Net Conservation Benefit Plan

Hoffman Falls Wind Project

Towns of Fenner, Nelson, Eaton, and Smithfield

Madison County, New York

Prepared for:

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ACRONYMS AND ABBREVIATIONS

EDR	Environmental Design & Research, Landscape Architecture, Engineering & Environmental Services, D.P.C.
IPaC	Information for Planning and Consultation
MW	megawatt
NCBP	Net Conservation Benefit Plan
NYCRR	New York Codes, Rules and Regulations
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
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service

1.0 INTRODUCTION

On behalf of Hoffman Falls Wind LLC, a wholly owned subsidiary of Liberty Renewables Inc. (the Applicant), Environmental Design & Research, Landscape Architecture, Engineering & Environmental Services, D.P.C. (EDR) has prepared this Net Conservation Benefit Plan (NCBP) for the Hoffman Falls Wind Project, a proposed wind energy generation facility and associated infrastructure (the Facility) located in Madison County, New York. This NCBP supports a siting permit application (Application) under New York's Accelerated Renewable Energy Growth and Community Benefit Act, Executive Law § 94-c (Section 94-c) regulations.[1] This NCBP 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 review of the proposed Facility in accordance with Title 19 New York Codes, Rules, and Regulations (19 NYCRR) 900-6.4(o), as well as the State Endangered Species Act (Environmental Conservation Law §11-0535 [ECL Article 11]) and its implementing regulations at Title 6 New York Codes, Rules, and Regulations (6 NYCRR) Part 182. The 6 NYCRR Part 182 regulations include a listing of endangered species, threatened species, and species of special concern in New York, requirements for incidental take permit applications, and standards for issuance of incidental take permits. As described in 6 NYCRR Part 182.11, an endangered or threatened species mitigation plan (i.e., an NCBP) must include:

> *(1) the measures the applicant will undertake to minimize and fully mitigate impacts to any species listed as endangered or threatened in this Part for which the incidental take permit application is being submitted. All proposed measures shall be capable of successful implementation, and shall be legally, technologically, economically and biologically practicable;*
>
> *(2) data and information to ensure that the taking sought to be authorized by the incidental take permit will not reduce the likelihood of the survival or recovery of the species in New York;*
>
> *(3) a proposed method for monitoring the effectiveness of the plan; and*
>
> *(4) a description of the funding source, the level of funding, and the guarantee or assurance of funding that the applicant will provide to implement the endangered or threatened species mitigation plan including but not limited to bonds, insurance, or escrow.*

Therefore, this NCBP has been prepared in accordance with the substantive requirements of 6 NYCRR Part 182, which requires the preparation of a mitigation plan that will result in a net conservation benefit to state listed species that may be affected by Facility construction and/or operation. According to 6 NYCRR Part 182.2, the term "net conservation benefit" is defined as follows:

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

> *(n) Net conservation benefit means a successful enhancement of the species' subject population, successful enhancement of the species' overall population or a contribution to the recovery of the species within New York. To be classified as a net conservation benefit, the enhancement or contribution must benefit the affected species listed as endangered or threatened in this Part or its habitat to a greater degree than if the applicant's proposed activity were not undertaken.*

Based on previous consultations with ORES and the NYSDEC, and environmental review and analysis conducted to date, the construction and operation of the Facility may result in impacts to areas of occupied habitat used by two state listed grassland bird species: **BEGIN CONFIDENTIAL INFORMATION**<[redacted]>**END CONFIDENTIAL INFORMATION** Given the requirements discussed previously and the potential impacts to these species, this NCBP identifies: (1) the estimated potential take of the listed species (in the form of adverse modification of occupied habitat for grassland bird species and direct take for **BEGIN CONFIDENTIAL INFORMATION**<[redacted]>**END CONFIDENTIAL INFORMATION** (2) avoidance and minimization measures that have been implemented to reduce potential Facility-related impacts; and (3) mitigation measures that will be implemented by the Applicant to ensure that a net conservation benefit is provided for the potentially affected species.

2.0 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) (**Figure 1**). 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 temporary concrete batch plant, an operations and 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 lands that were evaluated to host the Facility (i.e., the Facility Site) comprise approximately 3,897 acres (**Figure 2**).

