Revised Wildlife Site Characterization

Agricola Wind Project[1]

Towns of Venice and Scipio
Cayuga County, New York

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[1] This project was previously known as the 'Venice Wind Project.' A name change to 'Agricola Wind Project' was implemented May 2021.

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1.0 INTRODUCTION

Liberty Renewables Inc. (the Applicant) is proposing to construct a 100-megawatt (MW) wind energy generating facility and associated necessary infrastructure (the Facility) within approximately 7,568 acres (the Facility Study Area) in the Towns of Venice and Scipio in Cayuga County, New York (Figure 1). The Facility Study Area encompasses all potential parcels on which Facility components may be sited and consists primarily of agriculture, woody wetlands, and deciduous forest. The Facility Study Area is roughly bounded by State Route 34 to the west, Bruton Road to the south, Center Road to the north, and Sally Road to the east (Figure 2). The Facility will consist of up to approximately 25 utility-scale wind turbines. Other proposed components will include access roads, collection lines, permanent meteorological towers, an operations and maintenance (O&M) facility, temporary construction staging/laydown areas, a collection substation, and a point of interconnection switchyard.

The Office of Renewable Energy Siting (ORES) issues permits for major renewable energy facilities (i.e., projects larger than 25 MW) under Section 94-c of the New York State Executive Law. Chapter XVIII Title 19 of NYCRR Part 900 establishes the procedural and substantive requirements for the permit applications under Section 94-c, including submittal of a Wildlife Site Characterization. The purpose of the Wildlife Site Characterization is to summarize existing public information on bird, bat, and other animal species that may potentially occur in the vicinity of a proposed facility, and to provide additional analysis with respect to those species formally listed by New York State as threatened, endangered, or species of special concern.

Environmental Design & Research, Landscape Architecture, Engineering & Environmental Services, D.P.C. (EDR) was originally retained by the Applicant to prepare a Wildlife Site Characterization Report for the Facility in 2021, in the two years since that report was submitted to ORES, the Facility Study Area has been modified to reflect the progression of the layout and design of the Facility. This Revised Wildlife Site Characterization Report has been developed to update the record in preparation for winter raptor surveys that will be initiated by the Applicant in late 2023. This report is organized to follow the structure of the regulations set forth in §900-1.3(g)(1), with the relevant requirements provided at the start of each section.

2.0 PUBLICLY AVAILABLE DATA SOURCES

This section provides information in response to the following requirement of §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, NYSDEC bat information.

In querying publicly available data sources, the Applicant used the Facility Study Area as the default search area. However, due to variable data collection regimes for each data source, additional data from beyond the Facility Study Area were included in some cases. The Applicant searched all records within 1 mile of the Facility Study Area for the following data sources: eBird, Audubon Christmas Bird Count data, and the United

States Geological Survey (USGS) breeding bird surveys. In addition, the New York State Ornithological Association's data are only available at the county level and the New York State Department of Environmental Conservation's (NYSDEC's) bat information is only available at the town level.

2.1 NEW YORK'S EAF MAPPER

The Environmental Assessment Form (EAF) Mapper is a tool developed by the NYSDEC that takes a user-defined project site and searches multiple Geographic Information System (GIS) data sets. The results generated by the EAF Mapper appear in Part 1 of an electronically fillable form with certain location-based questions automatically filled out and is accompanied by a report that includes answers to specific questions on the EAF and a map showing the project site. The EAF Mapper tool was queried for the Facility, using an approximate boundary of the roads bounding the Facility Study Area (i.e., State Route 34 to the west, Bruton Road to the south, Center Road to the north, and Sally Road to the east). The responses to EAF questions E.2.n, E.2.o, and E.2.p, respectively, indicate that there are no records within the Facility Study Area of significant natural communities, threatened or endangered species, or rare plants or animals listed as species of special concern (Appendix A).

2.2 NEW YORK NATURAL HERITAGE PROGRAM

The New York Natural Heritage Program (NYNHP) maintains data on state-listed rare, threatened, and endangered plant and animal species, as well as significant ecological communities. The NYNHP notes that prior to submitting a request for information for a given project, it is recommended to review the NYSDEC Environmental Resource Mapper (ERM). If the project boundary does not fall within an area displayed in the Rare Plants and Rare Animals layer or in the Significant Natural Communities layer of the ERM, then NYNHP has no records to report in the vicinity of the project and submitting a project screening request is not necessary. According to the ERM, there are no records within the Facility Study Area of significant natural communities, threatened or endangered species, or rare plants or animals listed as species of special concern. See Section 2.4 for a discussion of the ERM.

2.3 USFWS IPaC and ECOs DATABASES

The Environmental Conservation Online System (ECOs) is a gateway web site that provides access to U.S. Fish and Wildlife Service (USFWS) and other federal government databases, including the Information for Planning and Consultation (IPaC) tool, which streamlines the USFWS environmental review process. Users define a proposed project area and provide basic information about the project. IPaC then generates an official species list containing information to assist in evaluating the potential impacts of the project. The official species list is a formal letter from the local USFWS office that includes a list of species and critical habitat that should be considered under Section 7 of the Endangered Species Act, as well as other pertinent information from the local field office. A shapefile of the Facility Study Area was uploaded to IPaC on August 1, 2023. **BEGIN CONFIDENTIAL INFORMATION<** [redacted]

[redacted]>END CONFIDENTIAL INFORMATION

2.4 NEW YORK'S ENVIRONMENTAL RESOURCE MAPPER

The ERM is an interactive mapping application developed by the NYSDEC that can be used to identify some of New York State's natural resources and environmental features that are state or federally protected, or of conservation concern. Specifically, the maps display the general areas where rare animals, rare plants, and significant natural communities have been documented by the NYNHP. The ERM also displays locations of New York State regulated freshwater wetlands and protected streams, rivers, and lakes. These maps are provided as a source of information for landowners, land managers, citizens, local officials, and project sponsors engaged in land use decision making, conservation planning, or environmental assessment of proposed projects or actions (NYSDEC, 2023a). The ERM does not support user-defined search areas or shapefile-based areas of interest. In evaluating the Facility Study Area, the Towns of Venice and Scipio were queried and then zoomed in to best display the portion of the map containing the Facility Study Area. Results are included in Appendix A. The ERM indicates that there are no records within the Facility Study Area of significant natural communities, threatened or endangered species, or rare plants or animals listed as species of special concern.

2.5 NEW YORK NATURE EXPLORER

New York Nature Explorer is an online tool developed by the NYSDEC to help inform land use decisions, natural resource management, biodiversity conservation, and environmental assessment. Users can define a specific search area (or query by county, town, or watershed) and obtain a list of the rare and listed animals, plants, and significant natural communities that have been found there, as documented in databases maintained by NYSDEC. However, because not all species are included in the list (i.e., location information for some sensitive species is excluded due to vulnerability to collection), the results of a New York Nature Explorer query should be considered only an initial indication of the potential presence of rare and/or listed animals and plants in the vicinity of the search area (NYSDEC, 2023b). Direct correspondence with the NYNHP, described above in Section 2.2, affords access to site-specific data for all rare and listed species, including those sensitive species not reported in New York Nature Explorer results. The New York Nature Explorer tool was queried for the Facility, using an approximate boundary of the roads bounding the Facility Study Area. Results are included in Appendix A. The New York Nature Explorer database indicates that there are no public records within the Facility Study Area of significant natural communities, listed threatened or endangered species, rare plants, or animals listed as species of special concern.

