Wildlife Site Characterization

Hoffman Falls Wind Project

Towns of Eaton, Fenner, Nelson, and Smithfield
Madison County, New York

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February 2023

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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 infrastructure (the Facility) within approximately 7,026 acres (the Facility Study Area) in the Towns of Eaton, Fenner, Nelson, and Smithfield in Madison County, New York (Figure 1). The Facility Study Area encompasses all potential parcels on which Facility components may be sited and consists primarily of deciduous forests and pasture/hay cover types. The Facility Study Area is roughly bounded by Cody Road to the north, Fearon Road to the east, US-20 to the south, and Nelson Road to the west (Figure 2). The Facility will consist of up to 20 wind turbines, access roads, collection lines, a temporary construction staging/laydown area, a collection substation, and a point of interconnection (POI) 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 retained by the Applicant to prepare a Wildlife Site Characterization Report for the Facility. 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 (NYSOA'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 Study Area, using an approximate boundary of the roads bounding the Facility Study Area (i.e., by Cody Road to the north, Fearon Road to the east, US-20 to the south, and Nelson Road to the west). 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 (see 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. A site-specific request for documented occurrences in the vicinity of the Facility Study Area was submitted to NYNHP on November 4, 2022, and a response received on December 28, 2022 (see Appendix B). The NYNHP response letter states that "there are no records of rare or state-listed animals or plants, or significant natural communities at the (Facility Study Area) or in its immediate vicinity." As such, because the species identified in the NYNHP response letter were not documented within the Facility Study Area, they are not discussed further in this report.

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 Facility Study 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 November 4, 2022. **BEGIN CONFIDENTIAL INFORMATION<** [redacted]

[redacted]>**END CONFIDENTIAL INFORMATION**

2.4 NEW YORK'S ENVIRONMENTAL RESOURCE MAPPER

The Environmental Resource Mapper (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, Madison County was queried and then zoomed in to best display the portion of the map containing the Facility Study Area. Results are included in Appendix A. There are no records in the ERM of significant natural communities or threatened or endangered animal species within the Facility Study Area. **BEGIN CONFIDENTIAL INFORMATION**<[redacted]>**END CONFIDENTIAL INFORMATION**

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. There are no public records in the

New York Nature Explorer database of significant natural communities or listed threatened or endangered animal species within the Facility Study Area.

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 January 10, 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.

The nearest eBird hotspot, Fenner Wind Farm, is located approximately 1.4 miles northwest of the Facility Study Area (eBird, 2023a). Because of this distance, species observed at this hotspot are not representative of the bird community within the Facility Study Area and are not further evaluated. 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 2018 and 2022. State-listed bird species observed at the eBird personal locations since 2018 (i.e., the last 5 years) can be seen in Table 1, discussed in Section 4.2, and listed in the Wildlife Species List (Appendix C).

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). Data were queried for the closest count circle, NYNW, which overlaps the southwestern portion of the Facility Study Area (see Figure 3).

State-listed bird species observed within the NYNW count circle since 2018 are listed in Table 1 and discussed in Section 4.2. Additionally, the Wildlife Species List provided in Appendix C identifies all bird species observed within the NYNW count circle from 2018 to 2022.

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 (Pardieck et al., 2023). Data were queried for the closest survey route, Oriskany Fls, located approximately 0.37 mile south of the Facility Study Area.

No state-listed bird species have been observed along the Oriskany Fls route since 2017. The Wildlife Species List provided in Appendix C identifies all bird species observed along the Oriskany Fls BBS route during the 2017 to 2021 surveys Observations recorded in 2022 were not included in this analysis, as these have not yet been added to the database.

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 seven atlas blocks that encompass the Facility Study Area (i.e., Cazenovia CE, Cazenovia NE, Morrisville CE, Morrisville CW, Morrisville NW, Morrisville E, and Morrisville W; see Figure 3).

State-listed bird species recorded within survey blocks Cazenovia CE, Cazenovia NE, Morrisville CE, Morrisville CW, Morrisville NW, Morrisville E, and Morrisville W over the last five years (2018-2022) are listed in Table 1 and discussed in Section 4.2. The Wildlife Species List provided in Appendix C also identifies all bird species observed within the seven survey blocks that overlap the Facility Study Area from 2018 to 2022.

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 Madison County records in this list, last updated in August 2020, were reviewed. No birds state listed as threatened, endangered, or species of special concern have been reported from Madison County within the last five years (NYSOA, 2020).

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 5, which contains two such groups: the Kirkland Bird Club and the Onondaga Audubon Society (NYSOA, 2023).

The link for the Kirkland Bird Club leads to a Facebook page where members share photos and announcements for programs, field trips, and special events. However, it appears that the Facebook page has since been deleted and there does not appear to be a website elsewhere for the Kirkland Bird Club.

Onondaga Audubon Society (OAS) is the National Audubon Chapter for central New York and the eastern Lake Ontario basin (i.e., Cayuga, Cortland, Herkimer, Jefferson, Lewis, Madison, Oneida, Onondaga, and Oswego Counties). The website includes information on meetings, field trips, and other programs hosted by the 2,200-member chapter, as well as information about the two sanctuaries on Lake Ontario that OAS owns and operates. Derby Hill Bird Observatory and Richard A. Noyes Sanctuary are both located more than 40 miles from the Facility Study Area. The OAS website also has a Rare Bird Alerts page that share information about sightings of uncommon birds throughout the region. Observations are organized by date, then by county, with general location information provided to help birders find new life species. EDR reviewed all observations within Madison County over the last five years. The OAS data contained no observations of state-listed birds within 1 mile of the Facility Study Area in the past five years (OAS, 2023).

2.13 BAT CONSERVATION INTERNATIONAL'S DATABASE ON BAT SPECIES RANGES

According to the Bat Conservation International (BCI) database, eight species of bat have ranges that extend into New York State. The BCI database's "approximate range" maps show that all eight 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]

[redacted]>**END CONFIDENTIAL INFORMATION** More specific information regarding the potential occurrence of each species is provided below.

BEGIN CONFIDENTIAL INFORMATION< [redacted]

[redacted]>**END CONFIDENTIAL INFORMATION**

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 at the Facility Study Area between May and July 2021.

3.1 BREEDING BIRD SURVEY

EDR conducted two breeding bird surveys in 2021. One survey was conducted within an approximately 8,300-acre area, which encompassed the western portions of the Facility Study Area. The second survey was conducted within an approximate 1,500-acre area, which encompassed the eastern portions of the Facility Study Area. These survey areas combined represent the Breeding Bird Study Area. The primary purpose of these surveys was to identify and document avian species that utilize the Facility Study Area during the breeding season. The scope of this survey was defined in Breeding Bird Survey Work Plans that were submitted for NYSDEC staff review and comment in June 2021. The 2021 breeding bird surveys were designed based on the 2016 NYSDEC Guidelines for Conducting Bird and Bat Studies at Commercial Wind Energy Projects, with some modifications in consideration of comments provided by ORES and NYSDEC staff, and the 2021 ORES Draft Field Survey Protocol for state-listed Breeding Grassland Bird Species. Survey locations were selected to provide representative coverage of a variety of different ecological community and habitat types found in the Breeding Bird Study Area, including deciduous forestland, pastureland, hayfields, and cultivated cropland. Surveys were conducted once per week between May 20 and July 22, 2021. Surveys were completed on 19 different days, and in total, included 469 breeding bird point counts and more than 97 survey-hours.

A total of 3,850 individual birds, representative of 92 different species, were recorded within 100 meters of point count locations. The most abundant species observed include the song sparrow (*Melospiza melodia*), Savannah sparrow (*Passerculus sandwichensis*), and red-winged blackbird (*Agelaius phoeniceus*), which in total accounted for approximately 40% of all observations throughout the survey period. **BEGIN CONFIDENTIAL INFORMATION**<[redacted]>**END CONFIDENTIAL INFORMATION** The complete breeding bird survey reports were submitted to the NYSDEC and ORES on September 20, 2021, and September 27, 2021. The Wildlife Species List provided in Appendix C identifies all avian species observed during the 2021 breeding bird surveys conducted by EDR.

3.2 WINTER RAPTOR SURVEY

Winter raptor surveys were conducted by EDR within the eastern portions of the Facility Study Area east of Swamp Road during the 2021-2022 winter season. The scope of these surveys was defined in a Winter Raptor Survey Work Plan that was submitted for NYSDEC staff review in October 2021. **BEGIN CONFIDENTIAL INFORMATION**<[redacted]>**END CONFIDENTIAL INFORMATION** Therefore, the winter raptor study specifically targeted these two grassland raptor species.

The winter raptor surveys were conducted by qualified biologists following recommendations provided by NYSDEC staff and the methodology established in the NYSDEC Survey Protocol for State-Listed Wintering

Grassland Raptor Species (NYSDEC, 2015b). In total, 75 evening stationary surveys were conducted at four survey locations between November 23, 2021, and March 30, 2022, and daytime driving surveys along one route were completed on 17 different days from December 2021 to March 2022, totaling 118 five-minute point count surveys. The total effort for the winter raptor study included more than 7,340 survey minutes (more than 122 survey hours).

Throughout the winter season, a total of 47 raptors were observed, **BEGIN CONFIDENTIAL INFORMATION<** [redacted][1] **>END CONFIDENTIAL INFORMATION** The remaining raptors documented at the Facility Study Area include red-tailed hawk (*Buteo jamaicensis*), turkey vulture (*Cathartes aura*), great horned owl (*Bubo virginianus*), unidentified buteo species, and unknown raptors. The complete winter raptor survey report was submitted to the NYSDEC and ORES on May 13, 2022. The Wildlife Species List provided in Appendix C identifies all avian species observed during the 2021 winter raptor surveys conducted by EDR.

Winter raptor surveys for the remaining portions of the Facility Study Area (i.e., all areas west of Swamp Road) were initiated by EDR in November 2022. The scope of these surveys was defined in a Winter Raptor Survey Work Plan that was submitted for NYSDEC staff review in October 2022. The complete Winter Raptor Survey Report will be submitted to the NYSDEC and ORES after completion, anticipated for spring 2023.

3.3 SPRING RAPTOR SURVEY

EDR conducted two spring raptor migration surveys during the spring of 2020-2021. One survey was conducted within an approximately 8,300-acre area, which encompassed the western portions of the Facility Study Area. The second survey was conducted within an approximate 1,500-acre area, which encompassed the eastern portions of the Facility Study Area. These survey areas combined represent the Spring Raptor Study Area. **BEGIN CONFIDENTIAL INFORMATION<** [redacted] **>END CONFIDENTIAL INFORMATION** Therefore, the spring raptor study specifically targeted this raptor species.

The spring raptors surveys were conducted by qualified biologists and followed the methodology established in the 2016 NYSDEC Guidelines for Conducting Bird and Bat Studies at Commercial Wind Energy Projects (NYSDEC, 2016). These surveys consisted of a daytime survey conducted from two separate survey locations. EDR conducted a GIS analysis to select survey locations with optimal, representative views of the area including and surrounding the Spring Raptor Study Area. The suitability of the survey location was also field-verified and micro-sited during the first field survey. In total, 26 surveys were conducted from March 2021 to May 2021, resulting in 245 observer-hours (more than 14,700 observer-minutes).

[1] [redacted]

Throughout the spring season, a total of 605 raptors were observed, **BEGIN CONFIDENTIAL INFORMATION<** [redacted] **>END CONFIDENTIAL INFORMATION** See Appendix C for a full list raptor species observed during the 2021 spring raptor surveys. The complete spring raptor survey reports were submitted to the NYSDEC and ORES in July 2021.

3.4 FALL RAPTOR SURVEY

BEGIN CONFIDENTIAL INFORMATION< [redacted] **>END CONFIDENTIAL INFORMATION**

The fall raptor surveys were conducted by qualified biologists and followed 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. The suitability of both locations was field verified by EDR biologists during a field reconnaissance site visit in July 2022. These locations provided open views of the sky and the Facility Study Area in multiple directions, with emphasis on northern views to improve detection of southbound raptors.