3.0 OCCUPIED HABITAT AND ANTICIPATED IMPACTS

3.1 Existing Conditions

In developing the Application for the Facility, the Applicant has gathered a substantial amount of information on existing ecological conditions within the Facility Site. A Wildlife Site Characterization (WSC) Report was prepared and submitted to ORES and the NYSDEC on February 16, 2023 as part of the Section 94-c pre-application process. In addition, spring raptor migration surveys, breeding bird surveys, fall raptor surveys, winter raptor surveys, marsh bird surveys, and forest raptor surveys were completed for the Facility between 2021 and 2023. Based on these assessments, the Facility Site is primarily composed of agricultural fields (row and field cropland), along with mixed forest, evergreen forest, woody wetlands, early successional communities, and developed land (primarily rural single-family houses, farms, and associated yards).

3.2 Summary of Agency Database Review, Consultation, and Field Survey Results

In addition to data collected on existing conditions with the Facility Site, the Applicant and EDR have engaged in consultations with federal and state agencies regarding the potential presence of threatened and endangered species within the vicinity of the Facility Site. These consultations included database review via the U.S. Fish and Wildlife Service (USFWS) online Information for Planning and Consultation (IPaC) system, as well as correspondence with the New York Natural Heritage Program (NYNHP), the NYSDEC, and ORES. 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 indicated that the NYNHP database contains records of several state listed endangered or threatened bird species that have been documented within 10 miles of the Facility. These bird species included **BEGIN CONFIDENTIAL INFORMATION<** [redacted] **>END CONFIDENTIAL INFORMATION**

Following receipt of this NYNHP response letter, EDR consulted with ORES and the NYSDEC to obtain occurrence records for any additional state listed species that may have been documented in the vicinity of the Facility Site. ORES provided a pre-application consultation letter dated March 6, 2023, which indicated that the Facility is not sited within areas of previously mapped occupied habitat for any state listed species. However, ORES recommended conducting on-site avian field surveys to evaluate state listed species presence and use patterns at the Facility Site.

Confirmed breeding behavior was observed for **BEGIN CONFIDENTIAL INFORMATION**<[redacted]>**END CONFIDENTIAL INFORMATION** Descriptions and habitat requirements for these species are provided in Section 3.3.

Following the completion of pre-application avian field studies, EDR estimated where occupied habitat areas may be located within the Facility Site based on state listed endangered or threatened species documented during the on-site field surveys. An occupied habitat evaluation memorandum containing EDR's analysis was provided to ORES on October 27, 2023. As noted previously, ORES has determined that **BEGIN CONFIDENTIAL INFORMATION**<[redacted]>**END CONFIDENTIAL INFORMATION** take may potentially result during the Facility's operation phase. Therefore, the occupied habitat evaluation memorandum also included an estimate of potential take for this species.

On November 30, 2023, the Applicant and EDR met with ORES and the NYSDEC to discuss the results of on-site avian field surveys that were conducted between 2021 and 2023, occupied habitat boundaries, estimated Facility-related impacts to occupied habitat and **BEGIN CONFIDENTIAL INFORMATION**<[redacted]>**END CONFIDENTIAL INFORMATION**, and requirements for the NCBP. ORES issued a Determination of Occupied Habitat, Incidental Take, and Net Conservation Benefit (Determination) for the Facility on January 5, 2024. In the summer of 2024, the Applicant made some minor adjustments to the Facility layout, which resulted in slight changes to the level of habitat modification and required mitigation. These layout adjustments, including shifts to several wind turbine locations, access roads, and underground collection lines, were made to address setback requirements. Given these updates to the Facility layout, the Applicant prepared a revised estimate of impact areas and mitigation requirements. This revised estimate and a request for a revised Determination were provided to ORES on September 16, 2024, and ORES issued a revised Determination on October 15, 2024 (refer to Section 3.4 for additional details).