2.6 NEW YORK'S BIODIVERSITY AND WIND SITING MAPPING TOOL

The Biodiversity and Wind Siting Online Mapping Tool is intended to help New York meet its renewable energy goals while avoiding and minimizing impacts on sensitive biodiversity resources. This tool, developed by scientists from The Nature Conservancy, the NYNHP, and the Cornell Laboratory of Ornithology in collaboration with the New York State Energy Research and Development Authority, uses GIS technology to map important ecological resources, such as sensitive habitats, large forest blocks, and

migration routes. As of July 2023, and after repeated attempts in multiple browsers, this online tool is not functioning. However, many other sources of information were reviewed to develop an understanding of the types of ecological resources included in the Biodiversity and Wind Siting Online Mapping Tool. See Sections 4.3 and 4.5 for discussion of ecological resources in the vicinity of the Facility Study Area.

2.7 CORNELL LABORATORY OF ORNITHOLOGY's eBird

The eBird database, managed by the Cornell Lab of Ornithology, is an on-line database of bird observations collected by citizen scientists around the world and vetted by regional experts. Data are used to document bird distribution, abundance, habitat use, and trends within a simple, scientific framework to help inform bird research worldwide. There are two eBird hotspots[2], "VansRidge Dairy" and "Sherwood Rd., Scipio", within 1 mile of the Facility Study Area (Figure 3). Additionally, there are two other eBird hotspots, "Owasco Lake inlet area" and "Drifters, Owasco Lake", within 2 miles of the Facility Study Area (Figure 3) (eBird, 2023a). In addition to hotspots, the eBird database also contains data reported from the public under "personal locations," which are not associated with the hotspots listed above. Personal location data were queried for all state-listed bird species between August 2018 and August 2023.

State-listed bird species observed at eBird hotspots and personal locations since August 2018 (i.e., the last 5 years) are listed in Appendix C, and discussed in Section 4.2.

2.8 AUDUBON CHRISTMAS BIRD COUNT

The Christmas Bird Count (CBC), which was created by the National Audubon Society in 1900, is the longest-running citizen science project in the country. The primary objective of the CBC is to monitor the status and distribution of wintering bird populations across the Western Hemisphere. Counts take place on a single day within defined 15-mile (24 kilometer) diameter count circles, and all bird species and individuals observed are recorded by volunteers (National Audubon Society, 2023a). The nearest CBC circle, Cortland, is located 12 miles southeast of the Facility Study Area at its center point. Because of this distance, species observed at the Cortland CBC circle are not representative of the bird community within the Facility Study Area and are not further evaluated herein.

2.9 USGS BREEDING BIRD SURVEY

The USGS Breeding Bird Survey (BBS), overseen by the Patuxent Wildlife Research Center, is a long-term, large-scale, international avian monitoring program that tracks the status and trends of North American bird populations. Each survey route is 24.5 miles long, with 3-minute point counts completed at 0.5-mile intervals. During the point counts, every bird seen or heard within a 0.25-mile radius is recorded. No BBS routes are located within the Facility Study Area (Ziolkowski et al., 2022). The closest BBS route, Cayuga, is located 14 miles northwest of the Facility Study Area. Because of this distance, species observed at the

[2] Hotspots are public birding locations created by eBird users, which allow multiple birders to enter data into the same shared location, creating aggregated results.

Cayuga BBS route are not representative of the bird community within the Facility Study Area and are not further evaluated herein.

2.10 NEW YORK BREEDING BIRD ATLAS III

The New York Breeding Bird Atlas (BBA) is a statewide inventory of all birds breeding in the state. The first atlas inventory was conducted from 1980-1985, the second from 2000-2005, and NYSDEC is currently working with agency and conservation partners to conduct the third atlas inventory from 2020-2024 (BBA III). Field work is conducted by dividing the state into blocks of approximately 9 square miles, within which volunteers record all the bird species observed during the breeding season and document evidence of breeding activity (NYSDEC, 2023c). A key change for the BBA III compared to the previous atlases is the use of eBird for data collection. eBird offers real-time data entry and outputs, so partial data results will be available throughout the entire survey period (eBird, 2023b). These preliminary results were reviewed for the five atlas blocks that encompass the Facility Study Area (i.e., Genoa NE, Moravia NW, Scipio Center SW, Scipio Center SE, and Owasco SW; Figure 3). State-listed bird species recorded within these five survey blocks over the first three years of the BBA III survey (2020-2023) are listed in Appendix C and discussed in Section 4.2.

2.11 NEW YORK STATE ORNITHOLOGICAL ASSOCIATION

The New York State Ornithological Association (NYSOA) is a conservation organization focused on documenting the ornithology of New York State, fostering interest in and appreciation of birds, and protecting birds and their habitats. Members of NYSOA participate in citizen science efforts, contributing data to eBird, the CBC, BBS, and BBA (described above in Sections 2.7, 2.8, 2.9, and 2.10, respectively). In addition, the New York State Avian Records Committee (NYSARC; a committee of the NYSOA) is responsible for maintaining the official list of species of birds that are known to occur (or to have occurred) in New York State and adjacent coastal waters (including the Great Lakes). As part of this effort, NYSARC reviews all data pertaining to records of scarce or rare birds reported in the state (NYSOA, 2023).

The NYSOA website includes a complete, downloadable list of all reports of rare birds submitted to and reviewed by NYSARC since its inception, including species, date, county, status, and publication date. All Cayuga County records in this list, last updated in August 2020, were reviewed. No birds listed by New York State as threatened, endangered, or species of special concern have been reported from Cayuga County within the last five years (NYSOA, 2022).

2.12 LOCAL BIRDING ORGANIZATIONS

The NYSOA website includes links to local breeding clubs and organizations, based on region. The Facility Study Area is located in NYSOA's Region 3, which contains three such groups: the Cayuga Bird Club, the Chemung Valley Audubon Society, and the Eaton Birding Society (NYSOA, 2023).

The link for the Cayuga Bird Club leads to a website where people can read newsletters, view helpful resources, and learn about upcoming webinars and field trips. There are some photos of state-listed species,

but the pictures are not geo-tagged and do not provide location information. The link of the Chemung Valley Audubon Society leads to a website where there is membership information, interactive maps, and helpful resources. There is also a link to the Chemung Valley Audubon Society's Facebook page where there are a few bird photos available. However, none of them provide location information. The link for the Eaton Birding Society leads to a website where there is information about the organization, membership information, and a calendar of events. There are no bird photos or tally lists available.