In total, 36 surveys were conducted between August 16 and December 14, 2022, resulting in more than 297 observer-hours (17,851 observer-minutes). Overall, a total of 2,223 migrating raptors, and 394 local raptors were recorded throughout the fall season (2,617 total individuals). Thirteen different raptor species were observed during the fall raptor migration surveys. **BEGIN CONFIDENTIAL INFORMATION<** [redacted] **>END CONFIDENTIAL INFORMATION**

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[2] 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
BEGIN CONFIDENTIAL INFORMATION<

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

[2] 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.

Species	NYS Status	USFWS Status	SGCN Status[1]	Source[2]

[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] EDR = Observed during on-site Breeding Bird Surveys, or Winter/Spring/Fall Raptor Surveys; NYNHP = New York Natural Heritage Program correspondence; CBC = Audubon Christmas Bird Count, NYNW Circle; USFWS = US Fish & Wildlife Service official species list; eBird = reported by eBird users at "personal locations" from 2017-2022; BBA = New York Breeding Bird Atlas III (Cazenovia CE, Cazenovia NE, Morrisville CE, Morrisville CW, Morrisville NW, Morrisville E, and Morrisville W survey blocks).

>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.

BEGIN CONFIDENTIAL INFORMATION<

4.2.1 [redacted]

[redacted]

4.2.2 [redacted]

[redacted]

4.2.3 [redacted]

[redacted]

4.2.4 [redacted]

[redacted]

4.2.5 [redacted]

[redacted]

[redacted]

[redacted]

4.2.6 [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, Audubon Important Bird Areas, high elevation mountaintops, known bat hibernacula, or other documented significant habitat areas 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). The Tioughnioga WMA is located approximately 4.5 miles southwest of the Facility Study Area at its closest point and encompasses

a total of approximately 3,800 acres[3]. The WMA is managed primarily for species that prefer early successional habitat, such as golden-winged warbler (*Vermivora chrysoptera*), ruffed grouse (*Bonasa umbellus*), American woodcock (*Scolopax minor*), and wild turkey (*Meleagris gallopavo*).

4.3.2 Grassland Focus Areas

The entire Facility Site, as well as the majority of the area within 5 miles, lies within Grassland Focus Area 4, which encompasses over 1 million acres in the Central Leatherstocking and Mohawk River Valley regions (see Figure 5). In New York, Grassland Focus Areas were created because grassland birds are declining faster than any other habitat-species suite in the northeastern United States. The draft focus areas were initially delineated by including contiguous BBA blocks where grassland bird species were found to be breeding, with subsequent field surveys conducted to confirm habitat conditions and refine the focus area boundaries. The final Grassland Focus Areas include approximately 63% of the BBA survey blocks in which 12 grassland bird species were reported, which equates to 22% of the total number of BBA blocks and land area in New York State (Morgan & Burger, 2008).

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

[3] Of this total, approximately 263 acres are within 5 miles of the Facility Study Area.

are the Rome Sand Plains matrix, located approximately 16.4 miles north-northeast of the Facility Study Area, and the Oneida Lake matrix, located approximately 17.9 miles north-northwest 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. Most of the Facility Study Area lies within the linkage zone that connects the Rome Sand Plains and Oneida Lake matrix forest blocks to the Chenango Highlands matrix forest, located approximately 20.3 miles south 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 113 core forest blocks at least partially within 5 miles of the Facility Study Area (see Figure 6). These forest blocks collectively total 43,244 acres, or approximately 36% 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 Prominent Ridgelines

Prominent ridgelines create physical barriers that can serve to concentrate or funnel wildlife movement. Along with being used as travel corridors by terrestrial mammals, major ridgelines can define avian migration corridors, influencing their movement, and creating currents and thermal updrafts which are used by soaring raptors.

The Facility Site is located atop a plateau, and for the most part, the area within 5 miles lacks prominent ridgelines (see Figure 7). One exception is West Stockbridge Hill, the top of which is located approximately 5 miles northeast of the Facility Site. The ridge runs in a northwest-southeast orientation and rises over 600 feet from the elevation in the valleys on either side. The valley to the west of West Stockbridge Hill, closer to the proposed Facility, is drained by Cowaselon Creek, while the valley to the east is drained by Oneida Creek. Land cover on West Stockbridge Hill is similar to the surrounding area (i.e., a mosaic of agricultural and forestland with scattered rural residences) except for 300 acres at the north end occupied by the Stockbridge Experimentation and Test Facility, an Air Force Research Laboratory. This facility includes an unmanned aircraft system experimentation range, two small runways, a wide variety of fixed wing and vertical take-off and landing platforms, a network of access roads, buildings to support experiments, a heavy-duty turntable with a 200-foot-high arch measurement probe, a 120-foot walkup tower for line of site and optical link, and many acres of mowed lawns (Griffiss Institute, 2023). No data were found regarding wildlife use of West Stockbridge Hill as a migratory or travel corridor.

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 within the Facility Study Area.

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**

4.4 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, 2023b). 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 4.3.4, 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.

4.4.1 Other Physical Features

The proposed Facility is located less than 1 mile south of the existing Fenner Wind Farm (see Figure 10). The Fenner Wind Farm has been operational since 2001 and consists of 20 wind turbines with a total height of 328 feet (FREE Center, 2023).

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 218 wetland communities within the Facility Study Area, totaling 335.3 acres (see Figure 10). Freshwater forested/shrub wetlands are the dominant community types mapped on-site, totaling approximately 202.6 acres. Other NWI-mapped communities within the Facility Study Area are classified as freshwater emergent wetlands (55.4 acres), riverine wetlands (42.3 acres), and open water ponds (35 acres).

New York State Freshwater Wetlands maps indicate that portions of four wetlands regulated under Article 24 of the Environmental Conservation Law occur within the Facility Study Area, totaling 66.6 acres (see Figure 10). Based on available NYSDEC stream classification mapping, the Facility Study Area includes Class C and C(T) streams. State protected streams (i.e., Class C(T) or better) mapped within the Facility Study Area include unnamed tributaries to Oneida Creek, unnamed tributaries to the Chenango River, unnamed tributaries to Chittenango Creek, and Callahan Brook (see Figure 10).

Aside from several small farm ponds and two open water wetlands, there are no significant areas of open water within the Facility Study Area. As discussed below in Section 4.5.3, these features that are classified as open water by the NLCD collectively comprise 55.4 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 parks are Chittenango Falls State Park, and Helen McNitt State Park, located approximately 3.6 and 4.5 miles west of the Facility Study Area, respectfully. The closest state forest is Stoney Pond State Forest, located approximately 0.83 mile south 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 a mix of forested and agricultural land. Forests within the Facility Study Area are primarily deciduous, though evergreen and mixed forests are also present. Agricultural land within the Facility Study Area includes pastureland, hay production, and cultivated crops. According to USGS NLCD, deciduous forest represents approximately 34% of the Facility Study Area, while pasture/hay represents approximately 30% and cultivated crops represent approximately 19% of the Facility Study Area (see Figure 4). Each of the reaming cover classes represent less than 5% of the Facility Study Area, and include woody wetlands, mixed or evergreen forest, low, medium, or high intensity developed land, emergent herbaceous wetlands, open/barren land, scrub/shrub, grassland/herbaceous, and open water (USGS, 2019). 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
Deciduous Forest	2,412.7	34.3
Pasture/Hay	2,078.5	29.6
Cultivated Crops	1,303.1	18.5
Developed/Open Space	258.4	3.7
Woody Wetlands	249.1	3.5
Evergreen Forest	240.5	3.4
Mixed Forest	238.9	3.4
Shrub/Scrub	98.6	1.4
Grassland/Herbaceous	37.9	0.5
Developed/Low Intensity	36.1	0.5
Emergent Herbaceous Wetland	30.5	0.4
Open Water	19	0.3
Developed, Medium Intensity	15.8	0.2
Developed, High Intensity	6.7	<0.1
Barren Land	1.1	<0.1
Total	7,026.9	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. A majority of 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 (see 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 Madison 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
BEGIN CONFIDENTIAL INFORMATION<

Species	Summer	Winter
[redacted]	n/a[1]	n/a [1]
	n/a[1]	stable
	stable	stable
	stable	n/a[1]
	low vulnerability	stable

Species	Summer	Winter
[redacted]	low vulnerability	stable
	stable	stable
	stable	low vulnerability
	high vulnerability	low vulnerability
	moderate vulnerability	stable
	stable	stable
	low vulnerability	low vulnerability
	moderate vulnerability	low vulnerability
	stable	stable

Source: National Audubon Society, 2023c.
[1]Climate change vulnerability was not assessed as part of this model.
>END CONFIDENTIAL INFORMATION

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 Species of Greatest Conservation Need (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. Of the 11 state-listed species documented in the vicinity of the Facility Study Area within the last five years (see Table 1), only one was evaluated in the NYNHP vulnerability assessment. **BEGIN CONFIDENTIAL INFORMATION<** [redacted] **>END CONFIDENTIAL INFORMATION**

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	Y	N
	E	N	N	N
	T	Y	Y	Y
	T	N	Y	Y
	T	Y	Y	Y
	SSC	Y	Y	Y
	SSC	Y	N	N
[redacted]	SSC	Y	Y	Y
	SSC	Y	Y	N
	SSC	Y	Y	Y
	SSC	N	N	N
	SSC	N	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.

>END CONFIDENTIAL INFORMATION

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 on-site surveys. If such 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).

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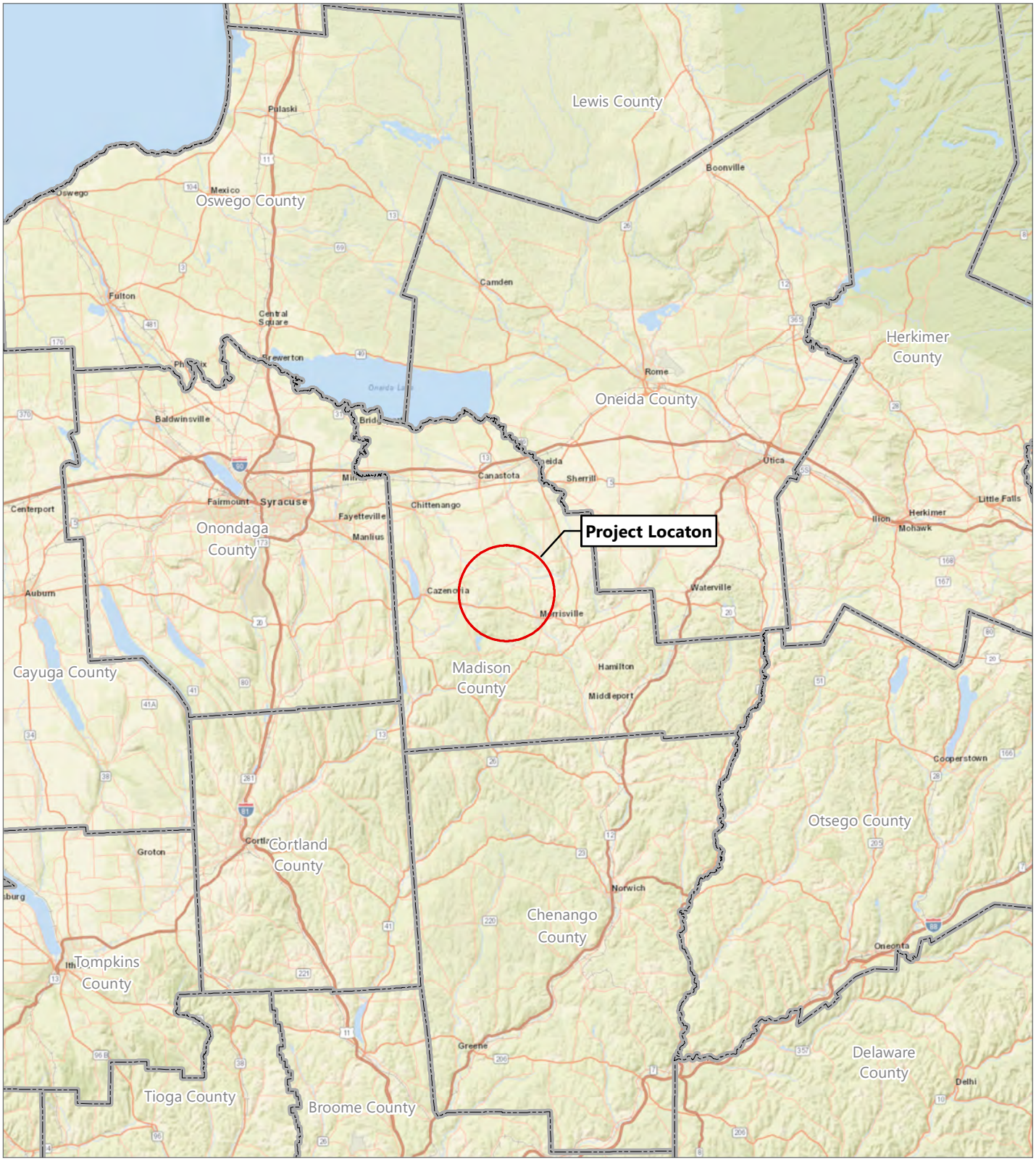
Figures

