Breeding Bird Survey Report

Hoffman Falls Wind Project

Towns of Fenner, Nelson, Eaton, and Smithfield

Madison County, New York

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ACRONYMS AND ABBREVIATIONS

BBS	Breeding Bird Survey
EDR	Environmental Design & Research, Landscape Architecture, Engineering & Environmental Services, D.P.C.
IPaC	Information for Planning and Consultation
kV	kilovolt
MW	megawatt
NYNHP	New York Natural Heritage Program
NYSDEC	New York State Department of Environmental Conservation
ORES	New York State Office of Renewable Energy Siting
POI	point of interconnection
SGCN	species of greatest conservation need
SGCN-HP	high priority species of greatest conservation need
SSC	species of special concern
USFWS	United States Fish and Wildlife Service

1.0 INTRODUCTION

1.1 Purpose of the Investigation

On behalf of Liberty Renewables Inc. (the Applicant), Environmental Design & Research, Landscape Architecture, Engineering & Environmental Services, D. P. C. (EDR) has prepared this Breeding Bird Survey Report for the Hoffman Falls Wind Project, a proposed wind energy generation facility and associated infrastructure (the Facility) located in Madison County, New York (**Figure 1**). This report supports an Application for a siting permit under New York's Accelerated Renewable Energy Growth and Community Benefit Act, Executive Law § 94-c (Section 94-c) regulations.[1] The information included in this report is intended to help the Applicant design the Facility in a manner that minimizes adverse environmental impacts. This information will also assist the New York State Office of Renewable Energy Siting (ORES) and the New York State Department of Environmental Conservation (NYSDEC) in their determination of whether occupied habitat[2] for one or more state-listed threatened or endangered avian species exists within the area under consideration to host the Facility in accordance with the requirements of Section 94-c.

The purpose of this study was to document the presence, abundance, and use patterns of breeding grassland and other bird species within a defined Breeding Bird Survey (BBS) Study Area. The BBS Study Area consists of parcels, or portions of parcels, which have been under consideration by the Applicant for the siting of Facility components (**Figure 2**). Trained, qualified biologists conducted the 2023 breeding bird surveys based on the methodology established in the NYSDEC 2022 *Survey Protocol for State-listed Breeding Grassland Bird Species* (NYSDEC 2022 Survey Protocol; NYSDEC, 2022). The scope of these surveys was defined in a Breeding Bird Survey Work Plan (EDR, 2023a), which was submitted to ORES and NYSDEC staff in April 2023. Based on recommendations provided by ORES and NYSDEC staff following submittal of the Breeding Bird Survey Work Plan and additional on-site review, EDR added 19 survey locations and shifted five of the originally proposed survey locations to improve coverage of open field areas within the BBS Study Area.

1.2 Facility Location and Description

The proposed Facility is a utility-scale wind energy generating project located in Madison County, New York with a generating capacity of up to 100 megawatts (MW). The Facility will include up to 24 wind turbines, with 12 located in the Town of Fenner, three in the Town of Smithfield, one in the Town of Nelson, and eight in the Town of Eaton. Associated support facilities will include an underground medium voltage collection system, gravel access roads, a permanent meteorological (MET) tower, an aircraft detection lighting system (ADLS) tower, temporary construction laydown areas, a concrete batch plant, an operations and

[1] Chapter XVIII, Title 19 of the New York Codes, Rules and Regulations (NYCRR) Part 900. Available at: https://ores.ny.gov/regulations

[2] The New York State Endangered Species Act (Environmental Conservation Law §11-0535) and its implementing regulations at 6 New York Codes, Rules, and Regulations (NYCRR) Part 182 define occupied habitat as follows: a geographic area in New York within which a species listed as endangered or threatened in this Part has been determined by the department to exhibit one or more essential behaviors. Essential behavior refers to any of the behaviors exhibited by a species listed as endangered or threatened in this Part that are a part of its normal or traditional life cycle and that are essential to its survival and perpetuation. Essential behavior includes behaviors associated with breeding, hibernation, reproduction, feeding, sheltering, migration and overwintering.

maintenance (O&M) facility, a medium voltage-to-transmission voltage collection substation, a point of interconnection (POI) switchyard, and a short 115-kilovolt (kV) transmission line that will connect the Facility to the high voltage electrical grid. The Facility will be constructed within an approximately 4,050-acre area (the Facility Site) that corresponds closely with the BBS Study Area. Within this area, a more limited subset of land will be selected for the siting, design, construction, and operation of the Facility. Some Facility components will be constructed in areas where disturbance has already occurred (e.g., agricultural fields that are used for hay and/or row crop production) to minimize the need for vegetation removal within natural communities.

2.0 BACKGROUND INFORMATION

2.1 Existing Conditions

The Applicant has gathered a substantial amount of information on existing ecological conditions within the BBS Study Area. These investigations have included preparation of a Wildlife Site Characterization for the Facility, plus additional desktop analyses and on-site field assessments (e.g., marsh bird surveys, spring and fall raptor migration surveys, winter raptor surveys, wetland delineations). Based on these assessments, the lands currently under consideration for the Facility are primarily composed of agricultural fields, along with mixed forest, evergreen forest, woody wetlands, early successional communities, and developed land (primarily rural single-family houses, farms, and associated yards). Crop cover types within the BBS Study Area for the past five years (2018-2022) were presented in the Breeding Bird Survey Work Plan (EDR, 2023a).

2.2 Agency Database Review and Consultation

As part of the Wildlife Site Characterization, EDR consulted with federal and state agencies regarding the potential presence of listed threatened or endangered species in the vicinity of the Facility. This included database review via the United States Fish and Wildlife Service (USFWS) online Information for Planning and Consultation (IPaC) system, correspondence with the New York Natural Heritage Program (NYNHP), and a pre-application consultation meeting with ORES and the NYSDEC. EDR performed a review of the IPaC system for the Facility on April 6, 2021, and again on November 4, 2022. **BEGIN CONFIDENTIAL INFORMATION<** [redacted] **>END CONFIDENTIAL INFORMATION** A site-specific request for documented state-listed species occurrences in the vicinity of the Facility was submitted to NYNHP on November 4, 2022, and a response was received on December 28, 2022. The response letter indicates that the NYNHP database contains records of several state-listed threatened or endangered bird species that have been documented within 10 miles of the Facility. **BEGIN CONFIDENTIAL INFORMATION<** [redacted] **>END CONFIDENTIAL INFORMATION**

In a pre-application consultation meeting held on June 11, 2021, and in an updated letter that was subsequently issued on March 6, 2023, ORES and NYSDEC indicated that the Facility is not sited within areas of previously mapped occupied habitat for any state-listed species (EDR, 2023a). However, given that the Facility is sited within areas that may be suitable for state-listed grassland bird species, ORES and NYSDEC recommended conducting on-site breeding bird surveys, with a focus on open fields greater than 25 acres in size. These open areas may represent suitable habitat for grassland bird species (state-listed and others).

