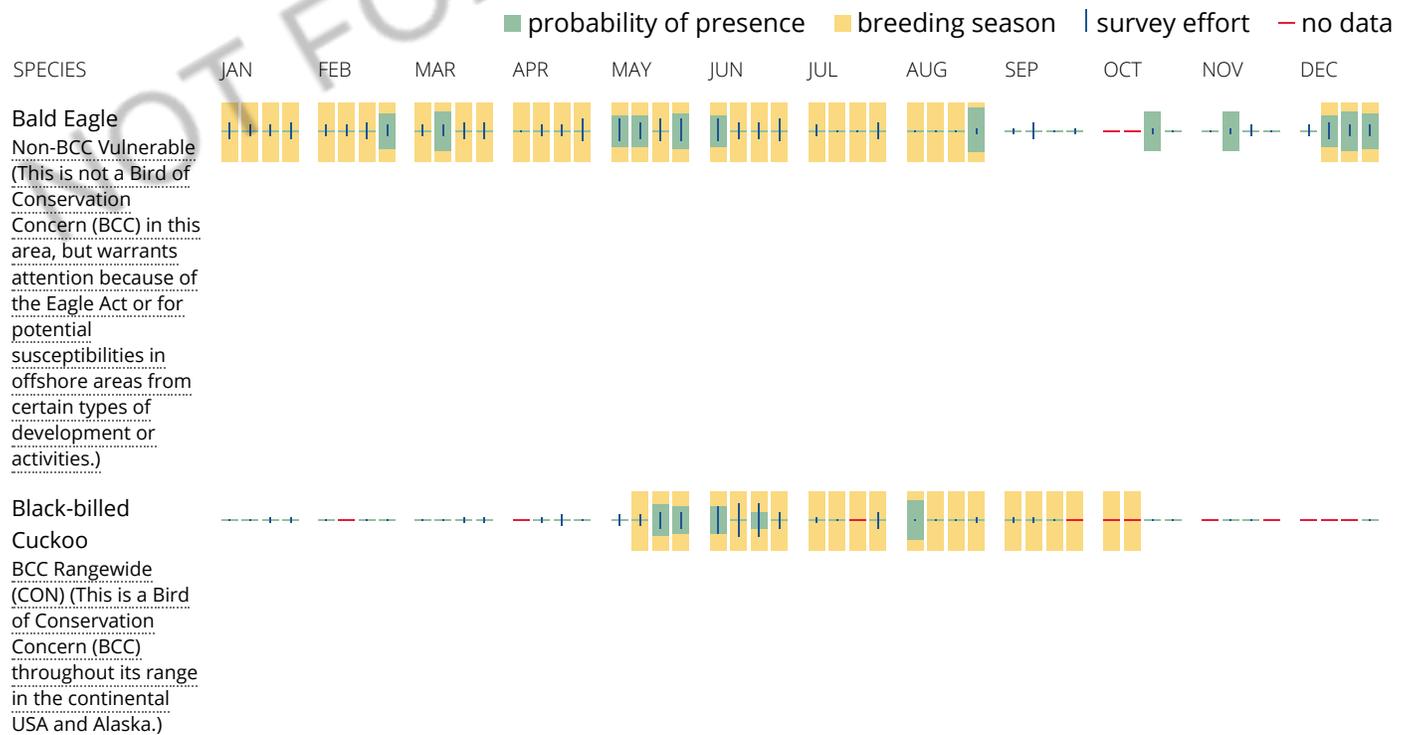
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