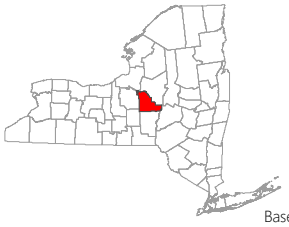
Figure 1. Regional Project Location



Hoffman Falls Wind Project

Towns of Eaton, Fenner, Nelson, and Smithfield
Madison County, New York

Wildlife Site Characterization

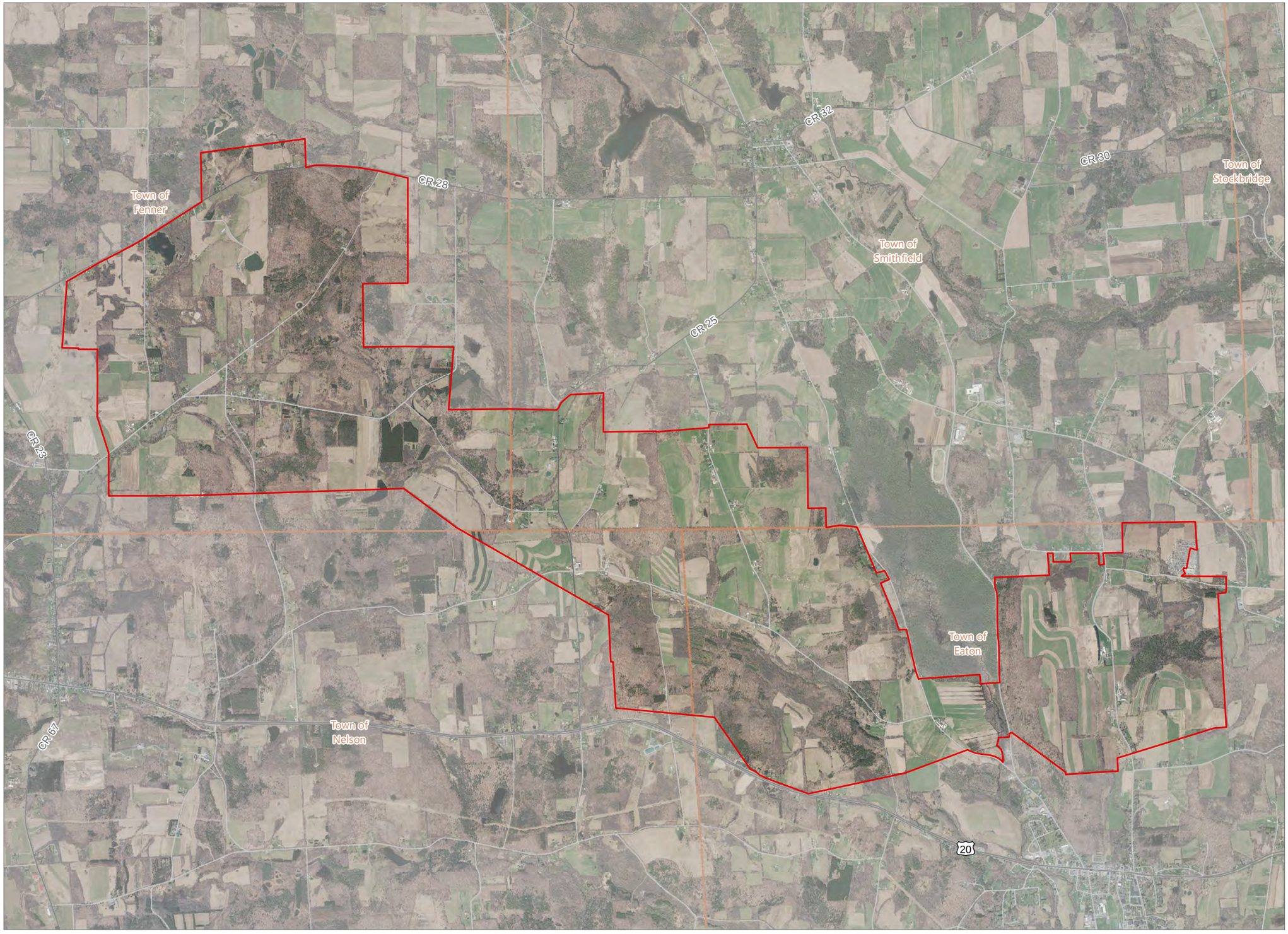


0 5 10
Miles

Prepared February 15, 2023
Basemap: Esri "World Street Map" map service.

EDR

Figure 2. Facility Study Area



Hoffman Falls Wind Project

Towns of Eaton, Fenner, Nelson, and Smithfield, Madison County, New York

Wildlife Site Characterization

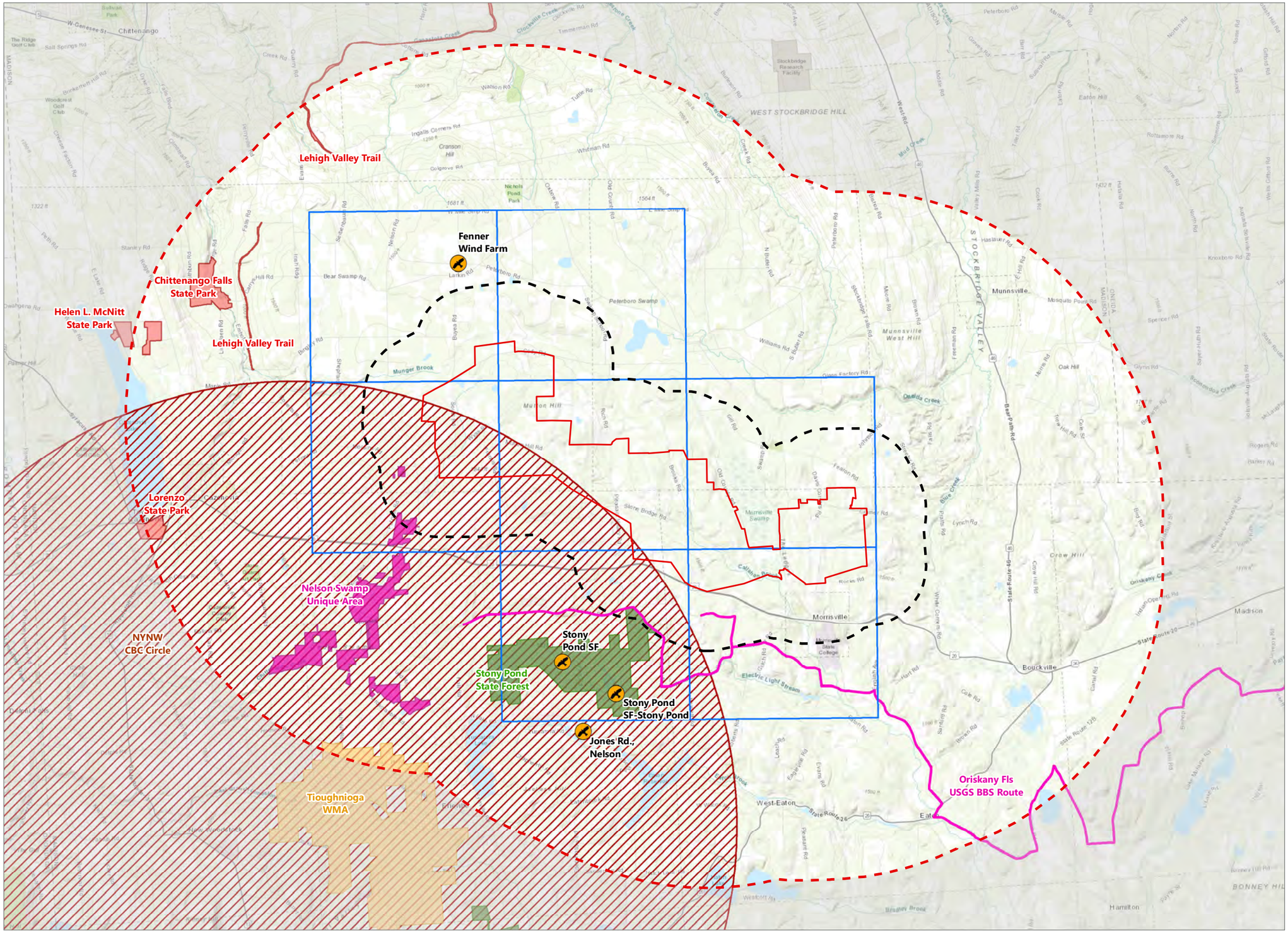
Facility Study Area

0 0.25 0.5 1
Miles

Prepared February 15, 2023
Basemap: NYSDOP "2017" orthoimagery map service.

EDR

Figure 3. Ecologically Sensitive Resources and Publicly Available Data Sources



Hoffman Falls Wind Project

Towns of Eaton, Fenner, Nelson, and Smithfield, Madison County, New York

Wildlife Site Characterization

- eBird Hotspot
- USGS BBS Route
- BBA III Block
- CBC Count Circle
- State Park
- State Forest
- Unique Area
- Wildlife Management Area
- Facility Study Area
- 1-Mile Study Area
- 5-Mile Study Area