3.0 BREEDING BIRD SURVEYS

3.1 Survey Period and Frequency

EDR biologists conducted breeding bird surveys between early May and mid-July 2023, which corresponds with the typical breeding period for the vast majority of avian species that may be present in New York State (and the optimal window for surveys for state-listed grassland bird species), as well as the early portion of the breeding season when some state-listed grassland bird species **BEGIN CONFIDENTIAL INFORMATION**<[redacted]>**END CONFIDENTIAL INFORMATION** may be present. Surveys began on May 4, 2023 and were performed each week until July 20, 2023. Survey locations were visited in a varying order each week so that each individual survey location was surveyed at different times of the day throughout the breeding season. In accordance with the NYSDEC 2022 Survey Protocol, each point count location within the BBS Study Area was surveyed a minimum of eight times throughout the survey period (NYSDEC, 2022). In total, morning surveys were conducted on 30 different days.

3.2 Survey Methodology

As described in the Breeding Bird Survey Work Plan (EDR, 2023a), the primary method for surveying breeding birds consisted of five-minute morning point count surveys that were conducted within on-site open habitats. A total of 83 point count locations were designated within the BBS Study Area (**Figure 3**). Point count locations were systematically located to provide coverage of open habitats (e.g., hayfields, pastureland, row cropland, fallow fields) throughout the BBS Study Area. These 83 point count locations were spaced approximately 250 meters apart to minimize the potential for overlapping detections while maintaining adequate coverage in accordance with the NYSDEC 2022 Survey Protocol. In addition to point count surveys, biologists also recorded incidental observations of species of interest while walking to, from, and among point count locations.

Point count surveys were conducted multiple days per week between first light (one half hour before sunrise) and approximately 10:30 a.m. as weather conditions permitted. To the greatest extent practicable, surveys were conducted in conditions that were conducive to: (1) hearing bird vocalizations; and (2) seeing birds move about in vegetation and in flight. Surveys were not conducted in conditions that could significantly reduce detectability, such as high winds, steady/heavy precipitation, fog, or extreme temperatures. Survey locations were visited in a different order each week to minimize sampling bias, as detectability of some species can vary at different times of day. As the season progressed, increased crop heights restricted access and/or visibility for some locations during some visits. In these instances, point count surveys were conducted from alternate locations near field edges, and the use of alternate locations

was noted on the survey data sheets. Alternate locations were also used when access was restricted due to the presence of livestock within fenced pasture areas. Alternate locations were selected to provide visual and auditory coverage of the same open field areas. Alternate point count locations located more than 100 meters from the original point due to access constraints were not included in the data analysis.

Surveys were conducted by qualified biologists with experience and training in both acoustic and visual identification of birds in New York State. Upon arriving at each point count location, biologists waited silently for at least two minutes before beginning the timed five-minute survey (to allow birds to habituate to the presence of the observer). During surveys, biologists recorded all birds seen and heard. Visual identification was aided by the use of binoculars with 8x or 10x magnification. Incidental species that were heard or seen during qualitative meander surveys between point count survey periods were also recorded, including any species listed by the state as endangered, threatened, or special concern, and birds listed as species of greatest conservation need (SGCN) (NYSDEC, 2015a; NYSDEC, 2015b). Standardized four-letter alpha codes were used for each avian species (Pyle and DeSante, 2022). Behavior and breeding codes were developed based on those used for the New York Breeding Bird Atlas III, and the activity or behavior observed that was most indicative of breeding was documented for each individual bird (eBird, 2020). The following data were recorded for each point count survey:

- Survey date.
- Observer name(s).
- Point count location identification number or name.
- Start time.
- Pertinent weather conditions including temperature, wind speed and direction, precipitation, cloud cover, and visibility.
- General habitat characteristics and vegetation measurements, including photographs.
- Species and number of each individual bird observed.
- Distance of each identified bird from the observer (recorded as less than 100 meters or greater than 100 meters).
- Detailed locations for all state-listed threatened or endangered species and species of special concern (SSC) observed.
- Observed activities, behaviors, and signs of breeding (if any) for each individual bird.

3.3 Data Analysis

Avian Use, Abundance, Composition, and Frequency

To avoid duplicate records of the same individuals between point count locations, only observations recorded within 100 meters of the point count locations were used to calculate avian use, composition, and frequency for each species. Avian use for each species was determined by dividing the total number of observations recorded within 100 meters of point count locations by the total number of surveys conducted. Observations were considered equivalent to individuals for the purpose of the analysis, as it is not always possible to discern among individuals of the same species during surveys (i.e., the same individuals may or may not be present at the same locations from week to week). However, in some cases, multiple features

(e.g., perch point and flight path) were used to represent a single bird. In these instances, each distinct feature was considered a separate observation. Similarly, if a single feature (e.g., perch point) was used to represent multiple birds, the total number of observations equaled the total number of birds recorded for the feature. Composition for each species was calculated as the percentage of species-specific observations divided by the number of total observations (of all species). Frequency for each species was calculated as the percentage of surveys during which the species was recorded.

Species Richness and Spatial Avian Use

Data analysis included a review of the variability in mean species richness (per survey), total species richness, and spatial avian use across the BBS Study Area. Mean species richness at each point count location was determined for each survey location by calculating the mean number of species recorded at each survey location per survey. Total species richness was determined by calculating the total number of species recorded over the course of the breeding season at each point count location. Spatial avian use was calculated by dividing the total number of observations recorded (for all species) by the total number of surveys conducted.

Incidental Observations

During point count surveys, birds detected at distances beyond 100 meters were recorded, but were not included in the calculation of the metrics described above. Incidental observations (i.e., birds observed before, after, and between point count surveys) were also documented for all special status species (i.e., state-listed endangered, threatened, SSC, and/or SGCN) detected. Incidental observations also included other avian species that were observed independent of the point count surveys.

Essential Behaviors

For state-listed endangered or threatened species that were documented, EDR reviewed behavioral descriptions, flight heights/patterns, and temporal data to identify the subset of observations of these species that appeared to include one or more essential behaviors.[3]

3.4 Survey Results

Biologists conducted surveys at least one day per week between May 4 and July 20, 2023. In total, morning point count surveys were completed on 30 different days and included a total of 770 breeding bird point count surveys and 3,850 survey-minutes. All survey locations were visited between eight and 11 times throughout the survey period, and overall survey effort, including travel among point count locations, totaled approximately 13,443 survey-minutes (more than 224 survey-hours). Completed survey information is provided in **Appendix A, Table 1**.

[3] 6 NYCRR Part 182.2(f) defines essential behavior as any of the behaviors exhibited by a species listed as endangered or threatened (in New York State) that are a part of its normal or traditional life cycle and that are essential to its survival and perpetuation. Essential behavior includes behaviors associated with breeding, hibernation, reproduction, feeding, sheltering, migration and overwintering.

A total of 2,427 birds representing 70 different species were recorded within 100 meters of point count locations during breeding bird surveys. The red-winged blackbird (*Agelaius phoeniceus*) was the most abundant species recorded, with 492 observations, which accounted for 20.30% of all observations within 100 meters of point count locations. Other abundant species included the song sparrow (*Melospiza melodia*; 285 observations), American goldfinch (*Spinus tristis*; 250 observations), bobolink (*Dolichonyx oryzivorus*; 221 observations), and savannah sparrow (*Passerculus sandwichensis*; 221 observations). Together, these four species accounted for 40.26% of all observations. The song sparrow was the most frequently observed species (29.05% of surveys). The red-winged blackbird was the second-most frequently observed species (28.25% of surveys). **Appendix A, Table 2** provides a summary of abundance (total number of species observed), composition (percent of species observations/total observations), use (specific species observations/total number of surveys), and frequency (percentage of surveys during which the species was recorded) for each species observed.