3.3 Covered Species Descriptions and Habitat Requirements

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3.4 Occupied Habitat Determination

Based on the habitat requirements of these species, the results of the avian studies completed for the proposed Facility**,** and consultation with ORES, portions of the Facility Site represent occupied habitat for **BEGIN CONFIDENTIAL INFORMATION<** [redacted] **>END CONFIDENTIAL INFORMATION** According to 6 NYCRR Part 182.2, occupied habitat is defined as follows:

> *(o) Occupied habitat means a geographic area in New York within which a species listed as endangered or threatened in this Part has been determined by the department [i.e., the NYSDEC] to exhibit one or more essential behaviors. Once identified as occupied habitat, the department will continue to consider that area as occupied habitat until the area is no longer suitable habitat for that species or monitoring has indicated that reoccupation by that species is unlikely.*

Within ORES-identified occupied habitat, the Facility's ground disturbance during construction and aboveground footprint as part of operations is considered to represent 'take' of such habitat. Occupied habitat impacts are assessed and defined in Section 3.5. Because of the anticipated habitat loss and displacement impacts, the Applicant is required to identify avoidance and minimization actions, as well as mitigation strategies for unavoidable impacts that will satisfy the requirements of Section 94-c and 6 NYCRR Part 182. ORES, in consultation with NYSDEC, identified the extent of occupied habitat in a revised Determination that was provided on October 15, 2024. **BEGIN CONFIDENTIAL INFORMATION<** [redacted] **>END CONFIDENTIAL INFORMATION**

3.5 Adverse Modification of Occupied Habitat and Incidental Take

Based on the occupied habitat areas defined for **BEGIN CONFIDENTIAL INFORMATION**<[redacted]>**END CONFIDENTIAL INFORMATION** ORES, in consultation with NYSDEC, quantified the anticipated effects of the Facility on these areas. According to 6 NYCRR Part 182.2, the terms "take," "lesser acts," and "adverse modification of habitat" are defined as follows:

> *Take or taking means the pursuing, shooting, hunting, killing, capturing, trapping, snaring and netting of any species listed as endangered or threatened in this Part, and all lesser acts such as disturbing, harrying or worrying.*
>
> *Lesser acts means, for the purposes of this Part, harassing, harming, maiming, wounding or collecting any species listed as endangered or threatened in section 182.5 of this Part, any act which is likely to cause the death of or injury to any individual member(s) of a species listed as endangered or threatened in section 182.5 of this Part, any adverse modification of habitat of any species listed as endangered or threatened in section 182.5 of this Part, and any interference with or impairment of an essential behavior of a species listed as endangered or threatened in section 182.5 of this Part.*
>
> *Adverse modification of habitat means any alteration of the occupied habitat of any species listed as endangered or threatened in this Part that, as determined by the department, is likely to negatively affect one or more essential behaviors of such species.*

Based on these definitions, Facility-related take is anticipated to result from adverse modification of occupied breeding and wintering habitat (a lesser act). Based on the current locations of Facility components with significant aboveground footprints within ORES-identified occupied habitat (i.e., wind turbines, access roads, and the O&M facility), ORES determined that adverse modification of occupied habitat will occur, with **BEGIN CONFIDENTIAL INFORMATION**<[redacted]>**END CONFIDENTIAL INFORMATION**

3.6 Population Jeopardy Assessment

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Other areas of Madison County and in the broader central New York landscape comprise very similar ecological community and habitat types to those found at the Facility and, therefore, are expected to include large areas of suitable habitat for the species in question. **BEGIN CONFIDENTIAL INFORMATION<** [redacted] **>END CONFIDENTIAL INFORMATION** Therefore, population-level effects to listed species in question are not anticipated as a result of construction or operation of the proposed Facility, especially given that the Applicant will offset potential impacts by providing a net conservation benefit to the species in question.

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4.0 AVOIDANCE AND MINIMIZATION

4.1 Avoidance and Minimization Measures

The Applicant has refined the Facility design multiple times in order to avoid and minimize impacts to a variety of sensitive resources. The following efforts have been (or will be) implemented during the Facility planning and design, construction and restoration, and operations and maintenance phases to avoid and minimize impacts to the state listed bird and bat species covered by this NCBP to the extent practicable, given the myriad of other siting constraints inherent in the development of a wind energy generation project:

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Facility Planning and Design