0 0.5 1 2

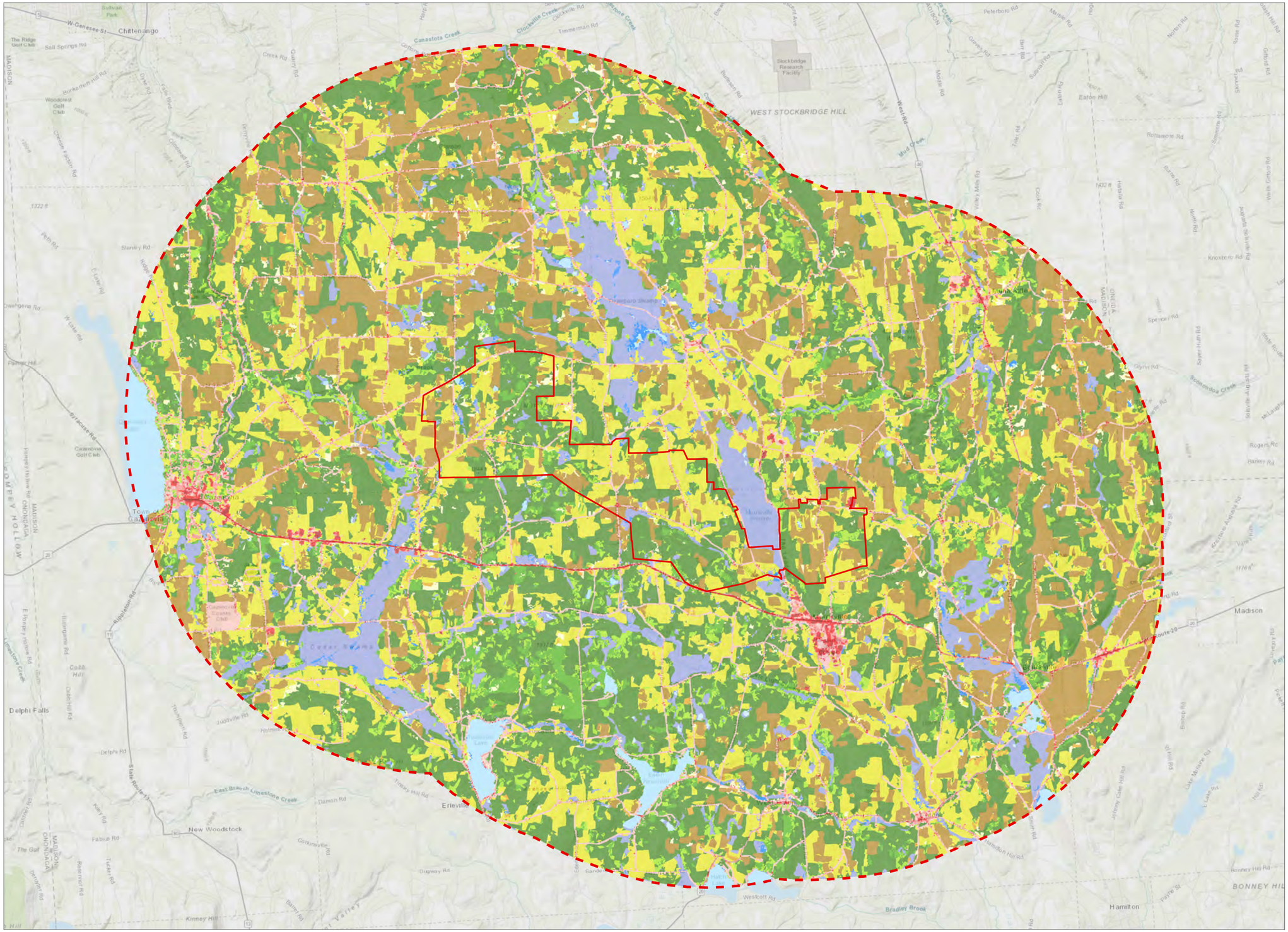
Miles

Prepared February 15, 2023

Basemap: Esri ArcGIS Online "World Topographic Map" map service.

EDR

Figure 4. Land Cover



Hoffman Falls Wind Project

Towns of Eaton, Fenner, Nelson, and Smithfield, Madison County, New York

Wildlife Site Characterization

2019 NLCD Land Cover

- 11 - Open Water
- 21 - Developed, Open Space
- 22 - Developed, Low Intensity
- 23 - Developed, Medium Intensity
- 24 - Devloped, High Intensity
- 31 - Barren Land
- 41 - Deciduous Forest
- 42 - Evergreen Forest
- 43 - Mixed Forest
- 52 - Shrub/Scrub
- 71 - Grassland/Herbaceous
- 81 - Pasture/Hay
- 82 - Cultivated Crops
- 90 - Woody Wetlands
- 95 - Emergent Wetlands
- Facility Study Area
- 5-Mile Study Area

0 0.5 1 2

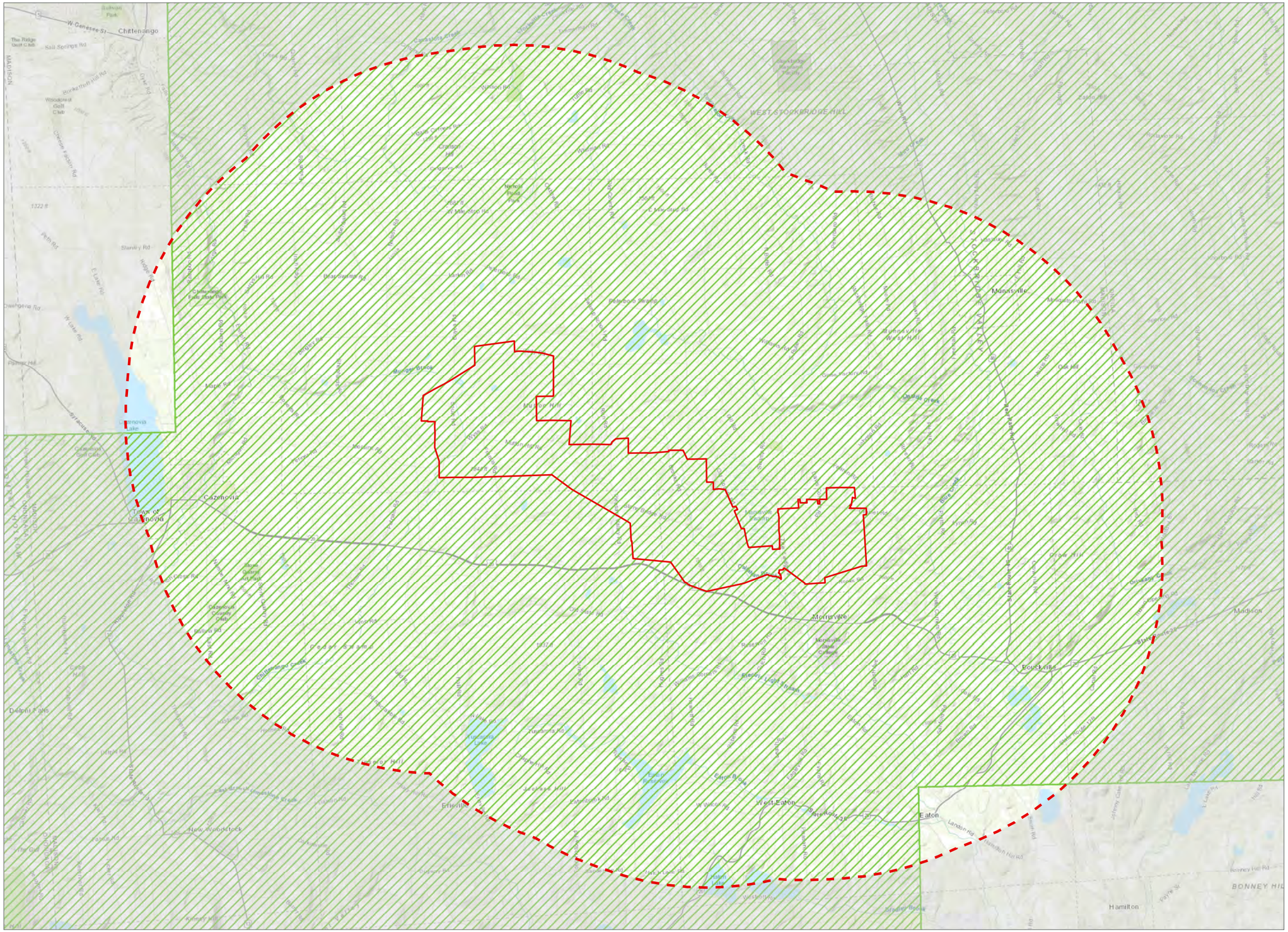
Miles

Prepared February 15, 2023

Basemap: Esri ArcGIS Online "World Topographic Map" map service.

EDR

Figure 5. Grassland Focus Area



Hoffman Falls Wind Project

Towns of Eaton, Fenner, Nelson, and Smithfield, Madison County, New York

Wildlife Site Characterization

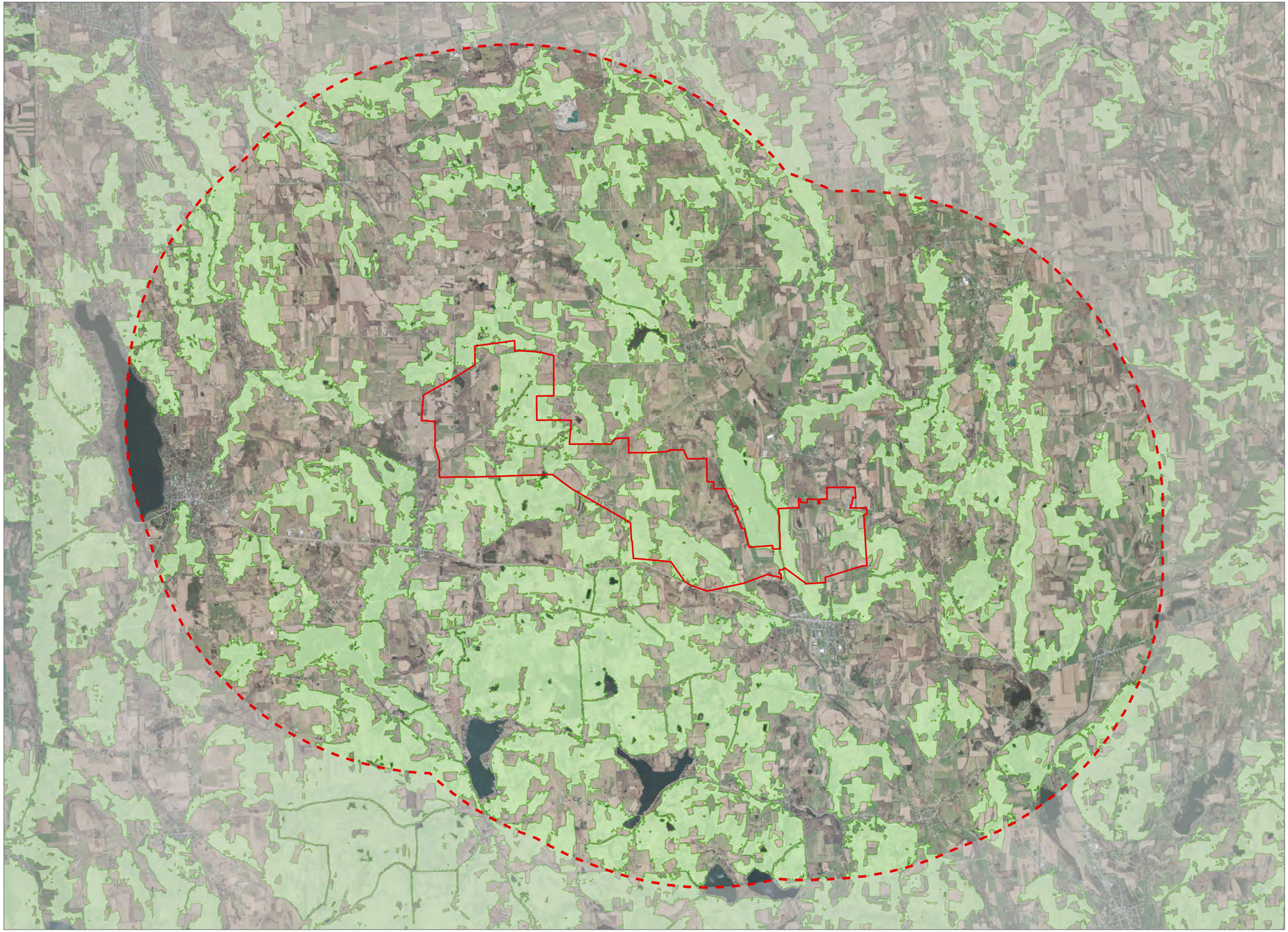
NYSDEC Grassland Focus Area
Facility Study Area
5-Mile Study Area

0 0.5 1 2
Miles

Prepared February 15, 2023
Basemap: Esri ArcGIS Online "World Topographic Map" map service.