Spatially, point count location 15 had the highest mean species richness at 12.00 species per survey, followed by point count locations 11 (11.67 species per survey) and 12 (11.64 species per survey). Point count locations 71 and 9 had the lowest mean species richness at 6.20 and 6.73 species per survey, respectively. Point count locations 2 and 6 had the highest total species richness, with 38 species recorded over the course of the season. Point count locations 59 and 58 had the lowest total species richness, with 16 and 18 species recorded over the course of the season, respectively. The highest avian use was recorded at point count location 20, with an average of 26.63 birds recorded per survey. **Appendix A, Table 3** provides a summary of abundance (total observations), avian use, total species richness, and mean species richness (per survey) for each point count location.

In addition to bird observation data, habitat data were collected during each survey, and included observations of plant species, vegetation percent cover, vegetation height, litter depth (if any), and human activities or other factors that would be likely to alter avian behavior. The dominant cover types at survey locations included field cropland (in the form of hayfields and alfalfa), row cropland (in the form of corn and soybean fields), and pastureland. In some cases, on-site hayfields were mowed/harvested during the survey period. Other cover types present throughout the season included successional old fields and forested edges. Habitat information and vegetative measurements, including representative photographs, are provided on the survey data sheets in **Appendix B**.

A total of 16 additional species were observed over 100 meters from point count locations, and therefore were not included in the data analysis (although these observations are included in **Appendix C**). Two species were observed at point count locations outside of the timed point count surveys (e.g., during the silent acclimatization period, while walking between point count locations). These species included the pine warbler (*Setophaga pinus*) and the cliff swallow (*Petrochelidon pyrrhonota*). Incidental species observed during each survey are noted on the survey data sheets in **Appendix B**.

Nine species were confirmed as breeding within the BBS Study Area based on behavioral observations made during the 2023 surveys. Brown-headed cowbirds (*Molothrus ater*) and bobolinks were observed carrying food and nesting material. Canada goose (*Branta canadensis*), house sparrow (*Passer domesticus*), song sparrow, and savannah sparrow fledglings were observed within the BBS Study Area. European starlings

(*Sturnus vulgaris*) were observed carrying food, and several fledglings were also documented. Killdeer (*Charadrius vociferus*) were observed exhibiting distraction displays, and one nest with eggs was also documented incidentally. Red-winged blackbirds were observed carrying food and nesting material, and an occupied nest and several fledglings were also documented within the BBS Study Area. In addition, as noted in **Appendix C**, many other species exhibited behaviors consistent with possible or probable breeding within the BBS Study Area, including singing birds, pairs in suitable breeding habitat, males chasing females, courtship displays, territorial defenses, and/or agitated behavior (refer to eBird, 2020 for details pertaining to breeding codes/definitions).

3.4.1 State-Listed Species

BEGIN CONFIDENTIAL INFORMATION<[redacted]>**END CONFIDENTIAL INFORMATION** **Figure 4** depicts the locations and flight paths of SSC observed during the survey period. **Appendix A**, **Table 4** also provides more detailed information for each state-listed species observed.

3.4.2 Other Special Status Species

Species for which conservation actions are needed within the next 10 years in order to maintain or increase populations are designated by the NYSDEC as high priority species of greatest conservation need (SGCN-

HP; NYSDEC, 2015b)[4]. Three species listed as SGCN-HP were recorded during the survey period, including the eastern meadowlark (*Sturnella magna*), brown thrasher (*Toxostoma rufum*), and bobolink. Eastern meadowlarks were observed singing in hayfields within 100 meters of point count locations 47 and 50. Brown thrashers were observed within 100 meters of point count locations 8, 32, 36, 37, 40, 69, and 78. Brown thrashers were most commonly observed singing in or near hayfields and corn fields. Bobolinks were observed within 100 meters of 33 of the 83 point count locations, with the highest number of observations occurring near point count location 47 (28 observations). Bobolinks were most often recorded in open hayfields and pastureland. The most commonly observed behavior included singing in an appropriate habitat.

Species of conservation concern in New York State are listed by the NYSDEC as SGCN.[5] These species are in need of conservation actions to maintain or increase population levels (NYSDEC, 2015b). Five species listed as SGCN were observed during the survey period, including the American kestrel (*Falco sparverius*), American woodcock (*Scolopax minor*), blue-winged warbler (*Vermivora cyanoptera*), scarlet tanager (*Piranga olivacea*), and wood thrush (*Hylocichla mustelina*). One American kestrel was observed in appropriate habitat at point count location 76.1, and another American kestrel was documented at point count location 50 during a timed survey. One American woodcock was observed in appropriate habitat on May 4, 2023 near point count location 2. The other three species were typically observed along wooded field edges and/or heard from within interior forest habitat located adjacent to open fields.

4.0 SUMMARY AND CONCLUSIONS

EDR biologists conducted breeding bird surveys at 83 point count locations within the BBS Study Area between May 4 and July 20, 2023. A total of 770 point count surveys were conducted over a period of 11 weeks, and each point count location was surveyed between eight and 11 times during the breeding season. Overall, a total of 2,427 birds of 70 different species were recorded within 100 meters of point count locations. A total of 16 species were recorded before or after timed point count surveys, or during meander surveys that were conducted when traveling between/among point count locations; of these, two species were recorded only outside of timed point count surveys.

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[4] Some endangered, threatened, and special concern species are also listed as SGCN-HP; these species are described in other sections of this report.
[5] Some endangered, threatened, and special concern species are also listed as SGCN; these species are described in other sections of this report.

[redacted]

[redacted]

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Overall, the results of the 2023 breeding bird study suggest that no occupied breeding habitat for state-listed endangered or threatened species is present within the BBS Study Area. However, state-listed species have been observed on-site during other spring/summer avian field studies that were previously completed for the Facility. Therefore, publicly available data (as summarized in the Wildlife Site Characterization; EDR, 2023b), the data collected during the 2023 breeding bird study, and other avian study data collected for the Facility will allow the Applicant to evaluate potential Facility-related impacts to state-listed breeding birds and identify possible avoidance, minimization, and mitigation measures in the Facility's Section 94-c Siting Permit Application.