2.13 BAT CONSERVATION INTERNATIONAL'S DATABASE ON BAT SPECIES RANGES

According to the Bat Conservation International (BCI) database, nine species of bat have ranges that extend into New York State. The BCI database's "approximate range" maps show that seven of these species have ranges that overlap the Facility Study Area, including both migratory tree bats and cave-hibernating bats. **BEGIN CONFIDENTIAL INFORMATION<** [redacted] **>END CONFIDENTIAL INFORMATION** Although the ranges for these species include the Facility Study Area, BCI does not provide occurrence data that could be used to determine the actual presence or absence of bat species at any given location (BCI, 2023).

2.14 NYSDEC BAT INFORMATION

NYSDEC data also indicate that nine bat species have the potential to occur in New York State, six cave bats and three tree bats (Stegemann & Hicks, 2008). **BEGIN CONFIDENTIAL INFORMATION<** [redacted] **>END CONFIDENTIAL INFORMATION** More specific information regarding the potential occurrence of each species is provided below.

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The Wildlife Species List provided in Appendix C identifies all bat species with recorded occurrences within the Facility Study Area.

3.0 SITE-SPECIFIC SURVEYS

This section summarizes the results of field surveys conducted within the Facility Study Area during 2020.

3.1 BREEDING BIRD SURVEYS

EDR conducted breeding bird surveys within the Avian Study Area in 2022 and 2023. The Avian Study Area is defined as all parcels, or portions of parcels, that were under consideration by the Applicant for the location of Facility components with an aboveground footprint (e.g., wind turbines, substations, access roads, and other similar components) during the previous design iteration of the Facility. For further information regarding the completed breeding bird surveys, please refer to the 2022 and 2023 reports. The primary purpose of these surveys was to identify and document avian species that utilize the Avian Study Area during the breeding season. The scope of these surveys was defined in Breeding Bird Survey Work Plans that were submitted for ORES and NYSDEC staff review and comment in April 2022 and April 2023. The on-site surveys were conducted by qualified biologists following recommendations provided by ORES and NYSDEC staff and the methodology established in the NYSDEC *Survey Protocol for State-listed Breeding*

Grassland Bird Species (NYSDEC, 2022). Survey locations were selected to provide representative coverage of a variety of different ecological community and habitat types found in the Facility Study Area, including active row cropland (used for corn, soybean, or vegetable production), fallow row cropland, successional shrubland, wetlands, and forestland. Surveys were conducted each week between May 5 and July 21, 2022, and May 2 and July 21, 2023.

A total of 31,190 individual birds representing 114 different species were recorded at point count locations in 2022 and 2023. The most abundant species observed included the red-winged blackbird (*Agelaius phoeniceus*), savannah sparrow (*Passerculus sandwichensis*), song sparrow (*Melospiza melodia*), and American robin (*Turdus migratorius*). Together, these four species accounted for approximately 42.2% of all observations recorded throughout the 2022 and 2023 survey periods. **BEGIN CONFIDENTIAL INFORMATION<** [redacted] **>END CONFIDENTIAL INFORMATION** The complete 2022 Breeding Bird Survey Report was submitted to ORES and NYSDEC staff on October 13, 2022. The complete 2023 Breeding Bird Survey Report has not yet been submitted to ORES and NYSDEC staff at the time of completion of this Revised Wildlife Site Characterization report. The Wildlife Species List provided in Appendix C identifies all avian species observed during the 2022 and 2023 breeding bird surveys conducted by EDR.

3.2 FALL RAPTOR MIGRATION SURVEYS

EDR conducted fall raptor migration surveys within the Avian Study Area in 2021. The purpose of the fall raptor migration surveys was to identify and document raptors that move through the vicinity including and surrounding the Avian Study Area during the fall migration season (defined by the NYSDEC as August 15 to December 15). The scope of these surveys was defined in a Fall Raptor Migration Survey Work Plan that was submitted for ORES staff review in August 2021. The fall raptor surveys were conducted by qualified biologists following the methodology established in the 2016 NYSDEC *Guidelines for Conducting Bird and Bat Studies at Commercial Wind Energy Projects* (NYSDEC, 2016). The primary method for surveying migrating raptors consisted of daytime surveys conducted from two survey locations. These locations provided open views of the sky and the Facility Study Area in multiple directions. Surveys were conducted twice per week between August 17 and December 14, 2021. Surveys were completed on 36 different days, and in total, included more than 295 survey-hours.

A total of 416 individual birds representing 10 different species were observed at survey locations. Turkey vultures (*Cathartes aura*) and red-tailed hawks (*Buteo jamaicensis*) were the most observed species, with the latter noted most frequently. **BEGIN CONFIDENTIAL INFORMATION<** [redacted] **>END CONFIDENTIAL INFORMATION** The complete Fall Raptor

Migration Survey Report was submitted to ORES and NYSDEC staff on January 25, 2022. The Wildlife Species List provided in Appendix C identifies all avian species observed during the 2021 fall raptor migration survey conducted by EDR.

3.3 SPRING RAPTOR MIGRATION SURVEYS

EDR conducted spring raptor migration surveys within the Avian Study Area in 2021. The purpose of the spring raptor migration surveys was to identify and document raptors that move through the vicinity including and surrounding the Facility Study Area during the spring migration season (defined by the NYSDEC as March 1 to May 31). The scope of these surveys was defined in a Spring Raptor Migration Survey Work Plan that was submitted for ORES and NYSDEC staff review in February 2021. The spring raptor surveys were conducted by qualified biologists following the methodology established in the 2016 *NYSDEC Guidelines for Conducting Bird and Bat Studies at Commercial Wind Energy Projects* (NYSDEC, 2016). The primary method for surveying migrating raptors consisted of daytime surveys conducted from two survey locations. These locations provided open views of the sky and the Facility Study Area in multiple directions. Surveys were conducted once per week between March 3 and May 25, 2021. Surveys were completed on 26 different days, and in total, included more than 250 survey-hours.

A total of 477 individual birds representing 10 different species were observed at survey locations. Turkey vultures and red-tailed hawks were the most observed species, with the former noted most frequently. **BEGIN CONFIDENTIAL INFORMATION**<[redacted]>**END CONFIDENTIAL INFORMATION** A summary of the spring raptor migration survey results was submitted to ORES and NYSDEC staff in July 2021. The Wildlife Species List provided in Appendix C identifies all avian species observed during the 2022 spring raptor migration survey conducted by EDR.

3.4 WINTER RAPTOR SURVEYS

Winter raptor surveys will be conducted by EDR following the methodology established in the NYSDEC *Survey Protocol for State-listed Wintering Grassland Raptor Species* (NYSDEC, 2021) during the 2023-2024 winter season to identify and document raptor species that utilize grassland habitat within the Facility Study Area during the winter season. A Winter Raptor Survey Work Plan will be submitted for ORES and NYSDEC staff review in 2023 prior to the commencement of these surveys.