EDR

Figure 6. Core Forest Blocks



Hoffman Falls Wind Project

Towns of Eaton, Fenner, Nelson, and Smithfield, Madison County, New York

Wildlife Site Characterization

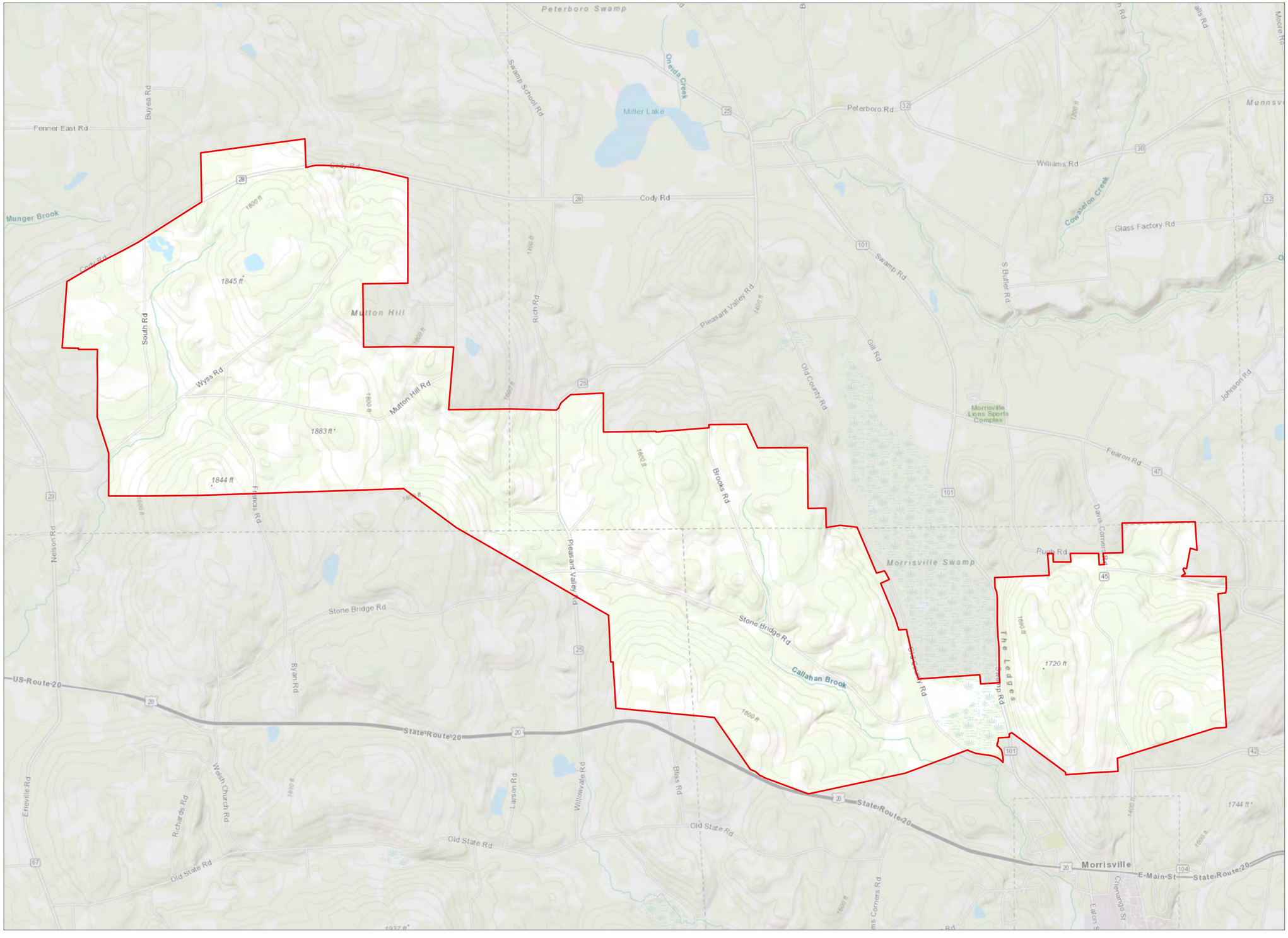
Core Forest Block
Facility Study Area
5-Mile Study Area

0 0.5 1 2
Miles

Prepared February 15, 2023
Basemap: NYSDOP "2017" orthoimagery map service.

EDR

Figure 7. Topography



Hoffman Falls Wind Project

Towns of Eaton, Fenner, Nelson, and Smithfield, Madison County, New York

Wildlife Site Characterization

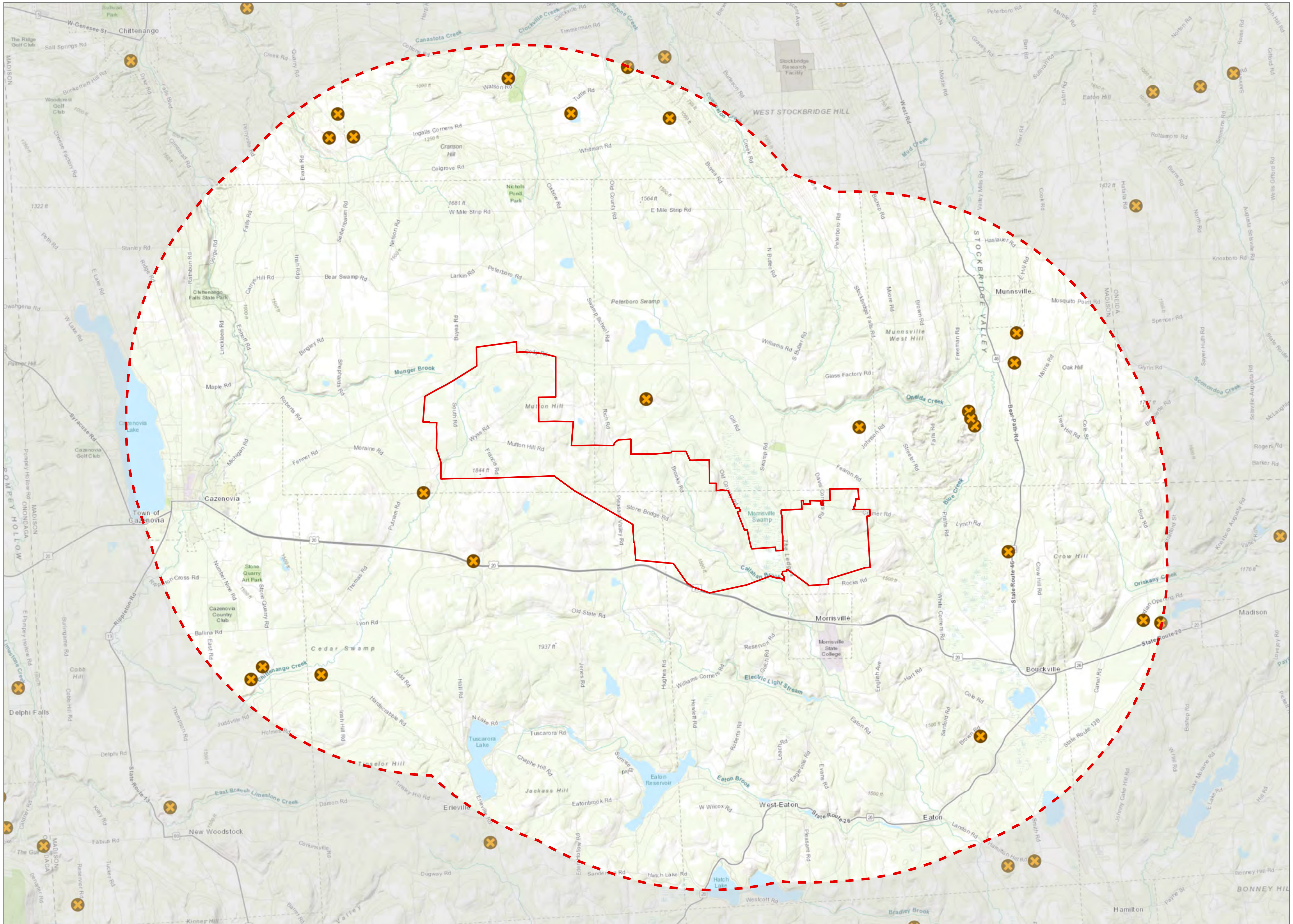
Facility Study Area

0 0.25 0.5 1
Miles

Prepared February 15, 2023
Basemap: Esri ArcGIS Online "World Topographic Map" map service.

EDR

Figure 8. Mines



Hoffman Falls Wind Project

Towns of Eaton, Fenner, Nelson, and Smithfield, Madison County, New York

Wildlife Site Characterization

Mine

Facility Study Area

5-Mile Study Area

0 0.5 1 2

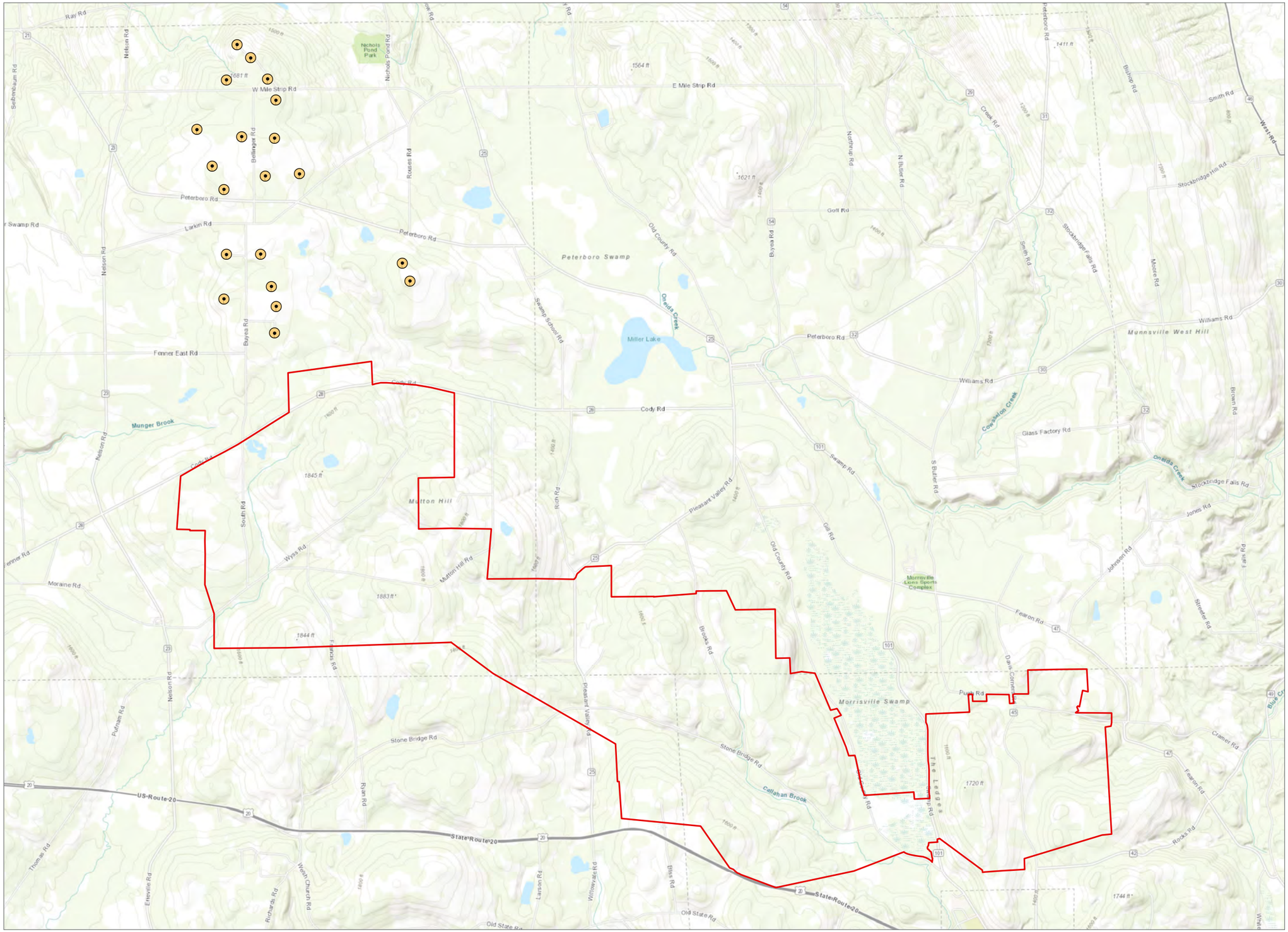
Miles

Prepared February 15, 2023

Basemap: Esri ArcGIS Online "World Topographic Map" map service.