5.0 REFERENCES

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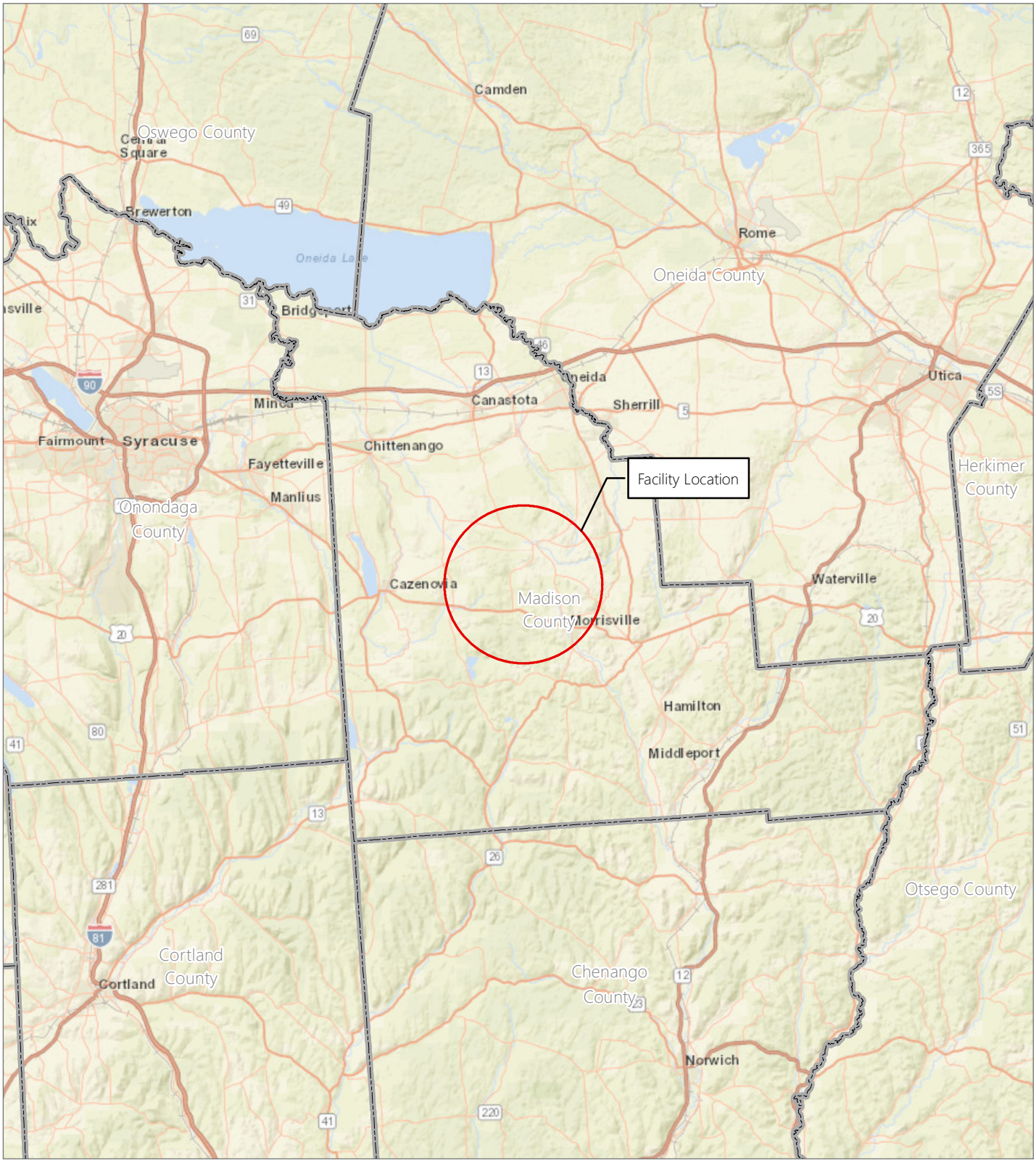
FIGURES

Figure 1. Regional Facility Location



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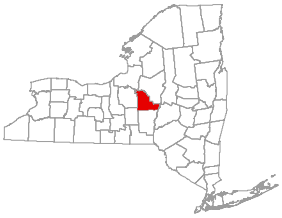

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Miles

Prepared July 17, 2023
Basemap: Esri "World Street Map" map service

EDR

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APPENDIX A

Summary Tables

Table 1. Completed Survey Information

Survey Date	Point Count Locations Surveyed	Start Time (a.m.)	End Time (a.m.)	Number of Surveyors	Number of Survey-Hours[1]	Temperature Range (°F)	Cloud Cover Range (%)	Wind Direction(s)	Wind Speed Range (mph)	Precipitation	Visibility Range (miles)
5/4/2023	1-7, 7.1, 8-16, 16.1, 16.2, 17	5:22	10:05	1	4:43	39-44	90-100	NNE, NW	0-3	Fog	<0.62-10+
5/5/2023	36-49	5:20	9:00	1	3:40	43-48	50-100	NNW	0-3	None	10+
5/5/2023	69-76, 76.1, 77-80	5:37	9:33	1	3:56	44-45	90-100	WNW, NW	1-3	Fog	<0.62-10
5/9/2023	69-76, 76.1, 77-80	5:48	9:36	1	3:48	36-48	25-50	N	1-3	None	10+
5/11/2023	36-49	5:11	10:30	1	5:19	40-62	0-25	W	1-7	None	10+
5/11/2023	1-7, 7.1, 8-14, 15.1, 16, 16.1, 16.2, 17	5:13	9:53	1	4:40	42-61	10-50	WSW, W	1-7	None	10+
5/17/2023	36-41, 49-50, 50.1, 51-55, 60	5:23	10:15	1	4:52	37	90-100	NNW	8-13+	None	10+
5/17/2023	1-7, 7.1, 8-14, 15.1, 16, 16.1, 16.2, 17, 18	5:07	10:25	1	5:18	37-38	50-90	N, NW	1-13+	None	10+

Survey Date	Point Count Locations Surveyed	Start Time (a.m.)	End Time (a.m.)	Number of Surveyors	Number of Survey-Hours[1]	Temperature Range (°F)	Cloud Cover Range (%)	Wind Direction(s)	Wind Speed Range (mph)	Precipitation	Visibility Range (miles)
5/17/2023	56-59, 59.1, 69-76, 76.1, 77-80	5:28	10:21	1	4:53	38	90-100	N, NNW	4-7	None	10+
5/19/2023	42-48, 61-68	5:22	10:22	1	5:00	48-54	25-100	S	8-13+	None	10+
5/19/2023	19-21, 24, 27-33, 33.2, 34, 35, 35.1	5:05	10:16	1	5:11	48-60	10-50	S	8-13+	None	10+
5/23/2023	41-50, 50.1, 51-53	6:00	10:28	1	4:28	45-65	0-50	NNE, S	1-7	None	10+
5/24/2023	1-7, 7.1, 8-14, 15.1, 16, 16.1, 16.2, 17	5:04	10:23	2	5:19	59-67	10-90	SSW, WNW	0-12	None	10+
5/25/2023	54-68	5:10	8:40	1	3:30	34-42	0	N, NW	4-12	None	10+
5/25/2023	36-40, 69-76, 76.1-80	5:19	10:16	1	4:57	33-49	0-25	N, NNW	1-7	None	10+
5/25/2023	18-21, 24, 27-33, 33.1, 34	5:07	9:53	1	4:46	33-46	0-25	NE, NW	1-7	None	10+
5/30/2023	36-50, 50.1	5:15	9:34	1	4:19	57-65	0	SSE, S	4-12	None	10+