4.0 THREATENED OR ENDANGERED SPECIES OR SPECIES OF SPECIAL CONCERN

This section provides more information about the state-listed threatened or endangered species or species of special concern identified in the publicly available data sources, as summarized above. Sections 4.1 through 4.6 respond to specific requirements of §900-1.3(g)(1), which are provided for reference at the beginning of each discussion.

4.1 SPECIES DOCUMENTED AT THE PROPOSED FACILITY

This section provides information in response to the following requirement of §900-1.3(g)(1):

With respect to NYS threatened or endangered species or species of special concern, the wildlife site characterization shall include:

(i) Species documented at the proposed facility, access roads, interconnections, connecting lines, from available data sources. A subset of NYS threatened or endangered species identified within the last five (5) years shall be provided.

A full list of wildlife species documented in the vicinity of the Facility Study Area[3] is included as Appendix C. A subset of the full list, comprising those species that are state-listed and have been identified within the last five years, is presented below in Table 1.

Table 1. State-listed Species Observed Within the Last Five Years in the Vicinity of the Facility Study Area.

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Species	NYS Status	USFWS Status	SGCN Status[1]	Source[2]
[redacted]	Endangered	n/a	SCGN	eBird
	Endangered	Endangered	SGCN-HP	USFWS
	Threatened	n/a	SGCN	eBird, BBA, BBS, FRS, SRS
	Threatened	n/a	SGCN	eBird
	Threatened	n/a	SGCN	eBird, BBA, BBS, FRS, SRS
	Threatened	n/a	SGCN	eBird, BBA
	Threatened	n/a	SGCN	eBird, BBA
	Species of Special Concern	n/a	n/a	eBird, BBA, BBS, FRS, SRS
	Species of Special Concern	n/a	n/a	eBird, BBS, FRS, SRS
	Species of Special Concern	n/a	SGCN-HP	BBS

[3] In querying publicly available data sources, the Applicant used the Facility Study Area as the default search area. However, due to variable data collection regimes for each data sources, additional data from beyond the Facility Study Area were included in some cases. The Applicant searched all records within 1 mile of the Facility Study Area for the following data sources: eBird, Audubon Christmas Bird Count data, and USGS breeding bird surveys. In addition, the NYSOA's data are only available at the county level and the NYSDEC's bat information is available at the town level.

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Species	NYS Status	USFWS Status	SGCN Status[1]	Source[2]
[redacted]	Species of Special Concern	n/a	SGCN	eBird, BBS
	Species of Special Concern	n/a	SGCN	eBird
	Species of Special Concern	n/a	SGCN-HP	eBird, BBA, BBS
	Species of Special Concern	n/a	SGCN	eBird, BBA
	Species of Special Concern	n/a	n/a	eBird, BBS, FRS, SRS
	Species of Special Concern	n/a	SGCN	eBird, BBA, BBS

[1] SGCN Status refers to status under the Comprehensive State Wildlife Strategy. SGCN = Species of Greatest Conservation Need, SGCN-HP = High Priority Species of Greatest Conservation.

[2] BBA= New York Breeding Bird Atlas III, Genoa NE, Moravia NW, Scipio Center SW, Scipio Center SE, and Owasco SW atlas blocks; USFWS = US Fish & Wildlife Service official species list; eBird= "VansRidge Dairy", "Sherwood Rd., Scipio", "Owasco Lake inlet area", and "Drifters, Owasco Lake" eBird hotspots and additional personal locations; BBS = 2022 and 2023 EDR on-site Breeding Bird Surveys; FRS = 2021 EDR on-site Fall Raptor Migration Survey; SRS = 2021 EDR on-site Spring Raptor Migration Survey.

>END CONFIDENTIAL INFORMATION

4.2 EVALUATION OF HABITAT SUITABILITY FOR LISTED SPECIES AT THE FACILITY STUDY AREA

This section provides information in response to the following requirement of §900-1.3(g)(1):

With respect to NYS threatened or endangered species or species of special concern, the wildlife site characterization shall include:

(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.

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4.2.1 [redacted]

[redacted]

[redacted]

4.2.2 [redacted]

[redacted]

[redacted]

4.2.3 [redacted]

[redacted]

[redacted]

[redacted]

4.2.4 [redacted]

[redacted]

[redacted]

4.2.5 [redacted]

[redacted]

[redacted]

[redacted]

4.2.6 [redacted]

[redacted]

[redacted]

4.2.7 [redacted]

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4.2.8 [redacted]

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4.2.9 [redacted]

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[redacted]

4.2.10 [redacted]

[redacted]

[redacted]

4.2.11 [redacted]

[redacted]

[redacted]

4.2.12 [redacted]

[redacted]

[redacted]

4.2.13 [redacted]

[redacted]

[redacted]

[redacted]

4.2.14 [redacted]

[redacted]

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4.2.15 [redacted]

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[redacted]

4.2.16 [redacted]

[redacted]

[redacted]

[redacted]

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4.3 LANDSCAPE FEATURES AND RESOURCES WITH FIVE MILES

This section provides information in response to the following requirement of §900-1.3(g)(1):

With respect to NYS threatened or endangered species or species of special concern, the wildlife site characterization shall include:

(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.

There are no national wildlife refuges, prominent ridgelines, high elevation mountaintops, or known bat hibernacula within 5 miles of the Facility Study Area. However, other landscape features and resources of potential concern within 5 miles of the Facility Study Area that could function to funnel or concentrate birds or bats are discussed in greater detail below.

4.3.1 Wildlife Management Areas

The NYSDEC Fish and Wildlife Division administers 128 Wildlife Management Areas (WMAs) across the state. These areas provide important habitat resources for a variety of wildlife and the NYSDEC actively manages portions of these areas to maintain quality habitat for targeted species. These areas also provide recreational and educational opportunities to the public, primarily in the form of hunting, fishing, trapping, wildlife observation, photography, hiking, and other passive recreation (NYSDEC, 2018). One NYSDEC WMA, the Owasco Flats WMA, is present within 5 miles of the Facility Study Area. The Owasco Flats WMA encompasses 67 acres of lands primarily managed for wildlife, wildlife habitat, water quality improvement, and wildlife-dependent recreation. The Owasco Flats WMA is located approximately 2.7 miles southwest of the Facility Study Area at its closest point.

4.3.2 Grassland Focus Areas

The Grassland Focus Area designation was created because grassland birds are declining faster than any other habitat-species suite in the northeastern United States. Draft and final focus areas were delineated by identifying contiguous BBA blocks where important grassland bird species were found to be breeding, with subsequent field surveys conducted to confirm habitat conditions and refine the focus area boundaries (Morgan & Burger, 2008). The entire Facility Study Area, as well as the majority of the area within 5 miles, lies within Grassland Focus Area 5, which encompasses approximately 877,000 acres in the Finger Lakes region (Figure 5).