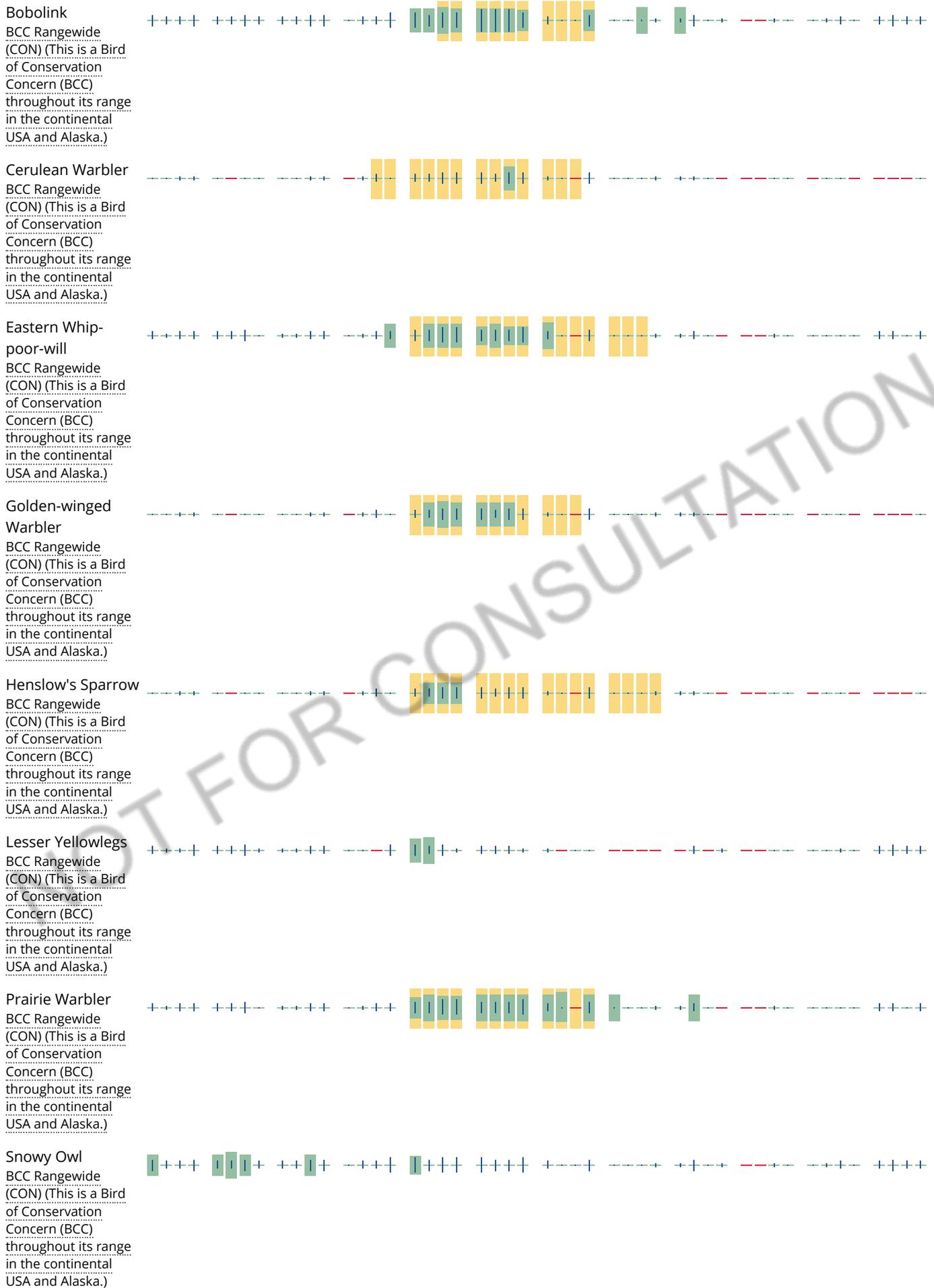
No Data (—)

A week is marked as having no data if there were no survey events for that week.

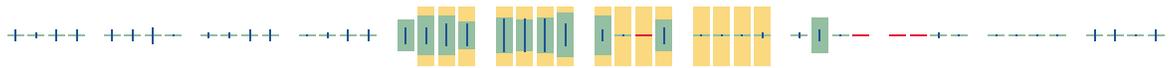
Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





Wood Thrush
BCC Rangewide
(CON) (This is a Bird
of Conservation
Concern (BCC)
throughout its range
in the continental
USA and Alaska.)



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) and/or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

[Palustrine](#)

RIVERINE

[Riverine](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION

November 23, 2020 | 6:30 pm

Information on Novel Coronavirus

Coronavirus is still active in New York. We have to be smart. Wear a mask, maintain six feet distance in public and download the official New York State exposure notification app, COVID Alert NY.

GET THE FACTS >

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION



Environmental Resource Mapper: Topographical [Using this map](#)

Search

Tools

Layers and Legend

All Layers

★ Unique Geological Features

Waterbody Classifications for Rivers/Streams i

Waterbody Classifications for Lakes

State Regulated Freshwater Wetlands (Outside of the Adirondack Park)

State Regulated Wetland Checkzone i

Significant Natural Communities

Natural Communities Near This Location i

Rare Plants or Animals

Other Wetland Layers

Reference Layers

Tell Me More...

Need A Permit?

Contacts