- The Applicant consulted with ORES, NYSDEC, and USFWS on multiple occasions during the pre-application process regarding potential impacts to endangered and threatened bird species and appropriate studies to evaluate potential impacts such species.
- Some Facility components were sited in regularly disturbed areas primarily used for agricultural row crop (e.g., corn, soybean) production, which typically represent lower-quality habitat than grass-dominated areas. This represents impact minimization for state listed grassland bird species including **BEGIN CONFIDENTIAL INFORMATION<** [redacted] **>END CONFIDENTIAL INFORMATION**
- Some Facility wind turbines were placed near the edges of open field areas to minimize impacts to grassland bird occupied habitat. This represents impact minimization for state listed grassland bird species including **BEGIN CONFIDENTIAL INFORMATION<** [redacted] **>END CONFIDENTIAL INFORMATION**
- Some Facility components were sited in wooded areas to minimize impacts to grassland bird occupied habitat. This represents impact minimization for state listed grassland bird species including **BEGIN CONFIDENTIAL INFORMATION<** [redacted] **>END CONFIDENTIAL INFORMATION**
- Facility electrical collection lines will be installed underground to minimize impacts to grassland bird occupied habitat. This represents impact minimization for state listed grassland bird species including **BEGIN CONFIDENTIAL INFORMATION<** [redacted] **>END CONFIDENTIAL INFORMATION**
- Many access roads throughout the Facility Site were sited to follow existing farm roads to avoid or minimize impacts to grassland bird occupied habitat. This represents impact minimization for state listed grassland bird species including **BEGIN CONFIDENTIAL INFORMATION<** [redacted] **>END CONFIDENTIAL INFORMATION**

- Linear Facility components were co-located where possible to reduce impacts to grassland bird occupied habitat. This represents impact minimization for state listed grassland bird species including **BEGIN CONFIDENTIAL INFORMATION**<[redacted]>**END CONFIDENTIAL INFORMATION**
- Facility electrical collection lines will be installed underground, thereby minimizing possible collision and electrocution risk to raptors. This represents impact minimization for **BEGIN CONFIDENTIAL INFORMATION**<[redacted]>**END CONFIDENTIAL INFORMATION**

Construction and Restoration

- The Facility will avoid or minimize ground disturbance and construction-related activities within occupied habitat during certain periods as follows:
    - In areas of grassland bird occupied breeding habitat, work will be conducted between August 16 and April 22 to the extent practicable.
    - In areas of grassland bird occupied wintering habitat, work will be conducted between April 1 and November 14 to the extent practicable.
- When ground disturbance and construction-related activities must occur within grassland bird occupied breeding habitat between April 23 and August 15 and within grassland bird occupied wintering habitat between November 15 and March 31, an environmental monitor or biologist will conduct weekly surveys for state listed endangered and threatened grassland bird species.
- If an active nest is discovered within the Facility Site prior to or during construction and the Facility may result in adverse impacts to the nest, then the Facility will adjust the construction schedule to avoid work in that location until nesting has been completed.
- All temporarily disturbed grassland vegetation communities will be re-graded to pre-construction contours and reseeded with a native or naturalized grassland seed mix (unless returning to agricultural use or otherwise specified by the landowner).

Operations and Maintenance

- If, during the life of the Facility, an active nest of a federal or state listed endangered or threatened bird species is discovered incidentally within the Facility Site, the Facility will notify the NYS Department of Public Service (NYSDPS) and ORES within 48 hours of discovery and prior to any further disturbance around the nest, roost, or area where the species were seen exhibiting any breeding or roosting behavior. An area at least 500 feet in radius around the active nest shall be posted and avoided until notice to continue maintenance activities is granted by ORES.

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Facility Planning and Design

- As indicated in the ORES Determination, the Facility will not be sited or located within **BEGIN CONFIDENTIAL INFORMATION<** [redacted] **>END CONFIDENTIAL INFORMATION** Because the Facility is not located within these distances relative to state listed bat species occurrences, the Applicant assumes that there will be no impact to occupied habitat for this species.
- Some Facility components were placed in open areas, which represents impact minimization for forest-associated bat species.
- Linear Facility components were co-located where possible to reduce impacts to forestland. This represents impact minimization for forest-associated bat species.
- Wherever possible, the Applicant sited Facility components to prioritize avoidance of wetlands and streams, which can represent higher-quality wildlife habitat. This represents impact minimization for bat species.