4.3.3 Core Forest Blocks

New York's forests provide important breeding, migratory stop-over, and wintering habitat for more than a hundred species of birds. One of their most important ecological functions is to provide breeding habitat for bird species that are experiencing population declines due to habitat fragmentation and the loss of quality forest habitat (Treyger, 2019). Research has demonstrated that larger forest tracks typically support more species than smaller forest stands. The amount of forest cover, size of individual forest patches, forest type, and linkages to other patches in a landscape determine their ability to support wildlife species which depend on them, including area-sensitive and edge-intolerant species. This is particularly true for mammals and forest interior birds that require extensive forests (Environment Canada, 2004). Ongoing development

is resulting in the fragmentation of privately held forest habitats that connect publicly managed open spaces. If these trends continue, New York's future forest ecosystems will have a higher proportion of isolated forest patches that will be less connected across the landscape. Large blocks of core forest also play an important role by providing 'source' populations of plants and animals that can repopulate nearby smaller patches of habitat after disturbance events (NYSDEC, 2011).

In partnership with the NYNHP, The Nature Conservancy (TNC) conducted an analysis to identify matrix forest blocks, which were defined as large contiguous areas whose size and natural condition allow for the maintenance of ecological processes, embedded large and small patch communities, and embedded species populations. The goal of the matrix forest selection was to identify viable examples of the dominant forest types that could serve as critical source areas for species requiring interior forest conditions or associated with the dominant forest types. Matrix occurrences are bounded by fragmenting features such as roads, railroads, major utility lines, and major shorelines. Tier 1 occurrences represent the best examples of viable matrix forest, while Tier 2 occurrences are also viable matrix occurrences, but are not needed to meet representation goals for the portfolio (i.e., are considered "alternates"). The closest matrix forest blocks are the Finger Lakes National Forest (Tier 2), located approximately 13.9 miles southwest of the Facility Study Area, and Connecticut Hill (Tier 1), located approximately 17.7 miles south-southwest of the Facility Study Area. The TNC/NYNHP analysis also identified linkage zones, which represent the easiest/most suitable paths for forest species traveling between matrix forest blocks. The Facility Study Area is located approximately 19.7 miles north of the nearest linkage zone which connects the Finger Lakes National Forest and Connecticut Hill forest blocks to the Chenango Highlands matrix forest, located approximately 32.2 miles southeast of the Facility Study Area (The Nature Conservancy, 2012).

In accordance with the Section 94-c regulations, EDR also conducted a desktop analysis to identify core forest blocks (i.e., contiguous areas 150 acres or larger) in the vicinity of the proposed Facility. Based on data from the 2016 USGS NLCD, there are 39 core forest blocks at least partially within 5 miles of the Facility Study Area (Figure 6). These forest blocks range in size from 156 acres to 2,604 acres and collectively total 14,486 acres, or approximately 13.6% of the total land area within 5 miles of the Facility Study Area boundaries. This analysis included all areas classified by the NLCD as one of the four forest types (i.e., deciduous forest, mixed forest, evergreen forest, and woody wetlands).

4.3.4 Audubon Important Bird Areas

Audubon Important Bird Areas (IBAs) are part of an international effort to conserve bird habitats. Designated IBAs must meet one or more of the following three criteria: 1) be a place where birds congregate in large numbers at one time, 2) be a place that provides habitat for species that are at-risk, or 3) be a place that supports groups of birds representing certain habitats such as forests, wetlands, grasslands, and shrublands. Within New York State, 132 IBAs have been recognized as significant places for birds. The Greater Summerhill Area Audubon IBA is located 0.25 mile east of the Facility Study Area at its closest point (Figure 3). The Greater Summerhill Area encompasses the Summer Hill State Forest and stretches west and north to the southern end of Owasco Lake. The area contains a variety of habitat types including forest, shrubland, grassland, and wetland areas.

4.3.5 Forested Riparian Areas

Riparian areas are located immediately adjacent to streams and rivers and are distinguished from uplands by their high soil moisture levels, frequent flooding, and unique plant and animal species assemblages. Riparian areas in the eastern United States are among the most productive biological systems in the world and provide critical habitat for many types of wildlife, including both common and rare species. Wildlife may be permanent residents of a riparian area or occasional visitors that use the area for food, water, temporary shelter, or travel corridors. The importance of a particular riparian area depends on the surrounding land uses and the vegetation present. For example, in areas of intensive agriculture, forested riparian areas can provide important natural habitat "islands" or refugia where species that depend on forests for their survival can live and reproduce (Klapproth & Johnson, 2009).

Mapped NYSDEC streams can be used as a preliminary screening tool to help identify forested riparian areas, as most NYSDEC streams have riparian corridors that are forested, at least in part. See Section 4.5.1 for a discussion of mapped NYSDEC streams.

4.3.6 Caves and Mines

Large numbers of cave-dwelling bats now use abandoned subterranean mines as roosting sites and hibernacula. Like caves, abandoned mines offer bats the advantage of a stable microclimate, reduced risk from predation and disturbance, and protection from adverse weather. Hard-rock mining provides structures that cave-dwelling bats find attractive for roosting (Belwood & Waugh, 1991). There are no caves or mines within the Facility Study Area. **BEGIN CONFIDENTIAL INFORMATION<** [redacted] **>END CONFIDENTIAL INFORMATION**

4.3.7 Other Significant Habitat Areas

Owasco Lake is located approximately 1.1 miles east of the Facility Study Area. Owasco Lake is a moderately sized member of New York's Finger Lakes, totaling approximately 6,665 acres with a length of approximately 11 miles and maximum width of approximately 1.3 miles. The lake is classified as a "Significant Waterfowl Winter Concentration Area" by the ERM. In addition to waterfowl, the lake contains many fish species and supports a variety of piscivorous birds.

Owasco Flats is located at the south end of Owasco Lake, encompassing Owasco Inlet and its floodplain. This landscape is comprised of approximately 1,500 acres of swamp, emergent marsh, fallow fields, and cropland which support a wide diversity of birds, reptiles/amphibians, and other wildlife species. This region is located approximately 1 mile east of the Facility Study Area at its closest point.

4.4 GEOGRAPHICAL, TOPOGRAPHICAL, OR OTHER PHYSICAL FEATURES WITHIN FIVE MILES

This section provides information in response to the following requirement of §900-1.3(g)(1):

With respect to NYS threatened or endangered species or species of special concern, the wildlife site characterization shall include:

(iv) Geographical, topographical, and other physical features within five (5) miles of the facility, interconnections, connecting lines, and access roads.

Every spring and fall, millions of birds and bats migrate through the Great Lakes region as they travel between their wintering and breeding grounds. The Facility Study Area is located within the Atlantic Flyway, a broad front north-south route for migratory birds that encompasses much of eastern North America (National Audubon Society, 2023c). Migrating raptors and other soaring birds tend to concentrate along linear ridges, which create updrafts or "thermals" that raptors use to fly long distances with minimal exertion (Berthold, 2001). As indicated in Section 4.3, there are no prominent ridgelines within 5 miles of the Facility Study Area.