Survey Date	Point Count Locations Surveyed	Start Time (a.m.)	End Time (a.m.)	Number of Surveyors	Number of Survey-Hours[1]	Temperature Range (°F)	Cloud Cover Range (%)	Wind Direction(s)	Wind Speed Range (mph)	Precipitation	Visibility Range (miles)
5/31/2023	1-7, 7.1, 8-14, 15.1, 16, 16.1, 16.2, 17	4:58	10:16	1	5:18	56-73	10-25	S	0-3	None	10+
5/31/2023	19-21, 24, 30-35, 35.1, 56-58	5:33	10:27	1	4:54	50-74	0	NNE, SSE	1-3	None	10+
6/1/2023	27-29, 33.1, 54-55, 60-68	5:40	10:29	1	4:49	52-77	0	N	1-3	None	10+
6/2/2023	18, 51-53, 59, 69-76, 76.1-80	5:08	10:28	1	5:20	53-82	0	N, NNW	1-3	None	10+
6/6/2023	18-20, 24, 34, 35, 35.1, 42-48	5:53	10:29	1	4:36	48-62	90-100	NW, NNW	1-7	Other (Wildfire Smoke)	0.62-10+
6/8/2023	50, 50.1, 51, 54, 55, 60-68	5:08	9:17	1	4:09	50	90-100	W, WNW	1-7	Fog, Rain (Intermittent Light), Other (Wildfire Smoke)	0.62-10
6/8/2023	56-58, 59.1, 69-76, 76.1-80	6:05	9:49	1	3:44	50-51	90-100	NNW	1-3	Rain (Intermittent Light), Other (Wildfire Smoke)	0.62-10

Survey Date	Point Count Locations Surveyed	Start Time (a.m.)	End Time (a.m.)	Number of Surveyors	Number of Survey-Hours[1]	Temperature Range (°F)	Cloud Cover Range (%)	Wind Direction(s)	Wind Speed Range (mph)	Precipitation	Visibility Range (miles)
6/8/2023	27-33, 33.1, 36-41, 49	5:14	10:07	1	4:53	48-53	90-100	NNW	1-3	Fog, Rain (Intermittent Light), Other (Wildfire Smoke)	<0.62-10
6/9/2023	1-7, 7.1, 8-13, 21, 52, 53	4:59	10:00	1	5:01	55-58	50-100	N, W	0-3	None	10+
6/13/2023	36-49	5:15	9:30	1	4:15	54-58	90-100	W, WNW	8-12	None	10+
6/13/2023	65-76, 76.1-80	5:19	10:26	1	5:07	55-62	50-100	NW	1-7	None	10+
6/14/2023	1-7, 7.1, 8-14, 15.1, 16, 16.1, 16.2, 17	5:06	10:01	1	4:55	53-56	90-100	W, SE	1-13+	Rain (Intermittent/ Light), Rain (Sustained/Heavy)	0.62-10
6/15/2023	19-21, 24, 27-33, 33.2, 34, 35, 35.1	5:12	10:05	1	4:53	54-60	90-100	W	8-12	Rain (Intermittent/ Light); None	0.62-10+
6/15/2023	50.1, 50-64	5:36	10:21	1	4:45	55-62	50-100	NW	4-7	Rain (Intermittent/ Light), None	0.62-10+
6/20/2023	18-21, 24, 27-33, 33.2, 34, 35, 35.1	4:56	10:03	1	5:07	55-69	25-90	S, SE	4-12	None	10+

Survey Date	Point Count Locations Surveyed	Start Time (a.m.)	End Time (a.m.)	Number of Surveyors	Number of Survey-Hours[1]	Temperature Range (°F)	Cloud Cover Range (%)	Wind Direction(s)	Wind Speed Range (mph)	Precipitation	Visibility Range (miles)
6/21/2023	1-7, 7.1, 8-14, 15.1, 16, 17	5:10	10:29	1	5:10	54-71	90-100	SE, E	1-7	None	10+
6/21/2023	50, 50.1-64	5:19	10:22	1	5:03	52-69	10-50	NNE, SE	0-3	None	10+
6/22/2023	65-76, 76.1,80	5:17	10:27	1	5:10	50-66	0-90	NNE, ESE	1-7	None	10+
6/28/2023	1-7, 7.1, 8-14, 15.1, 16, 16.1, 16.2, 17	4:59	10:20	1	5:21	64	90-100	W, NW	4-12	Fog, Rain (Intermittent/ Light)	0.62-10
6/28/2023	35, 35.1-49	5:23	10:25	1	5:02	62-64	90-100	NW, WNW	1-7	Rain (Intermittent/ Light)	0.62-10
7/07/2023	51-68	5:13	10:10	1	4:57	66-80	25-90	ENE, WNW	1-3	None	10+
7/11/2023	18-21, 24, 27-33, 33.1, 34	5:03	9:48	1	4:45	63-70	10-25	N, W	0-3	None	10+
7/12/2023	1-7, 7.1, 8-14, 15.1, 16, 16.1, 16.2, 17	5:06	10:09	1	5:03	61-72	10-50	ENE, S	1-7	None	10+
7/12/2023	35, 35.1-49	5:15	9:47	1	4:32	63-73	10-90	NNE, NW	1-3	None	10+

Survey Date	Point Count Locations Surveyed	Start Time (a.m.)	End Time (a.m.)	Number of Surveyors	Number of Survey-Hours[1]	Temperature Range (°F)	Cloud Cover Range (%)	Wind Direction(s)	Wind Speed Range (mph)	Precipitation	Visibility Range (miles)
7/13/2023	50, 50.1, 69-76, 76.1-80	5:35	10:07	1	4:32	66-77	0-90	SE, S	1-7	None	10+
7/17/2023	18-21, 24, 27-33, 33.1, 34-35.1	5:08	10:02	1	4:54	60-73	90-100	SW, S	1-7	Wildfire Smoke	0.62-10
7/19/2023	36-50.1	5:15	10:10	1	4:55	58-70	0-100	W, NNW	1-3	None	10+
7/19/2023	1-7, 7.1, 8-14, 15.1, 16, 16.1, 16.2, 17	5:08	9:55	1	4:47	59-70	10-50	W, NNW	0-3	Wildfire Smoke, None	0.62-10+
7/19/2023	65-76, 76.1-80	5:34	10:29	1	4:55	57-72	0-25	N, NNW	0-3	None	10+
7/20/2023	51-64	5:18	9:50	1	4:32	52-70	0-100	S, SE	1-3	None	10+

[1] The total amount of time surveyors conducted surveys on-site (h:mm).