Construction and Restoration

- Erosion, sedimentation, and pollution controls will be developed and implemented during construction to protect water quality in wetlands and streams. This represents impact minimization for bat species.
- During the construction and restoration phase, if an active state listed endangered or threatened bat species maternity colony roost tree (or structure) is discovered within the Facility Site by construction staff, the NYSDPS and ORES will be notified within 48 hours of discovery and a 500-foot radius around the colony will be posted and avoided until notice to continue maintenance related activities is granted by the NYSDPS or ORES. Following an incidental discovery of a bat maternity colony by construction staff or their consultants, the Facility will submit a re-evaluation of the potential impacts of the Facility on listed bat species to the NYSDPS and ORES.

Operations and Maintenance

- Consistent with the Section 94-c uniform standards and conditions, the Facility will implement curtailment from July 1 through October 1 when wind speeds are at or below 5.5 meters per second (m/s) and temperatures are at or above 10° Celsius (50° Fahrenheit) from 30 minutes before sunset to 30 minutes after sunrise. Curtailment will be on an individual turbine basis and will be determined by weather conditions as measured by each individual weather station on the turbine nacelle. This represents impact minimization for **BEGIN CONFIDENTIAL**

INFORMATION< [redacted] **>END CONFIDENTIAL INFORMATION** Multiple studies show that strategic seasonal turbine curtailment can reduce all bat fatalities by between 50% and 80% and potentially higher, depending on the cut-in speed used and the bat species that typically occur at a given site (Arnett et al., 2011; Baerwald et al., 2009; Martin et al., 2017). **BEGIN CONFIDENTIAL INFORMATION<** [redacted] **>END CONFIDENTIAL INFORMATION**

- During the operations and maintenance phase, if an active state listed endangered or threatened bat species maternity colony roost tree (or structure) is discovered within the Facility Site by operations staff, the NYSDPS and ORES will be notified within 48 hours of discovery and a 500-foot radius around the colony will be posted and avoided until notice to continue maintenance related activities is granted by the NYSDPS or ORES. Following an incidental discovery of a bat maternity colony by operations staff or their consultants, the Facility will submit a re-evaluation of the potential impacts of the Facility on listed bat species to the NYSDPS and ORES.
- Ultrasonic acoustic bat deterrent systems and/or other similar technologies may be employed at wind turbines during Facility operation.

Although the Applicant has designed the Facility to avoid and minimize impacts to ORES-identified occupied habitat and state listed wildlife species, the remaining impacts will be unavoidable, largely due to the many other siting constraints associated with the development of a wind energy generation project. The parcels that comprise the Facility Site represent a community of landowners who are willing and interested in hosting the Facility, but only under very specific circumstances that are compatible with their preferences. Parcels outside the Facility Site were typically not available for development; therefore, it was not possible to shift Facility components to other areas, even if they would otherwise be suitable for hosting Facility components or allow for further avoidance or minimization of impacts. Landowners agreeing to host Facility components typically have detailed requirements regarding where infrastructure can and cannot be located on their land so that they can continue to utilize portions of their property for activities like farming. Similarly, some landowners may be willing to host certain Facility components, but not others. Additionally, even if landowners are amenable to a shift in Facility components, such a change is often not possible given the setbacks and zoning requirements of the local municipalities and/or other sensitive resource constraints, which reduce flexibility for Facility design shifts. As discussed in other Exhibits of this Application, the Applicant has shifted Facility components to avoid other sensitive resources during Facility design, in addition to avoiding areas of occupied habitat, to the extent practicable. Therefore, the only Facility layout alternative available to the Applicant is often to not locate Facility components on a particular property at

all, which would undermine both the economic viability of the Facility and New York State's ability to meet the renewable energy and greenhouse gas emission reduction goals of the Climate Leadership and Community Protection Act (CLCPA, 2020).

New York State policy and laws—most notably the CLCPA—require the development of renewable energy projects to significantly increase generating capacity from renewable sources, meet clean energy goals, and combat climate change (CLCPA, 2020). The Facility has been designed to avoid and minimize impacts to environmental resources to the extent practicable, while also making a meaningful contribution to renewable energy generation in NYS and furthering well-established policy goals. As many policymakers, scientists, and developers are aware, climate change represents one of the most significant threats to a variety of wildlife species, potentially threatening two-thirds of North American bird species with extinction (National Audubon Society, 2019). Thus, any unavoidable impacts to bird species and their habitats from development of renewable energy projects, such as the proposed Facility, must be balanced against the environmental threats to those species and their habitats posed by a failure to address and mitigate climate change.