EDR

Figure 9. Existing Fenner Wind Turbines



Hoffman Falls Wind Project

Towns of Eaton, Fenner, Nelson, and Smithfield, Madison County, New York

Wildlife Site Characterization

- Existing Fenner Wind Turbine
- Facility Study Area

0 0.25 0.5 1

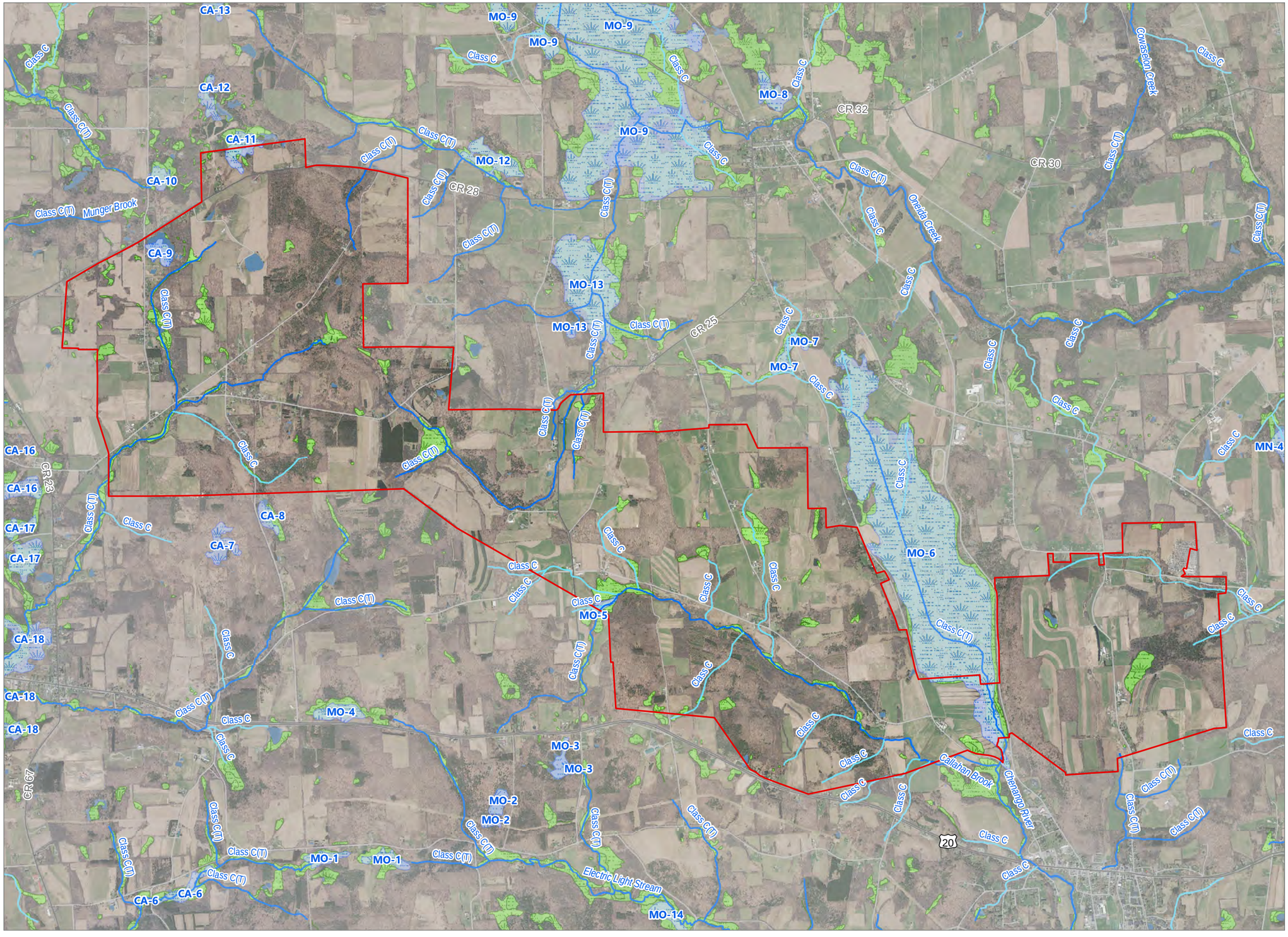
Miles

Prepared February 15, 2023

Basemap: Esri ArcGIS Online "World Topographic Map" map service.

EDR

Figure 10. Mapped Wetlands and Streams



Hoffman Falls Wind Project

Towns of Eaton, Fenner, Nelson, and Smithfield, Madison County, New York

Wildlife Site Characterization

NYSDEC Stream Classification
- Class A, B, C(TS), or C(T) Stream
- Class C or D Stream
- NYSDEC Mapped Wetland
- NWI Mapped Wetland
- NWI Mapped Lake/Pond/Riverine
- Facility Study Area

0 0.25 0.5 1
Miles

Prepared February 15, 2023
Basemap: NYSDOP "2017" orthoimagery map service.

EDR

Appendix A

New York State Database Reports

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 1is 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 ☐Yes☐No		
b. City, Town or Village Planning Board or Commission ☐Yes☐No		
c. City, Town or Village Zoning Board of Appeals ☐Yes☐No		
d. Other local agencies ☐Yes☐No		
e. County agencies ☐Yes☐No		
f. Regional agencies ☐Yes☐No		
g. State agencies ☐Yes☐No		
h. Federal agencies ☐Yes☐No		

i. Coastal Resources.

i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? ☐Yes☑No

ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program? ☐Yes☑No

iii. Is the project site within a Coastal Erosion Hazard Area? ☐Yes☐No

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):

NYS Major Basins:Upper Susquehanna

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.

	One Family	Two Family	Three Family	Multiple Family (four or more)
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.
_____
_____
i*v.* 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 (CO_2)
- _____Tons/year (short tons) of Nitrous Oxide (N_2O)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (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 ½ 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 Covertype	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:

_____

_____

iii. Describe any development constraints due to the prior solid waste activities: _____

_____

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 931-147, 899-291, 899-217, 899-292, 931-900, 93... Classification C(T)
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name Federal Waters, NYS Wetland, Federal Waters, Fe... Approximate Size NYS Wetland (in a...
- Wetland No. (if regulated by DEC) CA-9, CA-10, CA-8, CA-11, M...

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: _____
Name - Pollutants - Uses:Chenango River, Upper, and minor tribs – Metals – Fish Consumption

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: Principal 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? ☐ Yes ☑ No

If Yes:

i. Describe the habitat/community (composition, function, and basis for designation): _____

_____

ii. Source(s) of description or evaluation: _____

iii. Extent of community/habitat:

- 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? ☐ Yes ☑ No

If Yes:

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? ☐ Yes ☑ No

If Yes:

i. Species and listing: _____

_____

q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☐ Yes ☐ 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? ☑ Yes ☐ No

If Yes, provide county plus district name/number: MADIcn1, MADIcn2

b. Are agricultural lands consisting of highly productive soils present? ☐ Yes ☐ No

i. If Yes: acreage(s) on project site? _____

ii. 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? ☐ Yes ☑ No

If Yes:

i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature

ii. 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? ☐ Yes ☑ No

If Yes:

i. CEA name: _____

ii. Basis for designation: _____

iii. Designating agency and date: _____

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? ☐ Yes ☐ No

If Yes:

i. Nature of historic/archaeological resource: ☐ Archaeological Site ☐ Historic Building or District

ii. Name: _____

iii. Brief description of attributes on which listing is based:

_____

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? ☑ Yes ☐ No

g. Have additional archaeological or historic site(s) or resources been identified on the project site? ☐ Yes ☐ No

If Yes:

i. Describe possible resource(s): _____

ii. Basis for identification: _____

h. Is the project site within fives miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? ☐ Yes ☐ No

If Yes:

i. Identify resource: _____

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): _____

iii. Distance between project and resource: _____ miles.

i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? ☐ Yes ☑ No

If Yes:

i. Identify the name of the river and its designation: _____

ii. Is the activity consistent with development restrictions contained in 6NYCRR Part 666? ☐ Yes ☐ No

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

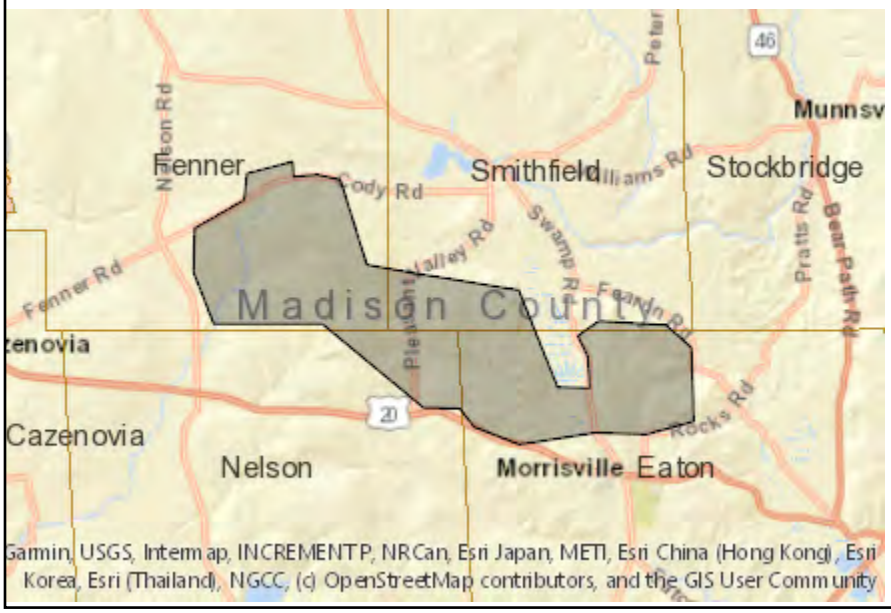
I certify that the information provided is true to the best of my knowledge.