Table 2. Summary of Avian Species Observed

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Alpha Code[1]	Common Name	Scientific Name	Within 100 meters[2]	Beyond 100 meters[3]	Total[4]	Avian Use[5]	Composition[6]	Frequency[7]	Activity Code[8]
ALFL	Alder Flycatcher	*Empidonax alnorum*	9	47	56	0.01	0.04%	1.06%	S
AMCR	American Crow	*Corvus brachyrhynchos*	49	867	916	0.06	2.02%	4.38%	A, T
AMGO	American Goldfinch	*Spinus tristis*	250	394	644	0.33	10.30%	21.09%	P, T
AMKE	American Kestrel	*Falco sparverius*	2	0	2	0.003	0.08%	0.27%	H, S
AMRE	American Redstart	*Setophaga ruticilla*	0	4	4	0.00	0.00%	0.00%	S
AMRO	American Robin	*Turdus migratorius*	92	654	746	0.12	3.80%	9.68%	T
AMWO	American Woodcock	*Scolopax minor*	1	0	1	0.001	0.04%	0.13%	H
BAOR	Baltimore Oriole	*Icterus galbula*	0	28	28	0.00	0.00%	0.00%	S
BARS	Barn Swallow	*Hirundo rustica*	74	42	116	0.10	3.05%	4.00%	H
BAWW	Black-and-white Warbler	*Mniotilta varia*	0	1	1	0.00	0.00%	0.00%	S
BCCH	Black-capped Chickadee	*Poecile atricapillus*	12	204	216	0.02	0.50%	1.06%	H
BEKI	Belted Kingfisher	*Megaceryle alcyon*	0	1	1	0.00	0.00%	0.00%	H
BHCO	Brown-headed Cowbird	*Molothrus ater*	4	28	32	0.005	0.16%	0.40%	CF, CN
BHVI	Blue-headed Video	*Vireo solitarius*	0	2	2	0.00	0.00%	0.00%	S
BLJA	Blue Jay	*Cyanocitta cristata*	7	275	282	0.01	0.29%	0.66%	H
BOBO	Bobolink	*Dolichonyx oryzivorus*	221	201	422	0.29	9.12%	12.60%	CF, CN
BRCR	Brown Creeper	*Certhia americana*	0	4	4	0.00	0.00%	0.00%	S
BRTH	Brown Thrasher	*Toxostoma rufum*	7	31	38	0.01	0.29%	0.93%	S
BTNW	Black-throated Green warbler	*Setophaga virens*	0	1	1	0.00	0.00%	0.00%	S
BWWA	Blue-winged Warbler	*Vermivora cyanoptera*	1	6	7	0.001	0.04%	0.13%	S
CANG	Canada Goose	*Branta canadensis*	54	145	199	0.07	2.22%	2.39%	FL
CARW	Carolina Wren	*Thryothorus ludovicianus*	0	3	3	0.00	0.00%	0.00%	S
CEDW	Cedar Waxwing	*Bombycilla cedrorum*	7	21	28	0.01	0.29%	0.80%	H
CHSP	Chipping Sparrow	*Spizella passerina*	26	101	127	0.03	1.07%	3.18%	S
COGR	Common Grackle	*Quiscalus quiscula*	23	37	60	0.03	0.95%	2.12%	A

Alpha Code[1]	Common Name	Scientific Name	Within 100 meters[2]	Beyond 100 meters[3]	Total[4]	Avian Use[5]	Composition[6]	Frequency[7]	Activity Code[8]
CORA	Common Raven	*Corvus corax*	0	9	9	0.00	0.00%	0.00%	H
COYE	Common Yellowthroat	*Geothlypis trichas*	43	465	508	0.06	1.77%	5.44%	S
CSWA	Chestnut-sided Warbler	*Setophaga pensylvanica*	4	37	41	0.005	0.16%	0.53%	S
DEJU	Dark-eyed Junco	*Junco hyemalis*	0	3	3	0.00	0.00%	0.00%	S
DOWO	Downy Woodpecker	*Dryobates pubescens*	0	1	1	0.00	0.00%	0.00%	CL
EABL	Eastern Bluebird	*Sialia sialis*	3	14	17	0.004	0.12%	0.40%	S
EAKI	Eastern Kingbird	*Tyrannus tyrannus*	2	22	24	0.002	0.08%	0.27%	P
EAME	Eastern Meadowlark	*Sturnella magna*	2	12	14	0.002	0.08%	0.27%	S
EAPH	Eastern Phoebe	*Sayornis phoebe*	0	19	19	0.00	0.00%	0.00%	S
EATO	Eastern Towhee	*Pipilo erythrophthalmus*	8	76	84	0.01	0.33%	1.06%	S
EAWP	Eastern Wood-Pewee	*Contopus virens*	2	69	71	0.002	0.08%	0.27%	S
EUST	European Starling	*Sturnus vulgaris*	73	228	301	0.10	3.01%	1.33%	CF, FL
FISP	Field Sparrow	*Spizella pusilla*	39	186	225	0.05	1.61%	4.11%	S
GBHE	Great Blue Heron	*Ardea herodias*	5	0	5	0.007	0.21%	0.53%	H
GCFL	Great Crested Flycatcher	*Myiarchus crinitus*	2	34	36	0.002	0.08%	0.27%	S
GRCA	Gray Catbird	*Dumetella carolinensis*	34	152	186	0.05	1.40%	4.11%	S
GRHE	Green Heron	*Butorides virescens*	0	1	1	0.00	0.00%	0.00%	H
[redacted]	[redacted]	[redacted]	0	1	1	0.00	0.00%	0.00%	S
HAWO	Hairy Woodpecker	*Dryobates villosus*	0	2	2	0.00	0.00%	0.00%	H
HETH	Hermit Thrush	*Catharus guttatus*	0	2	2	0.00	0.00%	0.00%	H, S
HOFI	House Finch	*Haemorhous mexicanus*	7	22	29	0.01	0.29%	0.53%	S
[redacted]	[redacted]	[redacted]	1	4	5	0.001	0.04%	0.13%	S
HOSP	House Sparrow	*Passer domesticus*	2	15	17	0.003	0.08%	0.13%	FL
HOWR	House Wren	*Troglodytes aedon*	12	98	110	0.02	0.50%	1.59%	A
INBU	Indigo Bunting	*Passerina cyanea*	5	59	64	0.01	0.21%	0.66%	S
KILL	Killdeer	*Charadrius vociferus*	110	149	259	0.15	4.53%	5.04%	DD
LBDO	Long-billed Dowitcher	*Limnodromus scolopaceus*	3	0	3	0.004	0.12%	0.13%	F
LEFL	Least Flycatcher	*Empidonax minimus*	2	17	19	0.003	0.08%	0.27%	S7
MALL	Mallard	*Anas platyrhynchos*	12	17	29	0.02	0.50%	0.80%	P