Post-Construction Avian and Bat Monitoring

The Applicant is in the process of coordinating with ORES and the USFWS regarding potential post-construction avian and bat monitoring surveys for the Facility. Post-construction avian and bat monitoring requirements are not fully described in the Section 94-c regulations; therefore, the Applicant will review the NYSDEC's *Guidelines for Conducting Bird and Bat Studies at Commercial Wind Energy Projects* (NYSDEC Guidelines; NYSDEC 2016), the USFWS *Land-based Wind Energy Guidelines* (USFWS 2012), and recommendations provided by the regulatory agencies to determine the scope for potential post-construction avian and bat monitoring. For example, the Applicant may complete one year of post-construction avian and bat monitoring surveys to document Facility-related avian and bat mortality, calculate fatality rates for the Facility during operation, and evaluate the effectiveness of bat minimization measures (e.g., curtailment).

5.0 PROPOSED MITIGATION

5.1 Net Conservation Benefit

Because ORES has determined that adverse modification of occupied habitat and incidental take will result from the construction and operation of the proposed Facility, the Section 94-c regulations require the Applicant to show that the proposed mitigation measures can achieve a net conservation benefit for the species concerned. **BEGIN CONFIDENTIAL INFORMATION<** [redacted] **>END CONFIDENTIAL INFORMATION**

According to 6 NYCRR Part 182.2, the term "net conservation benefit" is defined as follows:

> *(n) Net conservation benefit means a successful enhancement of the species' subject population, successful enhancement of the species' overall population or a contribution to the*

recovery of the species within New York. To be classified as a net conservation benefit, the enhancement or contribution must benefit the affected species listed as endangered or threatened in this Part or its habitat to a greater degree than if the applicant's proposed activity were not undertaken.

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ORES and the NYSDEC have indicated in other renewable energy facility proceedings that the most straightforward and most widely accepted method for providing a net conservation benefit for adverse modification of state listed grassland bird habitat is through the protection and management of suitable state listed grassland bird species habitat within a facility site. However, if suitable land is unavailable within a facility site, creation of suitable habitat within a facility site, or protection and management of suitable habitat within the vicinity of a facility site or within the broader region could also be undertaken to provide a net conservation benefit to the species. The Section 94-c uniform standards and conditions allow for a permittee to pay a mitigation fee into the Endangered and Threatened Species Mitigation Bank Fund commensurate with the actual acreage of occupied habitat taken. Alternatively, permittee-implemented grassland bird habitat conservation (i.e., physical mitigation) may be proposed, with 0.2 acres of mitigation for every 1.0 acre of occupied grassland bird wintering habitat determined to be taken and 0.4 acres of mitigation for every 1.0 acre of occupied grassland bird breeding habitat determined to be taken.

Based on these mitigation ratios and information provided by ORES in the revised Determination, EDR calculated the total mitigation acreage needed for permittee-implemented grassland bird habitat conservation. These calculations are summarized in **Table 1**. **BEGIN CONFIDENTIAL INFORMATION<**

Table 1. Grassland Bird Mitigation Calculations

Species and Occupied Habitat Type(s)	Adversely Modified Habitat (acres)[1]	Mitigation to Impact Ratio	Required Mitigation (acres)
[redacted]			

[redacted]>**END CONFIDENTIAL INFORMATION** Proposed mitigation actions for grassland bird species are discussed further in Sections 5.2 and 5.3.

The current regulations for major renewable energy facilities in New York State do not require detailed information regarding grassland habitat mitigation measures for specific species, temporal considerations for implementation of grassland habitat mitigation measures, or the development of grassland habitat mitigation measures in situations where habitat areas and/or habitat requirements for multiple species overlap. Rather, as noted previously, the regulations simply indicate that for permittee-implemented grassland bird habitat conservation in lieu of payment of a mitigation fee, "the required mitigation ratio shall be 0.4 acres of mitigation for every acre of occupied grassland bird breeding habitat determined to be taken and 0.2 acres of mitigation for every acre of occupied grassland bird wintering habitat determined to be taken."

Therefore, the regulations enable applicants to consider the biology and ecology of the species affected, the level of use of identified occupied habitat by the species in question, the condition and quality of the occupied habitat determined to be impacted by a given facility, the types of occupied habitat present, the degree of overlap of different types of occupied habitat, and the temporal aspects of habitat protection and use restrictions and identify a mitigation plan that will ensure a "net conservation benefit" to the species is achieved.