Applicant/Sponsor Name _____ Date_____

Signature_____ Title_____

PRINT FORM

EAF Mapper Summary Report

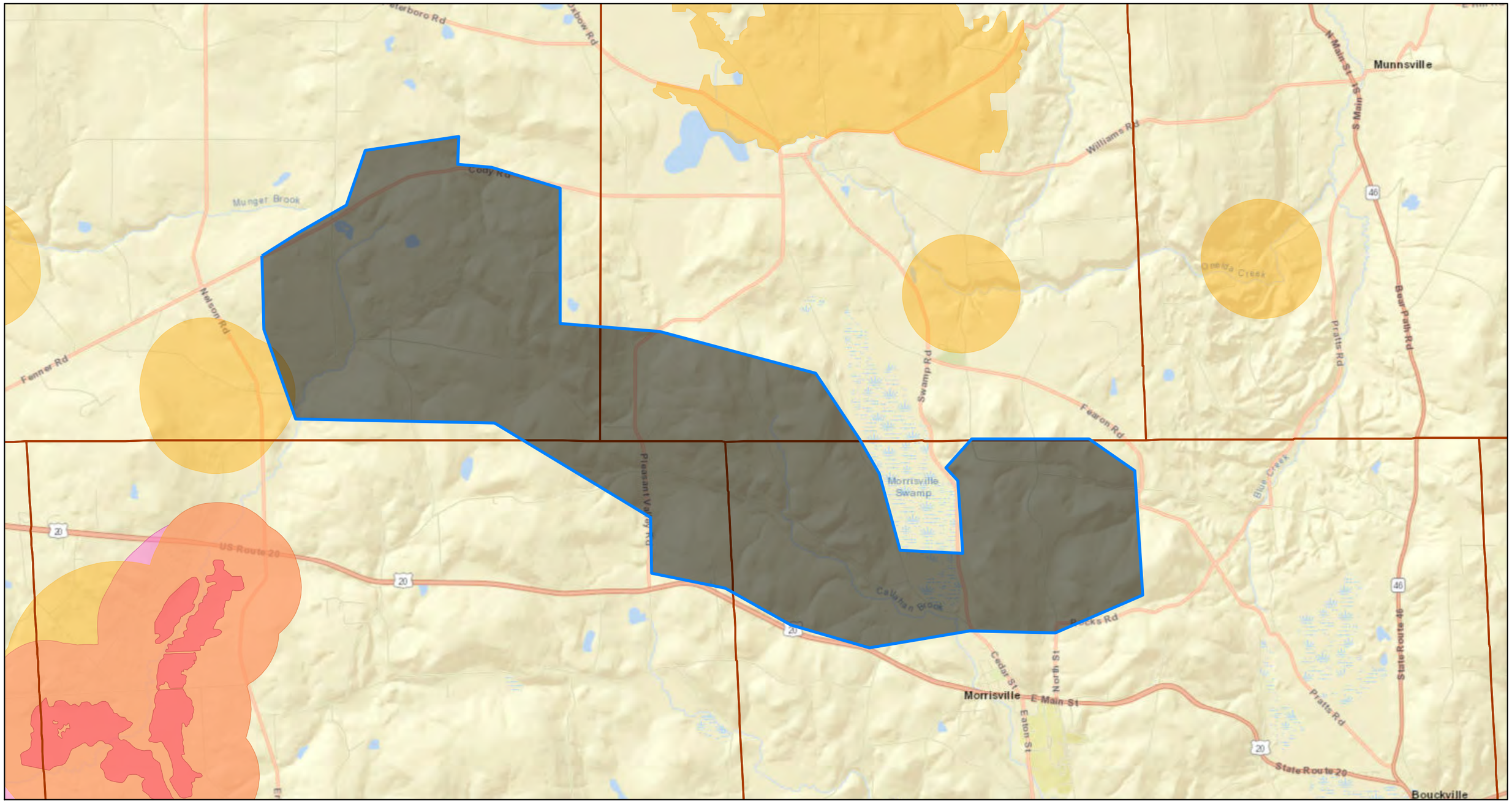


Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the 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]	Yes - Digital mapping data are not available for all Special Planning Districts. Refer to EAF Workbook.
C.2.b. [Special Planning District - Name]	NYS Major Basins:Upper Susquehanna
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]	No
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]	931-147, 899-291, 899-217, 899-292, 931-900, 931-899, 899-178, 899-293, 931-895, 899-175, 899-177
E.2.h.iv [Surface Water Features - Stream Classification]	C(T)
E.2.h.iv [Surface Water Features - Wetlands Name]	Federal Waters, NYS Wetland
E.2.h.iv [Surface Water Features - Wetlands Size]	NYS Wetland (in acres):14.7, NYS Wetland (in acres):11.8, NYS Wetland (in acres):10.6, NYS Wetland (in acres):22.2, NYS Wetland (in acres):10.7, NYS Wetland (in acres):642.5

E.2.h.iv [Surface Water Features - DEC Wetlands Number]	CA-9, CA-10, CA-8, CA-11, MO-5, MO-6
E.2.h.v [Impaired Water Bodies]	Yes
E.2.h.v [Impaired Water Bodies - Name and Basis for Listing]	Name - Pollutants - Uses:Chenango River, Upper, and minor tribs – Metals – Fish Consumption
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]	Yes
E.2.l. [Aquifer Names]	Principal Aquifer
E.2.n. [Natural Communities]	No
E.2.o. [Endangered or Threatened Species]	No
E.2.p. [Rare Plants or Animals]	No
E.3.a. [Agricultural District]	Yes
E.3.a. [Agricultural District]	MADIcn1, MADIcn2
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

Hoffman Falls Wind Facility Area



November 4, 2022

1:72,224

0 0.5 1 2 mi

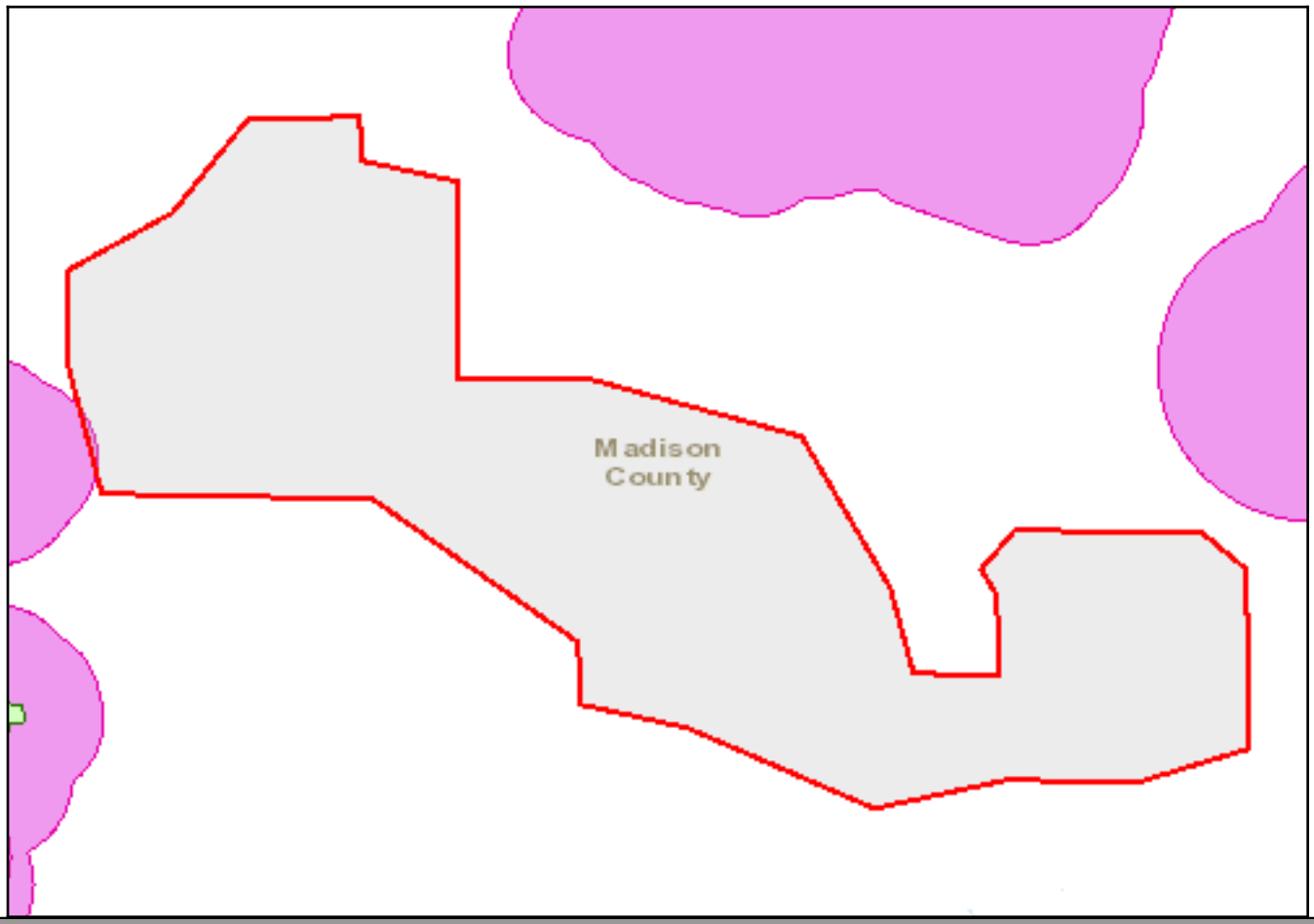
0 1 2 4 km

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

NYS Department of Environmental Conservation
Not a legal document

New York Nature Explorer
User Defined Results Report

Criteria: Selected Map Area



Plant: Flowering Plants

Common Name	Subgroup	Distribution Status	Year Last Documente	Protection Status		Conservation Rank	
				State	Federal	State	Global
Spreading Globeflower	Other Flowering Plants	Historically Confirmed	1987	Rare		S3	G5T3
Trollius laxus							

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.

Appendix B

Agency 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

December 28, 2022

Kyle Crawford
EDR
41 State Street, Suite 806
Albany, NY 12207

Re: Hoffman Falls Wind Project (EDR Project No. 21028)
County: Madison Town/City: Fenner, Smithfield, Eaton, Nelson

Dear Kyle Crawford:

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

Although we have no records of rare or state-listed animals or plants, or significant natural communities at the project site or in its immediate vicinity, I have enclosed a report of rare birds documented within 10 miles of the project site, and rare bats documented within 40 miles of the project site, for use in assessing potential impacts of bird and bat collisions. For information on NYSDEC's environmental review of proposed wind energy projects, and for the document entitled Guidelines for Conducting Bird and Bat Studies at Commercial Wind Energy Projects, follow this link: https://www.dec.ny.gov/regulations/28693.html

The absence of data at the site does not necessarily mean that rare or state-listed species, significant natural communities, or other significant habitats do not exist on or adjacent to the proposed site. Rather, our files currently do not contain information that indicates their presence. For most sites, comprehensive field surveys have not been conducted. We cannot provide a definitive statement on 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 resources 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.

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 Permits staff at the NYSDEC Region 7 Office at dep.r7@dec.ny.gov, 315-426-7438.

Sincerely,

Heidi Krahling
Environmental Review Specialist
New York Natural Heritage Program

1054

New York Natural Heritage Program

Report on Rare Birds and Rare Bats in the General Vicinity of Wind Power Projects

The following rare bats and birds have been documented in the general vicinity of the proposed wind power project.

The impacts of wind turbines on animals include both impacts due to disturbance at the site of the turbines, and impacts due to flying birds and bats colliding with turbine blades. Therefore, when screening proposed wind energy projects for potential impacts on rare species, in addition to reporting rare plants and animals documented at the project site itself, NY Natural Heritage reports species of rare birds documented within 10 miles of the project site, and rare bats documented within 40 miles of the project site. These distances were determined in consultation with the NYSDEC Division of Fish, Wildlife and Marine Resources.

For information on NYSDEC's environmental review of proposed wind energy projects, and for the document entitled Guidelines for Conducting Bird and Bat Studies at Commercial Wind Energy Projects, follow this link: https://www.dec.ny.gov/regulations/28693.html

Bats within 40 miles

COMMON NAME	*SCIENTIFIC NAME*	*NY STATE LISTING*	*HERITAGE CONSERVATION STATUS**
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
Tri-colored Bat *Hibernaculum*	*Perimyotis subflavus*	Unlisted	S1

Birds within 10 miles

COMMON NAME	*SCIENTIFIC NAME*	*NY STATE LISTING*	*HERITAGE CONSERVATION STATUS**
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]

* Conservation status in NYS as ranked by NY Natural Heritage Program on a 1 to 5 scale:
  S1 = Critically imperiled
  S2 = Imperiled
  S3 = Rare or uncommon
  S4 = Abundant and apparently secure
  S5 = Demonstrably abundant and secure

B after one of the above ranks indicates the status rank is for breeding populations only.
N after one of the above ranks indicates the status rank is for nonbreeding wintering populations only.

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: 2023-0012593
Project Name: Hoffman Falls Wind Project

November 04, 2022

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

Project Summary

Project Code: 2023-0012593
Project Name: Hoffman Falls Wind Project
Project Type: Power Gen - Wind
Project Description: Liberty Renewables Inc. is proposing to construct a 100-megawatt wind energy generating facility and associated necessary infrastructure within approximately 7,025 acres in the Towns of Eaton, Fenner, Nelson, and Smithfield in Madison County, New York.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@42.937175499999995,-75.72543653695953,14z

Counties: Madison County, New York

Endangered Species Act Species

[redacted].

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. 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.