On a smaller scale, birds and bats often follow more local migration corridors. The migration corridor system is not well understood, but areas near Great Lakes shorelines are known to host concentrated movements of birds and bats. The Great Lakes act as barriers to migrating birds and bats because they are devoid of safe places to land and require substantial energy to cross. Conversely, the shorelines of these lakes concentrate migrants by providing the last refuge near a geographic obstacle and are likely used for navigation (USFWS & USGS, 2012; Heist et al., 2018a). A radar study conducted by the USFWS and partners quantified this effect by using two avian radar units to compare migration patterns at shoreline and inland sites along the eastern shoreline of Lake Michigan. Shoreline activity was 27% greater than inland activity over all time periods, and 132% greater during the hour surrounding dawn (Heist et al., 2018b). The NYSDEC has also identified large river corridors (e.g., the Hudson, the St. Lawrence) as features that can concentrate movements of migrating birds and bats (NYSDEC, 2016). There are no Great Lakes shorelines or large river corridors within 5 miles of the Facility Study Area.

4.5 MAPPED WETLANDS, STREAMS, STATE FORESTS, STATE PARKS, LAND USE

This section provides information in response to the following requirement of §900-1.3(g)(1):

With respect to NYS threatened or endangered species or species of special concern, the wildlife site characterization shall include:

(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.

4.5.1 Mapped Wetlands, Streams, and Waterbodies

National Wetlands Inventory (NWI) mapping indicates the presence of 152 wetland communities within the Facility Study Area, totaling 697 acres (Figure 8). Freshwater forested/shrub wetlands are the dominant community types mapped on-site, totaling approximately 621 acres. Other NWI-mapped communities within the Facility Study Area are classified as riverine (45.7 acres), freshwater emergent wetlands (16 acres), and freshwater pond (13.7 acres).

New York State Freshwater Wetlands maps indicate that portions of seven wetlands regulated under Article 24 of the Environmental Conservation Law occur within the Facility Study Area, totaling 219.5 acres (Figure 8). Based on available NYSDEC stream classification mapping, the Facility Study Area includes 17.3 miles of

Class C streams. There are no state protected streams (i.e., Class C(T) or better) mapped within the Facility Study Area (Figure 8).

The Facility Study Area contains several small farm ponds, one natural pond, and various wetland areas. As discussed below in Section 4.5.3, the features that are classified as open water by the NLCD collectively comprise 2.4 acres within the Facility Study Area.

4.5.2 State Forests and Parks

There are no state parks or state forests within the Facility Study Area. The closest state park is Fillmore Glen State Park, located approximately 4.3 miles southeast of the Facility Study Area. The closest state forest is Frozen Ocean State Forest, located approximately 4.0 miles northeast of the Facility Study Area. There are no other state parks or state forests within 5 miles of the Facility Study Area.

4.5.3 Land Use/Land Cover

The Facility Study Area is primarily composed of agricultural land that is actively managed to produce cultivated crops (i.e., row crops), and to a lesser extent, used for pastureland and/or hay production (Figure 4). Woody wetlands and deciduous forests also comprise a significant portion of the land cover within the Facility Study Area. Table 2 summarizes the NLCD land cover types found within the Facility Study Area.

Table 2. Land Cover Classes Found within the Facility Study Area

Land Cover Class	Acres	Percent Cover
Cultivated Crops	4,943.2	66.2
Woody Wetlands	744.9	10.0
Deciduous Forest	726.7	9.7
Hay/Pasture	681.7	9.1
Developed, Open Space	191.9	2.6
Developed, Low Intensity	133.9	1.8
Evergreen Forest	52.7	0.7
Developed, Medium Intensity	32.9	0.4
Mixed Forest	16.7	0.2
Shrub/Scrub	16.5	0.2
Emergent Herbaceous Wetlands	9.3	0.1
Developed, High Intensity	7.4	0.1
Open Water	4.1	0.1
Barren Land	3.2	<0.1
Herbaceous	3	<0.1
Total	7,568.2	100

Source: USGS, 2019.

4.6 CLIMATE CHANGE MODELING FOR LISTED SPECIES

This section provides information in response to the following requirement of §900-1.3(g)(1):

With respect to NYS threatened or endangered species or species of special concern, the wildlife site characterization shall include:

(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 Study Area, as available.

Climate change is accelerating many threats that challenge rare species and the natural ecosystems they depend on. Consequently, successful conservation strategies will require an understanding of climate change and the ability to predict how it will affect both species and habitats. Birds have been the focus of many studies on the ecological effects of climate change and have also been the subject of a wide variety of correlative models to predict potential future species distribution. Data show that birds are responding to recent climate change in a variety of ways, including shifting their breeding and non-breeding ranges to higher latitudes (La Sorte and Jetz, 2010). For example, a National Audubon Society study investigated the center of abundance for North American bird species using CBC data and found a strong northward shift over the past 40 years. Of the 305 species evaluated, 208 (68%) had shifted north. Most species of wetland birds, forest birds, shrub birds, and generalists have shifted their range northward, while most grassland birds have not (Niven et al., 2009).

This section reviews climate change modeling to evaluate the sensitivity of listed wildlife species documented in the vicinity of the Facility Study Area within the last five years (Table 1).

4.6.1 National Audubon Society Climate Change Modeling

The National Audubon Society assessed the climate change vulnerability of North American bird species under multiple warming scenarios, ranging from 1.5 degrees Celsius (°C; 2.7 degrees Fahrenheit [°F]) warming, which is considered imminent, to a 3°C (5.4°F) warming, which is expected to occur by 2080-2100. The study found that 389 of 604 species (64%) were moderately or highly vulnerable to climate change. However, climate change vulnerability was not evenly distributed across habitats. The most vulnerable groups include Arctic bird species, boreal forest birds, western forest birds, and waterbirds (Wilsey et al., 2019). The National Audubon Society *Survival by Degrees* climate change modeling platform was queried for Cayuga County, where the Facility Study Area is located. Table 3 summarizes the climate change vulnerability of the state-listed bird species observed in the vicinity of the Facility Study Area within the last five years.

Table 3. Climate Change Vulnerability of State-listed Bird Species Observed Within the Last Five Years

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Species	Summer	Winter
[redacted]	stable	stable
	low vulnerability	stable

[redacted]	stable	stable
	low vulnerability	n/a
	low vulnerability	stable
	n/a	n/a
	stable	stable
	stable	low vulnerability
	moderate vulnerability	stable
	moderate vulnerability	low vulnerability
	low vulnerability	stable
	stable	stable
	low vulnerability	low vulnerability
	stable	stable
	stable	n/a
	moderate vulnerability	stable

Source: National Audubon Society, 2023d.

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4.6.2 New York Natural Heritage Program Vulnerability to Climate Change Assessment

The NYNHP conducted a vulnerability assessment for 119 of the 366 wildlife species designated as SGCN in New York State using NatureServe's Climate Change Vulnerability Index (CCVI). Species were included in the assessment that represent the range of taxonomic groups designated as SGCN, might be susceptible to climate change, are indicators of vulnerability of other species in similar habitats, and have sufficient data available to allow conducting the assessment. The CCVI determines vulnerability to climate change based on both exposure and sensitivity. None of the State-listed species documented in the vicinity of the Facility Study Area within the last five years were evaluated in the NYNHP vulnerability assessment (Schlesinger et al., 2011).