The Applicant believes that the grassland habitat mitigation measures proposed in this NCBP will provide the required net conservation benefit to **BEGIN CONFIDENTIAL INFORMATION**<[redacted]>**END CONFIDENTIAL INFORMATION** for multiple reasons. First, the proposed mitigation area will be of adequate size to provide at least **BEGIN CONFIDENTIAL INFORMATION**<[redacted]>**END CONFIDENTIAL INFORMATION** As presented in Section 5.2, the proposed mitigation area totals **BEGIN CONFIDENTIAL INFORMATION**<[redacted]>**END CONFIDENTIAL INFORMATION** and is therefore larger than both of these required minimum acreage values.

As noted in Section 3.3 of this NCBP, habitat use by **BEGIN CONFIDENTIAL INFORMATION**<[redacted]>**END CONFIDENTIAL INFORMATION** if a grassland habitat mitigation area is placed under a year-round protective land agreement and subject to seasonal use restrictions during both the NYSDEC-defined breeding season (April 23 to August 15) and the NYSDEC-defined wintering season (November 1 to March 31), mitigation for both breeding and wintering habitat impacts can be readily accomplished within the same physical area of land. This is because breeding and wintering habitat requirements are similar for these species. When land protections and use restrictions are implemented year-round, this ensures that open habitat remains optimal for these species during both

seasons. Accordingly, the risk of vegetation modification during time periods when the species may be actively using the habitat can be eliminated, and the risks posed by other forms of anthropogenic disturbance (e.g., loud noise, presence of dogs) during the most important times of the year can also be eliminated.

As further discussed in the following sections, the proposed mitigation area will also be managed at appropriate intervals during the time of year when the NYSDEC recommends conducting such activities, typically between August 16 and October 31 unless surveys are conducted prior to management to confirm that state listed species are not nesting within or using the fields (NYSDEC, 2024e).

In addition, the areas determined by ORES to represent occupied breeding habitat for **BEGIN CONFIDENTIAL INFORMATION<** [redacted] **>END CONFIDENTIAL INFORMATION** Therefore, it is reasonable to conclude that permittee-implemented grassland habitat mitigation that includes habitat protections and use restrictions during both the breeding and wintering seasons provides a net conservation benefit for **BEGIN CONFIDENTIAL INFORMATION<** [redacted] **>END CONFIDENTIAL INFORMATION**

The Applicant believes that this mitigation approach is more beneficial to the species as compared with providing breeding and wintering habitat separately, as a single mitigation area will allow for year-round protections and thereby encourage **BEGIN CONFIDENTIAL INFORMATION<** [redacted] **>END CONFIDENTIAL INFORMATION** If separate mitigation areas were proposed, land protections and use restrictions would only be implemented during one of the two seasons, which would limit habitat suitability to a single season in each mitigation area.

The proposed grassland habitat mitigation measures should be considered in the context of the relatively limited level of habitat use documented by the affected species during pre-construction avian field surveys, and the generally low habitat quality characteristics of the areas that ORES has determined may be impacted by the Facility.

With respect to **BEGIN CONFIDENTIAL INFORMATION<** [redacted] **>END CONFIDENTIAL INFORMATION**

The lack of use of the Facility Site during breeding bird survey periods in 2021 or 2023 may be attributed to agricultural land uses and associated crop cover types in the area in question. As discussed in the Estimated Occupied Habitat Analysis Memorandum prepared for the Facility (EDR, 2023b), portions of the open field in question have been planted with row crops (i.e., corn) for the past 5 years based on EDR's review of USDA crop type data (USDA, 2023a; USDA, 2023b). Furthermore, the extent of areas used for corn production appears to have expanded from 2018 to 2022. The NYSDEC has indicated for other renewable energy projects that monocultures of corn, soybeans, and other row crops are not preferred nesting habitat for most grassland birds, that crop cover types are often in place on a rotational basis on the landscape, and that fields can provide suitable nesting habitat when planted with hay, alfalfa, or left fallow for one or more years following the presence of row crops (Denoncour, Novak, and Palumbo, 2020). Therefore, it can be reasonably concluded that fields that are continually used for row crop production would not represent suitable nesting habitat. **BEGIN CONFIDENTIAL INFORMATION<** [redacted] **>END CONFIDENTIAL INFORMATION** Corn fields are not specifically identified as suitable breeding habitat for this species by these sources.