Snails

NAME	STATUS
[redacted]	[redacted]

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

IPaC User Contact Information

Agency: Environmental Design and Research
Name: Kyle Crawford
Address: 41 State Street
City: Albany
State: NY
Zip: 12207
Email kcrawford@edrdpc.com
Phone: 5184519150

Appendix C
Wildlife Species List

Notes	Common Name	Scientific Name	Conservation Status
Bird Species			
	Ducks, Geese, and Waterfowl	*Anatidae*	
1, 5, 7	wood duck	*Aix sponsa*	
4	northern pintail	*Anas acuta*	SGCN
1, 4, 5, 7	mallard	*Anas platyrhynchos*	
4	American black duck	*Anas rubripes*	SGCN-HP
4	snow goose	*Anser caerulescens*	
1, 2, 4, 5, 7	Canada goose	*Branta canadensis*	
1, 4	bufflehead	*Bucephala albeola*	
4	tundra swan	*Cygnus columbianus*	
1, 2, 4	hooded merganser	*Lophodytes cucullatus*	
1, 4	common merganser	*Mergus merganser*	
4	redhead	*Aythya americana*	
4	greater scaup	*Aythya marila*	SGCN
4	lesser scaup	*Aythya affinis*	SGCN
4	long-tailed duck	*Clangula hyemalis*	SGCN
4	common goldeneye	*Bucephala clangula*	SGCN
1, 4	ring-necked duck	*Aythya collaris*	
4	red-breasted merganser	*Mergus serrator*	
	[redacted]	[redacted]	[redacted]
	Cormorants	*Phalacrocoracidae*	
4	double-creasted cormorant	*Phalacrocorax auritus*	
	Rails	*Rallidae*	
4	American coot	*Fulica americana*	
	[redacted]	[redacted]	[redacted]
	Pheasants, Grouse, and Allies	*Phasianidae*	
1, 4, 5	ruffed grouse	*Bonasa umbellus*	SGCN
1, 2, 4, 5, 7	wild turkey	*Meleagris gallopavo*	
	Pigeons, Doves	*Columbidae*	
1, 2, 4, 5, 7	rock pigeon	*Columba livia*	
1, 2, 4, 5, 7	mourning dove	*Zenaida macroura*	
	Cuckoos	*Cuculidae*	
2	yellow-billed cuckoo	*Coccyzus americanus*	
5	black-billed cuckoo	*Coccyzus erythropthalmus*	SGCN
	Swifts	*Apodidae*	
1	chimney swift	*Chaetura pelagica*	
	Hummingbirds	*Trochilidae*	
2, 5	ruby-throated hummingbird	*Archilochus colubris*	
	Plovers	*Charadriidae*	
1, 2, 5, 7	killdeer	*Charadrius vociferus*	

	Gulls, Terns	*Laridae*	
4	herring gull	*Larus argentatus*	
4, 7	ring-billed gull	*Larus delawarensis*	
4	Iceland gull	*Larus glaucoides*	
4	glaucous gull	*Larus hyperboreus*	
4	great black-backed gull	*Larus marinus*	
	Herons, Bitterns	*Ardeidae*	
1, 2, 4, 5, 7	great blue heron	*Ardea herodias*	
1, 2	green heron	*Butorides virescens*	
	American Vultures	*Cathartidae*	
1, 2, 5, 6, 7, 8	turkey vulture	*Cathartes aura*	
	Hawks	*Accipitridae*	
[redacted]	[redacted]	[redacted]	[redacted]
1, 2, 4, 5, 6, 7, 8	red-tailed hawk	*Buteo jamaicensis*	
3, 4, 6, 7, 8	rough-legged hawk	*Buteo lagopus*	
[redacted]	[redacted]	[redacted]	[redacted]
1, 7, 8	broad-winged hawk	*Buteo platypterus*	
[redacted]	[redacted]	[redacted]	[redacted]
	Owls	*Strigidae*	
3	snowy owl	*Bubo scandiacus*	
4, 6	great horned owl	*Bubo virginianus*	
4	eastern screech owl	*Megascops asio*	
4	barred owl	*Strix varia*	
	Kingfishers	*Alcedinidae*	
1, 2, 4, 5, 7	belted kingfisher	*Ceryle alcyon*	
	Woodpeckers	*Picidae*	
1, 2, 4, 5, 7	northern flicker	*Colaptes auratus*	
1, 2, 4, 5	downy woodpecker	*Dryobates pubescens*	
1, 2, 4, 5	hairy woodpecker	*Dryobates villosus*	
1, 2, 4, 5	pileated woodpecker	*Dryocopus pileatus*	
1, 2, 4, 5, 7	red-bellied woodpecker	*Melanerpes carolinus*	
1, 2, 4, 5	yellow-bellied sapsucker	*Sphyrapicus varius*	
	Falcons	*Falconidae*	
4, 7, 8	merlin	*Falco columbarius*	
1, 2, 4, 5, 7, 8	American kestrel	*Falco sparverius*	SGCN
[redacted]	[redacted]	[redacted]	[redacted]
	Tyrant Flycatchers	*Tyrannidae*	
1, 2, 5	eastern wood-pewee	*Contopus virens*	
1, 2, 5	alder flycatcher	*Empidonax alnorum*	
1, 2, 5	least flycatcher	*Empidonax minimus*	
1, 2, 5	willow flycatcher	*Epidonax traillii*	

1, 2, 5	great crested flycatcher	*Myiarchus crinitus*	
1, 2, 5, 7	eastern phoebe	*Sayornis phoebe*	
1, 2, 5, 7	eastern kingbird	*Tyrannus tyrannus*	
	Vireos	*Vireonidae*	
2	yellow-throated vireo	*Vireo flavifrons*	
1, 2, 5	warbling vireo	*Vireo gilvus*	
1, 2, 5	red-eyed vireo	*Vireo olivaceus*	
1, 2, 5	blue-headed vireo	*Vireo solitarius*	
	Shrikes	*Laniidae*	
1, 4	northern shrike	*Lanius borealis*	
	Jays, Crows	*Corvidae*	
1, 2, 4, 5, 7	American crow	*Corvus brachyrhynchos*	
1, 2, 4, 5, 7	common raven	*Corvus corax*	
1, 2, 4, 5, 7	blue jay	*Cyanocitta cristata*	
	Titmice	*Paridae*	
1, 2, 4, 5, 7	tufted titmouse	*Baeolophus bicolor*	
1, 2, 4, 5, 7	black-capped chickadee	*Poecile atricapillus*	
	Larks	*Alaudidae*	
[redacted]	[redacted]	[redacted]	[redacted]
	Swallows	*Hirundinidae*	
1, 2, 5, 7	barn swallow	*Hirundo rustica*	
1	bank swallow	*Riparia riparia*	
1, 2, 5, 7	tree swallow	*Tachycineta bicolor*	
5	purple martin	*Progne subis*	
	Kinglets	*Regulidae*	
1, 4, 5	golden-crowned kinglet	*Regulus satrapa*	
1	ruby-crowned kinglet	*Regulus calendula*	
	Nuthatches	*Sittidae*	
1, 4, 5	red-breasted nuthatch	*Sitta canadensis*	
1, 2, 4, 5, 7	white-breasted nuthatch	*Sitta carolinensis*	
	Treecreepers	*Certhiidae*	
1, 4, 5	brown creeper	*Certhia americana*	
	Wrens	*Troglodytidae*	
1, 2, 4, 5	Carolina wren	*Thryothorus ludovicianus*	
1, 2, 5, 7	house wren	*Troglodytes aedon*	
1, 4	winter wren	*Troglodytes hiemalis*	
	Starlings	*Sturnidae*	
1, 2, 4, 5, 7	European starling	*Sturnus vulgaris*	
	Mimic Thrushes	*Mimidae*	
1, 2, 5, 7	gray catbird	*Dumetella carolinensis*	
4, 5	northern mockingbird	*Mimus polyglottos*	
2, 5, 7	brown thrasher	*Toxostoma rufum*	SGCN-HP

	Thrushes and Allies	*Turdidae*	
1, 2, 5	veery	*Catharus fuscescens*	
5	hermit thrush	*Catharus guttatus*	
1, 2, 5	wood thrush	*Hylocichla mustelina*	SGCN
1, 2, 4, 5, 7	eastern bluebird	*Sialia sialis*	
1, 2, 4, 5, 7	American robin	*Turdus migratorius*	
5	Swainsons thrush	*Catharus ustulatus*	
	Waxwings	*Bombycillidae*	
1, 2, 4, 5	cedar waxwing	*Bombycilla cedrorum*	
	Old World Sparrows	*Passeridae*	
2, 4, 5, 7	house sparrow	*Passer domesticus*	
	Finches and Allies	*Fringillidae*	
4, 7	common redpoll	*Acanthis flammea*	
4	hoary redpoll	*Acanthis hornemanni*	
4	evening grosbeak	*Coccothraustes vespertinus*	
2, 4, 7	house finch	*Haemorhous mexicanus*	
2, 4	purple finch	*Haemorhous purpureus*	
4	pine siskin	*Spinus pinus*	
1, 2, 4, 5, 7	American goldfinch	*Spinus tristis*	
1, 4	red crossbill	*Loxia curvirostra*	
	Longspurs	*Calcariidae*	
1, 4, 7	snow bunting	*Plectrophenax nivalis*	
	New World Sparrows	*Passerellidae*	
1, 2, 4, 5, 7	dark-eyed junco	*Junco hyemalis*	
1, 2, 4	swamp sparrow	*Melospiza georgiana*	
1, 2, 4, 5, 7	song sparrow	*Melospiza melodia*	
1, 2, 5, 7	Savannah sparrow	*Passerculus sandwichensis*	
4	fox sparrow	*Passerella iliaca*	
1, 2, 5	eastern towhee	*Pipilo erythrophthalmus*	
1, 2, 5, 7	chipping sparrow	*Spizella passerina*	
1, 2, 5	field sparrow	*Spizella pusilla*	
1, 4	American tree sparrow	*Spizelloides arborea*	
1, 4, 5, 7	white-throated sparrow	*Zonotrichia albicollis*	
1, 5	hooded warbler	*Setophaga citrina*	
	Blackbirds	*Icteridae*	
1, 2, 4, 5, 7	red-winged blackbird	*Agelaius phoeniceus*	
2, 5, 7	bobolink	*Dolichonyx oryzivorus*	SGCN-HP
1, 2, 4, 5, 7	Baltimore oriole	*Icterus galbula*	
1, 2, 4, 5, 7	brown-headed cowbird	*Molothrus ater*	
1, 2, 5, 7	common grackle	*Quiscalus quiscula*	
1, 5, 7	eastern meadowlark	*Sturnella magna*	SGCN-HP
	New World Warblers	*Parulidae*	
2, 5	mourning warbler	*Geothlypis philadelphia*	
1, 2, 5, 7	common yellowthroat	*Geothlypis trichas*	
5	Nashville warbler	*Leiothlypis ruficapilla*	
1	northern waterthrush	*Parkesia noveboracensis*	

1, 2, 5	ovenbird	*Seiurus aurocapillus*	
2, 5	black-throated green warbler	*Setophaga virens*	
1	black-throated blue warbler	*Setophaga caerulescens*	
1, 2, 5, 7	chestnut-sided warbler	*Setophaga pensylvanica*	
1, 2, 5, 7	yellow warbler	*Setophaga petechia*	
1, 2, 5	American redstart	*Setophaga ruticilla*	
1, 2, 5	blue-winged warbler	*Vermivora cyanoptera*	SGCN
1, 5, 7	yellow-rumped warbler	*Setophaga coronata*	
1, 2, 5	black-and-white warbler	*Mniotilta varia*	
1	blackburnian warbler	*Setophaga fusca*	
1	Louisiana waterthrush	*Parkesia motacilla*	
5	magnolia warbler	*Setophaga magnolia*	
	Cardinals and Allies	*Cardinalidae*	
1, 2, 4, 5, 7	northern cardinal	*Cardinalis cardinalis*	
1, 2, 5	indigo bunting	*Passerina cyanea*	
1, 2, 5	rose-breasted grosbeak	*Pheucticus ludovicianus*	
1, 5	scarlet tanager	*Piranga olivacea*	SGCN
	Sandpipers	*Scolopacidae*	
1	solitary sandpiper	*Tringa solitaria*	
1	greater yellowlegs	*Tringa melandeuca*	
	Gnatcatcher	*Polioptilidae*	
	blue-gray gnatcatcher	*Polioptila caerulea*	

Notes
1. Species identified in the 2020-2024 NYS Breeding Bird Atlas (Survey Blocks Cazenovia CE, Cazenovia NE, Morrisville CE, Morrisville CW, Morrisville NW, Morrisville E, Morrisville W, Munnsville CW, and Munnsville SW)
2. Species identified in the Oriskany Fls Breeding Bird Survey Route (2017-2022)
3. State-listed species reported by eBird users at "personal locations" from 2017-2022
4. Species identified in the NYNW Christmas Bird Count Circle (2018-2022)
5. Species observed during 2021 on-site breeding bird surveys
6. Species observed during winter raptor surveys conducted by EDR throughout the 2021 and 2022 winter seasons.
7. Species observed during spring raptor surveys conducted by EDR from March 2021 to May 2021
8. Species observed during fall raptor surveys conducted by EDR from August 2022 to December 2022

Conservation Status Codes			
SE	NYS Endangered Species		
ST	NYS Threatened Species		
SSC	NYS Species of Special Concern		
SGCN	NYS Species of Greatest Conservation Need		
SGCN-HP	NYS Species of Greatest Conservation Need – High Priority		