5.0 CONCLUSIONS

In accordance with the requirements of the Section 94-c permitting process, publicly available data sources were queried to determine wildlife species that have the potential to be present within the Facility Study Area. Table 4 provides a summary of state-listed species with documented occurrences in the vicinity of the Facility Study Area in the last 5 years.

Table 4. State-listed Species Summary

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Species	NYS Status[1]	Habitat Present within the Facility Study Area (Y/N)	Documented Within the Facility Study Area (Y/N)	Multiple Supporting Data Sources[2] (Y/N)
[redacted]	E	N	N	N
	E	Y	N	N
	T	Y	Y	Y
	T	N	N	N
	T	Possible	Y	Y
	T	N	N	Y
	T	N	N	Y
	SSC	Y	Y	Y
	SSC	Y	Y	Y
	SSC	Y	Y	N
	SSC	N	Y	Y
	SSC	Y	N	N
	SSC	Y	Y	Y
	SSC	N	N	Y
	SSC	Y	Y	Y
	SSC	Y	Y	Y

[1] E = endangered; T = threatened; SSC = species of special concern.

[2] Multiple publicly available data sources identify this species as potentially occurring within the Facility Study Area or its vicinity. See Table 1.

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In accordance with §900-1.3(g)(2) through (4), project-specific consultations with NYSDEC and ORES will take place to determine the need for more on-site surveys. If additional surveys are necessary, the Applicant will prepare associated work plans in consultation with ORES and NYSDEC and conduct the required surveys in accordance with §900-1.3(g)(4) and (5). Should NYSDEC and ORES ultimately determine that there is

confirmed or presumed occupied habitat at the Facility Site, the Section 94-c application will identify any unavoidable impacts to state-listed threatened or endangered species or species of special concern and provide an evaluation of avoidance and minimization measures to be incorporated into Facility design, as per the requirements of §900-2.13(d).

6.0 REFERENCES

Bat Conservation International (BCI). 2023. *Bat Profiles: New York*. Available at: https://www.batcon.org/about-bats/bat-profiles/?fwp_location=new-york (Accessed August 2023).

Belwood, J.J. and R.J. Waugh. 1991. *Bats and Mines: Abandoned Does Not Always Mean Empty*. Bats 9(3): 13-16.

Berthold, P. 2001. *Bird Migration: A General Survey*. Oxford University Press, New York. 253 pp.

Center for Biological Diversity. 2023. *Saving the Bicknell's Thrush*. Available at: https://www.biologicaldiversity.org/species/birds/Bicknells_thrush (Accessed August 2023).

Cornell Lab of Ornithology. 2023. *All About Birds*. Ithaca, New York. Available at: https://www.allaboutbirds.org (Accessed August 2023).

Cowardin, L.M., V. Carter, F.C. Goblet, and E.T. LaRoe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. FWS/OBS-79/31. U.S. Fish and Wildlife Service. Washington, D.C.

eBird. 2023a. *Hotspots*. Cornell Lab of Ornithology, Ithaca, New York. Available at: https://ebird.org/ hotspots (Accessed August 2023).

eBird. 2023b. *New York State Breeding Bird Atlas III*. Cornell Lab of Ornithology, Ithaca, New York. Available at: https://ebird.org/atlasny (Accessed August 2023).

Environment Canada. 2004. *How Much Habitat is Enough? Second Edition*. Canadian Wildlife Service. Available at: http://envirothonnb.ca/wp-content/uploads/How-much-Habitat-is-Enough.pdf (Accessed August 2023).

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.

Freeman, B.G., M.N. Scholer, V. Ruiz-Gutierrez, and J.W. Fitzpatrick. 2018. *Climate Change Causes Upslope Shifts and Mountaintop Extirpations in a Tropical Bird Community*. Proceedings of the National Academy of Sciences 115(47): 11982–11987.

Griffiss Institute. 2023. *Stockbridge Research Site*. Rome, New York. Available at: https://www.griffissinstitute.org/who-we-work-with/afrl/stockbridge-research-site (Accessed August 2023).

Heist, K.W., N.A. Rathbun, M.T. Wells, E. Olson, and J.C. Gosse. 2018a. *Great Lakes Avian Radar Technical Report Lake Ontario Shoreline: Jefferson County, Niagara County, and Wayne County, New York, Fall 2016*. U.S. Department of Interior, Fish and Wildlife Service, Biological Technical Publication FWS/BTP-BTP-R3017-2018.

Heist, K.W., T.S. Bowden, J. Ferguson, N.A. Rathbun, E.C. Olson, D.C. Nolfi, R. Horton, J.C. Gosse, D.H. Johnson, and M.T. Wells. 2018b. *Radar Quantifies Migrant Concentration and Dawn Reorientation at a Great Lakes Shoreline*. Movement Ecology 6(15): 1-14.

Klapproth, J.C. and J.E. Johnson. 2009. *Understanding the Science Behind Riparian Forest Buffers: Effects on Plant and Animal Communities*. Virginia Cooperative Extension, Publication 420-152.

Land Trust Alliance. 2023. *Manage Mountainous Habitats for Climate Change.* Available at: https://climatechange.lta.org/manage-mountainous-habitats-for-climate-change/ (Accessed August 2023).

La Sorte, F.A., and W. Jetz. 2010. *Avian Distributions Under Climate Change: Towards Improved Projections*. The Journal of Experimental Biology 213: 862-869.

Morgan, M. and M. Burger. 2008. *A Plan for Conserving Grassland Birds in New York*. Final Report to the New York State Department of Environmental Conservation Under Contract #C005137. Audubon New York. Ithaca, New York. June 10, 2008.

National Audubon Society. 2023a. *The Christmas Bird Count Historical Results: Cortland Count Circle, 2018-2023*. Available at: http://www.christmasbirdcount.org (Accessed August 2023).

National Audubon Society. 2023b. *Important Bird Areas: New York*. Available at: https://ny.audubon.org/conservation/important-bird-areas (Accessed August 2023).

National Audubon Society. 2023c. *Flyways of the America: Atlantic Flyway*. Available at: https://www.audubon.org/atlantic-flyway (Accessed August 2023).

National Audubon Society. 2023d. *Survival by Degrees: 389 Bird Species on the Brink*. Available at: https://www.audubon.org/climate/survivalbydegrees (Accessed August 2023).

Nature Conservancy, The. 2012. *Matrix Forest Blocks and Linkages*. Eastern Conservation Science Program, in partnership with the New York Natural Heritage Program. Vector digital data, published November 27, 2012.

BEGIN CONFIDENTIAL INFORMATION< [redacted]

[redacted]

[redacted]

[redacted]

[redacted]>END CONFIDENTIAL INFORMATION

New York State Department of Environmental Conservation (NYSDEC). 1995. *New York State Freshwater Wetland Delineation Manual*. July 1995.