Alpha Code[1]	Common Name	Scientific Name	Within 100 meters[2]	Beyond 100 meters[3]	Total[4]	Avian Use[5]	Composition[6]	Frequency[7]	Activity Code[8]
MODO	Mourning Dove	*Zenaida macroura*	30	202	232	0.04	1.24%	3.05%	S
MOWA	Mourning Warbler	*Geothlypis philadelphia*	0	1	1	0.00	0.00%	0.00%	S
NAWA	Nashville Warbler	*Leiothlypis ruficapilla*	1	3	4	0.001	0.04%	0.13%	S
NOCA	Northern Cardinal	*Cardinalis cardinalis*	14	300	314	0.02	0.60%	1.90%	S
NOFL	Northern Flicker	*Colaptes auratus*	3	67	70	0.004	0.12%	0.40%	H
NOMO	Northern Mockingbird	*Mimus polyglottos*	1	6	7	0.001	0.04%	0.13%	S
NRWS	Northern Rough-winged Swallow	*Stelgidopteryx serripennis*	7	0	7	0.01	0.29%	0.66%	H
OVEN	Ovenbird	*Seiurus aurocapilla*	2	89	91	0.003	0.08%	0.27%	S7
[redacted]	[redacted]	[redacted]	1	0	1	0.001	0.04%	0.13%	H
PHVI	Philadelphia Vireo	*Vireo philadelphicus*	0	2	2	0.00	0.00%	0.00%	S
PIWO	Pileated Woodpecker	*Dryocopus pileatus*	2	19	21	0.003	0.08%	0.27%	H
PUFU	Purple Finch	*Haemorhous purpureus*	3	8	11	0.004	0.12%	0.40%	S
RBGR	Rose-breasted Grosbeak	*Pheucticus ludovicianus*	1	24	25	0.001	0.04%	0.13%	S
RBWO	Red-bellied Woodpecker	*Melanerpes carolinus*	1	50	51	0.001	0.04%	0.13%	H
REVI	Red-eyed Vireo	*Vireo olivaceus*	5	151	156	0.01	0.21%	0.66%	S
ROPI	Rock Pigeon	*Columba livia*	25	51	76	0.03	1.03%	0.66%	H
RTHA	Red-tailed Hawk	*Buteo jamaicensis*	5	21	26	0.01	0.21%	0.66%	H
RWBL	Red-winged Blackbird	*Agelaius phoeniceus*	492	1526	2018	0.65	20.30%	28.25%	CF, CN, FL, ON
SAVS	Savannah Sparrow	*Passerculus sandwichensis*	221	276	497	0.29	9.12%	22.68%	FL
SCTA	Scarlet Tanager	*Piranga olivacea*	1	11	12	0.001	0.04%	0.13%	S
SOSP	Song Sparrow	*Melospiza melodia*	285	595	880	0.38	11.74%	29.05%	FL
SWSP	Swamp Sparrow	*Melospiza georgiana*	2	2	4	0.003	0.08%	0.27%	S
TEWA	Tennessee Warbler	*Leiothlypis peregrina*	0	1	1	0.00	0.00%	0.00%	S
TRES	Tree Swallow	*Tachycineta bicolor*	6	0	6	0.01	0.25%	0.13%	H
TUTI	Tufted Titmouse	*Baeolophus bicolor*	1	34	35	0.001	0.04%	0.13%	S
TUVU	Turkey Vulture	*Cathartes aura*	8	10	18	0.01	0.33%	0.93%	H
VEER	Veery	*Catharus fuscescens*	1	5	6	0.001	0.04%	0.13%	S

Alpha Code[1]	Common Name	Scientific Name	Within 100 meters[2]	Beyond 100 meters[3]	Total[4]	Avian Use[5]	Composition[6]	Frequency[7]	Activity Code[8]
[redacted]	[redacted]	[redacted]	0	4	4	0.00	0.00%	0.00%	S
WAVI	Warbling Vireo	*Vireo gilvus*	3	51	54	0.004	0.12%	0.40%	S7
WBNU	White-breasted Nuthatch	*Sitta carolinensis*	0	9	9	0.00	0.00%	0.00%	S
WIFL	Willow Flycatcher	*Empidonax traillii*	16	47	63	0.02	0.66%	1.72%	S
WITU	Wild Turkey	*Meleagris gallopavo*	8	22	30	0.01	0.33%	0.40%	H
WODU	Wood Duck	*Aix sponsa*	3	0	3	0.004	0.12%	0.27%	F
WOTH	Wood Thrush	*Hylocichla mustelina*	1	108	109	0.001	0.04%	0.13%	S
WTSP	White-throated Sparrow	*Zonotrichia albicollis*	1	20	21	0.001	0.04%	0.13%	S
YBCU	Yellow-billed Cuckoo	*Coccyzus americanus*	0	1	1	0.00	0.00%	0.00%	S
YBSA	Yellow-bellied Sapsucker	*Sphyrapicus varius*	0	6	6	0.00	0.00%	0.00%	H
YEWA	Yellow Warbler	*Setophaga petechia*	65	301	366	0.09	2.68%	7.29%	S
YRWA	Yellow-rumped Warbler	*Setophaga coronata*	2	6	8	0.003	0.08%	0.27%	S
YTVI	Yellow-throated Vireo	*Vireo flavifrons*	0	1	1	0.00	0.00%	0.00%	S

[1] Species codes are based on standardized four-letter alpha codes defined by the Institute for Bird Populations (https://www.birdpop.org/docs/misc/Alpha_codes_eng.pdf). The alpha code for the American goldfinch was changed from AMGO to AGOL while the 2023 breeding bird study was underway; therefore, it is reported as AMGO in this report.

[2] Includes all observations recorded within 100 meters of point count locations during 5-minute point count surveys.

[3] Includes all observations recorded more than 100 meters from point count locations during 5-minute point count surveys.

[4] Includes all observations recorded within and more than 100 meters from point count locations during 5-minute point count surveys.

[5] Represents the mean number of birds recorded per 5-minute point count survey (based on all observations recorded within 100 meters of point count locations).

[6] Reflects the percentage of point count survey observations that were of the species (based on all observations recorded within 100 meters of point count locations).

[7] Represents the percentage of 5-minute point count surveys during which the species was recorded (based on all observations recorded within 100 meters of point count locations).

[8] Represents the activity or behavior observed (based on all observations) that was most indicative of on-site breeding, based on the codes used for the New York Breeding Bird Atlas III (eBird, 2020). The following additional code was used when no other more indicative behavior was observed: CL = Calling.

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Table 3. Summary of Avian Metrics for Each Point Count Location

Point Count Location	Habitat Type(s)	Number of Point Count Surveys	Number of Point Count Surveys at Alternate Locations [1]	Total Observations	Avian Use[2]	Total Species Richness[3]	Mean Species Richness[4]
1	Row Cropland (Corn)	10	1	137	13.70	30	9.20
2	Row Cropland (Corn)	11	0	176	16.00	38	10.45
3	Row Cropland (Corn)	10	1	132	13.20	34	9.20
4	Row Cropland (Corn)	10	1	183	18.30	34	9.00
5	Row Cropland (Corn)	11	0	169	15.36	36	10.00
6	Field Cropland (Hay)	11	0	259	23.55	38	11.55
7	Row Cropland (Corn)	11	0	119	10.82	30	7.27
7.1	Row Cropland (Corn)	10	1	126	12.60	26	7.60
8	Row Cropland (Corn)	10	1	111	11.10	27	7.70
9	Row Cropland (Corn)	11	0	130	11.82	25	6.73
10	Row Cropland (Corn)	11	0	161	14.64	27	8.55
11	Row Cropland (Corn)	9	2	163	18.11	36	11.67
12	Field Cropland (Hay)	11	0	193	17.55	34	11.64
13	Row Cropland (Corn)	11	0	162	14.73	34	10.73
14	Row Cropland (Corn)	10	0	199	20.00	33	10.40
15	Row Cropland (Corn)	10	0	193	19.30	35	12.00
16	Row Cropland (Corn)	10	0	182	10.2	33	10.50

Point Count Location	Habitat Type(s)	Number of Point Count Surveys	Number of Point Count Surveys at Alternate Locations [1]	Total Observations	Avian Use[2]	Total Species Richness[3]	Mean Species Richness[4]
16.1	Field Cropland (Hay)	9	0	150	16.67	24	7.56
16.2	Row Cropland (Corn)	9	0	136	15.11	32	8.89
17	Row Cropland (Corn)	10	0	140	14.00	30	8.90
18	Field Cropland (Hay)	8	0	139	17.38	33	10.13
19	Row Cropland (Soy)	8	0	116	14.50	25	8.00
20	Row Cropland (Soy)	8	0	213	26.63	27	9.25
21	Row Cropland (Soy)	8	0	105	13.13	32	9.63
24	Successional Old Field	8	0	123	15.38	26	9.25
27	Field Cropland (Oat)	8	0	144	18.00	33	9.75
28	Field Cropland (Oat)	8	0	139	17.38	33	9.63
29	Field Cropland (Oat)	8	0	101	12.63	29	9.38
30	Field Cropland (Hay)	8	0	90	11.25	29	8.50
31	Field Cropland (Hay)	8	0	103	12.88	28	9.13
32	Field Cropland (Hay)	8	0	86	10.75	22	7.50
33	Field Cropland (Hay)	8	0	132	16.5	29	8.00
33.1	Pastureland	4	4	56	14	21	10.00
34	Row Cropland (Corn)	8	0	211	26.38	29	9.38
35	Field Cropland (Hay)	8	0	139	17.38	26	9.88

Point Count Location	Habitat Type(s)	Number of Point Count Surveys	Number of Point Count Surveys at Alternate Locations [1]	Total Observations	Avian Use[2]	Total Species Richness[3]	Mean Species Richness[4]
35.1	Field Cropland (Hay)	8	0	128	16.00	28	9.50
36	Field Cropland (Hay)	10	0	100	10.00	25	6.90
37	Row Cropland (Corn)	10	0	115	11.50	30	7.40
38	Row Cropland (Corn)	10	0	112	11.20	29	7.50
39	Field Cropland (Hay)	10	0	142	14.20	32	9.00
40	Field Cropland (Alfalfa)	10	0	194	19.40	35	10.30
41	Row Cropland (Corn)	10	0	154	15.40	29	8.00
42	Field Cropland (Hay)	10	0	114	11.40	27	8.40
43	Field Cropland (Hay)	10	0	98	9.80	23	6.80
44	Field Cropland (Hay)	10	0	156	15.60	31	9.00
45	Row Cropland (Corn)	10	0	145	14.50	26	8.30
46	Field Cropland (Hay)	10	0	167	16.70	24	9.30
47	Field Cropland (Hay)	10	0	162	16.20	25	7.90
48	Row Cropland (Corn)	10	0	124	12.40	27	8.10
49	Row Cropland (Corn)	9	1	117	13.00	30	8.11
50	Field Cropland (Hay)	8	0	104	13.00	25	7.00
50.1	Field Cropland (Hay)	8	0	77	9.63	27	7.63
51	Row Cropland (Corn and Soy)	8	0	124	15.50	24	9.50

Point Count Location	Habitat Type(s)	Number of Point Count Surveys	Number of Point Count Surveys at Alternate Locations [1]	Total Observations	Avian Use[2]	Total Species Richness[3]	Mean Species Richness[4]
52	Row Cropland (Soy)	8	0	104	13.00	29	9.13
53	Row Cropland (Soy)	8	0	86	10.75	24	7.88
54	Field Cropland (Wheat)	8	0	111	13.88	27	9.88
55	Row Cropland (Corn)	8	0	154	19.25	23	7.75
56	Row Cropland (Corn)	8	0	167	20.88	24	7.88
57	Field Cropland (Hay)	8	0	135	16.88	22	8.25
58	Field Cropland (Hay)	8	0	199	24.88	18	7.34
59	Pastureland	4	4	76	19.00	16	8.25
60	Pastureland	8	0	107	13.38	26	8.00
61	Pastureland	8	0	119	14.88	24	8.00
62	Pastureland	8	0	127	15.88	27	9.63
63	Pastureland	8	0	144	18.00	28	9.63
64	Field Cropland (Hay)	8	0	104	13.00	28	8.38
65	Row Cropland (Soy)	8	0	102	12.75	26	8.75
66	Row Cropland (Soy)	8	0	98	12.25	25	9.13
67	Row Cropland (Soy)	8	0	88	11.00	19	7.50
68	Row Cropland (Soy)	8	0	130	16.25	23	9.13
69	Field Cropland (Hay and Alfalfa)	10	0	149	15.00	23	8.80

Point Count Location	Habitat Type(s)	Number of Point Count Surveys	Number of Point Count Surveys at Alternate Locations [1]	Total Observations	Avian Use[2]	Total Species Richness[3]	Mean Species Richness[4]
70	Row Cropland (Corn)	10	0	122	12.20	32	7.60
71	Field Cropland (Hay and Alfalfa)	10	0	112	11.20	19	6.20
72	Field Cropland (Hay)	10	0	125	12.50	23	8.20
73	Field Cropland (Hay and Alfalfa)	10	0	130	13.00	28	8.30
74	Field Cropland (Alfalfa)	10	0	158	15.80	24	8.20
75	Field Cropland (Alfalfa)	10	0	161	16.10	23	7.60
76	Field Cropland (Hay and Alfalfa)	10	0	156	15.60	28	9.20
76.1	Successional Old Field	10	0	177	17.70	22	9.20
77	Field Cropland (Hay and Alfalfa)	10	0	137	13.70	27	8.40
78	Field Cropland (Hay and Alfalfa)	10	0	118	11.80	25	7.80
79	Row Cropland (Corn)	10	0	110	11.00	24	7.80
80	Field Cropland (Hay)	10	0	111	11.10	25	7.30

[1] Alternate point count locations were used when access and visibility were restricted due to tall crop height or when access was restricted due to the presence of livestock within fenced pasture areas. This column notes surveys that were completed from alternate point count locations located more than 100 meters from the original corresponding point count locations.

[2] The mean number of observations recorded during 5-minute point count surveys.

[3] The total number of species observed at the survey location.

[4] The mean number of species observed during 5-minute point count surveys.

Table 4. State-Listed Species Observations

BEGIN CONFIDENTIAL INFORMATION<

Common Name	Scientific Name	Conservation Status[1]	Number of Observations[2]	Sex/Age	Date(s)	Nearest Point Count Location(s)	Observed Behavior(s)	Probable or Confirmed Breeding Behavior(s)[3]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

[1] Highest conservation status based on the List of Endangered, Threatened and Special Concern Fish & Wildlife Species of New York State (NYSDEC, 2015a).

[2] Includes all observations documented, including those recorded during point count surveys and incidentally. In some cases, multiple features (e.g., perch point and flight path) were used to represent a single bird. In these instances, each distinct feature was considered a separate observation.

[3] Based on the codes used for the New York Breeding Bird Atlas III (eBird, 2020).**>END CONFIDENTIAL INFORMATION**