NYSDEC. 2011. *Strategic Plan for State Forest Management*. Division of Lands and Forests, Bureau of State Land Management. Available at: https://www.dec.ny.gov/docs/lands_forests_pdf/spsfmfinal.pdf (Accessed August 2023).

BEGIN CONFIDENTIAL INFORMATION<[redacted]

[redacted]

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[redacted]

[redacted]

[redacted]

[redacted]>END CONFIDENTIAL INFORMATION

NYSDEC. 2016. *Guidelines for Conducting Bird and Bat Studies at Commercial Wind Energy Projects*. Division of Fish and Wildlife. Albany, New York. June 2016.

NYSDEC. 2017b. *Natural Areas and Wildlife in Your Community: A Habitat Summary Prepared for the Town of Hunter*. Hudson River Estuary Program in cooperation with Cornell University's Department of Natural Resources. July 2017.

NYSDEC. 2018. *Public Use of Wildlife Management Areas*. Bureau of Wildlife. Available at: https://www.dec.ny.gov/docs/wildlife_pdf/publicuseofwmas.pdf (Accessed August 2023).

NYSDEC. 2021. *Survey Protocol for State-listed Wintering Grassland Raptor Species*. Albany, NY.

NYSDEC. 2022. *Survey Protocol for State-listed Breeding Grassland Bird Species*. Albany, NY.

NYSDEC. 2023a. *Environmental Resource Mapper*. Division of Fish and Wildlife. Available at: https://www.dec.ny.gov/animals/38801.html (Accessed August 2023).

NYSDEC. 2023b. *New York Nature Explorer: A Gateway to Biodiversity Information*. New York Natural Heritage Program, Albany, NY. Available at: https://www.dec.ny.gov/animals/57844.html (Accessed August 2023).

NYSDEC. 2023c. *New York State Breeding Bird Atlas*. Bureau of Wildlife. Available at: https://www.dec.ny.gov/animals/7312.html (Accessed August 2023).

BEGIN CONFIDENTIAL INFORMATION< [redacted]

[redacted]

[redacted] **>END CONFIDENTIAL INFORMATION**

NYSDEC. 2023h. *Downloadable Mining Database*. Division of Mineral Resources. Available at: https://www.dec.ny.gov/lands/5374.html (Accessed August 2023).

NYSDEC. 2023l. *Welcome to the Adirondacks*. Available at: https://www.dec.ny.gov/outdoor/119734.html (Accessed August 2023).

NYSDEC. 2023m. *Spring Recreation Tips*. Lands and Forests Forest Preserve Management. Available at: https://www.dec.ny.gov/outdoor/113437.html (Accessed August 2023).

NYSDEC. 2023n. *New York State Mined Land Reclamation Database*. Division of Mineral Resources. Available at: https://www.dec.ny.gov/cfmx/extapps/MinedLand (Accessed August 2023).

New York State Ornithological Association (NYSOA). 2022. *NYSARC Reports and Decisions through 2020*. Available at: https://nybirds.org/NYSARC/HistData/NYSARCthru2020updated2022_0716.pdf (Last updated July 16, 2022; Accessed August 2023).

NYSOA. 2023. *New York State Ornithological Association: for the Birders and Birds of the Empire State*. Available at: https://nybirds.org (Accessed August 2023).

Niven, D.K., G.S. Butcher, and G.T. Bancroft. 2009. *Christmas Bird Counts and Climate Change: Northward Shifts in Early Winter Abundance*. American Birds 63: 10-15.

Schlesinger, M.D., J.D. Corser, K.A. Perkins, and E.L. White. 2011. *Vulnerability of At-risk Species to Climate Change in New York*. New York Natural Heritage Program, Albany, New York.

Stegemann, E. and A. Hicks. 2008. *Bats of New York*. New York State Conservationist 62(4): 19-22.

Treyger, S.M. 2019. *Managing Forests for Birds: A Forester's Guide*. Audubon New York.

U.S. Army Corps of Engineers (USACE). 2012. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region*. Version 2.0. ERDC/EL TR-12-1. Vicksburg, MS.

U.S. Fish and Wildlife Service (USFWS) and United States Geological Survey (USGS). 2012. *Bird and Bat Migration along Great Lakes Coastlines: Progress Report*. March 2012.

United States Geological Survey (USGS). 2019. *NLCD 2016 Land Cover Conterminous United States*. Sioux Falls, South Dakota.

Wilsey, C., B. Bateman, L. Taylor, J.X. Wu, G. LeBaron, R. Shepherd, C. Koseff, S. Friedman, and R. Stone. 2019. *Survival by Degrees: 389 Bird Species on the Brink*. National Audubon Society: New York.

Wisconsin Department of Natural Resources (DNR). 2023. *Bat Hibernaculum*. Natural Heritage Conservation Program. Available at: https://dnr.wi.gov/topic/endangeredresources/OtherElements.asp?mode=detail&SpecCode=OBATCOLONY (Last updated March 2023; Accessed August 2023).

Ziolkowski Jr., D.J., Lutmerding, M., Aponte, V.I., and Hudson, M-A.R. 2022. *North American Breeding Bird Survey Dataset: Cayuga Survey Route 2018-2023*. United States Geological Survey, Patuxent Wildlife Research Center. Available at: https://www.pwrc.usgs.gov/bbs (Accessed August 2023).

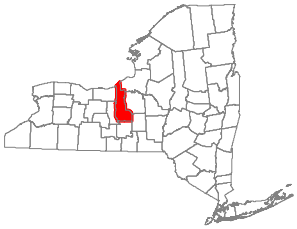
Figures

Figure 1. Regional Facility Location

Agricola Wind Project

Towns of Venice and Scipio,
Cayuga County, New York

Revised Wildlife Site Characterization Report



0 2.5 5 10
Miles

Prepared August 23, 2023
Basemap: Esri "World Street Map" map service

EDR

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Appendix A

New York State Database Reports

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Appendix B

Agency Correspondence

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New York Ecological Services Field Office
3817 Luker Road
Cortland, NY 13045-9385
Phone: (607) 753-9334 Fax: (607) 753-9699
Email Address: fw5es_nyfo@fws.gov

In Reply Refer To:
Project Code: 2023-0111545
Project Name: Agricola Wind

August 01, 2023

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. **Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.**

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New York Ecological Services Field Office
3817 Luker Road
Cortland, NY 13045-9385
(607) 753-9334

This appendix has been redacted from this publicly available document because it contains protected/confidential information regarding the proposed facility location and/or species listed as endangered, threatened, or special concern in New York.

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IPAC USER CONTACT INFORMATION

Agency: EDRDPC
Name: Lewis Lolya
Address: 41 State Street
Address Line 2: Suite 806
City: Albany
State: NY
Zip: 12207
Email llolya@edrdpc.com
Phone: 5184519150

Appendix C

Wildlife Species List

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