Given these considerations, it is reasonable to conclude that: (1) the amount of occupied breeding habitat within the Facility Site is limited; (2) the quality of occupied breeding habitat within the Facility Site is marginal; and (3) the presence of occupied breeding habitat may fluctuate from year to year depending on crop cover types. In years when on-site portions of fields are used for corn production, occupied breeding habitat may be functionally absent. This finding is supported by USDA crop type data for 2023 and the results of the 2023 breeding bird surveys, which did not document use of the Facility Site by **BEGIN CONFIDENTIAL INFORMATION**<[redacted]>**END CONFIDENTIAL INFORMATION** ORES should consider these factors when determining the grassland habitat mitigation measures required to offset potential Facility-related impacts to occupied breeding habitat. The majority of the area that ORES has determined will constitute impacted occupied breeding habitat is characterized as agricultural land used for corn production, and corn has been the dominant crop cover type in 2023, 2022, and 2021 (based on USDA crop cover type data and field observations made by EDR during the 2023 and 2021 breeding bird surveys; USDA, 2023a; USDA, 2023b; EDR, 2021a; EDR, 2023a). Thus, ORES should carefully consider the quality and suitability of the areas being impacted when determining grassland habitat mitigation requirements for the Facility.

Although future crop cover types within on-site occupied breeding habitat cannot be known with certainty for the entirety of the mitigation term, it is reasonable to assume that in some (or even most) years, portions of open fields designated by ORES as occupied breeding habitat would not actually provide suitable breeding habitat for **BEGIN CONFIDENTIAL INFORMATION**<[redacted]>**END CONFIDENTIAL INFORMATION** due to their use for corn production. For these reasons, the Applicant believes that the mitigation area proposed in this NCBP will provide an appropriate amount of suitable breeding habitat for the species to offset potential Facility-related impacts to on-site occupied breeding habitat that may only be intermittently used by **BEGIN CONFIDENTIAL INFORMATION**<[redacted]>**END CONFIDENTIAL INFORMATION**

With respect to **BEGIN CONFIDENTIAL INFORMATION**<[redacted]>**END CONFIDENTIAL INFORMATION** Although the Applicant and EDR estimated that occupied wintering habitat was present within three open field areas corresponding with the observations with essential behavior, ORES assumed occupied wintering habitat to be present in several additional areas that ORES found to be inadequately surveyed. Therefore, it is important to note that some of the occupied wintering habitat impacts identified by ORES are based solely on assumed presence of occupied wintering habitat, rather than review of actual documented species use (refer to EDR, 2023d for further details). **BEGIN CONFIDENTIAL INFORMATION**<[redacted]>

[redacted]

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[redacted] **>END CONFIDENTIAL INFORMATION** Therefore, it is important to note that some of the occupied wintering habitat impacts identified by ORES are based solely on assumed presence of occupied wintering habitat, rather than review of actual documented species use (refer to EDR, 2023d for further details). **BEGIN CONFIDENTIAL INFORMATION<** [redacted] **>END CONFIDENTIAL INFORMATION**

Overall, the Applicant's proposed mitigation measures, as presented in this NCBP, are functionally equivalent to providing one mitigation area for **BEGIN CONFIDENTIAL INFORMATION<** [redacted] **>END CONFIDENTIAL INFORMATION** with added benefits associated with year-round habitat protection and use restriction continuity (refer to the following sections for further details). The alternative, which would involve establishing a separate, mitigation area subject to use restrictions during only one of the two seasons, is not logical in this case considering the biology and ecology of the species in question, the results of the pre-construction avian surveys conducted for the Facility, and the quality of the habitat potentially impacted by the Facility. Providing separate, non-contiguous mitigation areas is one mitigation approach, but it should not be the only acceptable mitigation approach. To require an additional, separate mitigation area would be overly burdensome and impracticable, and would ignore a variety of case-specific considerations, as presented herein and in the Applicant's Siting Permit Application Exhibit 12.

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5.2 Proposed Grassland Bird Mitigation Area

Mitigation of impacts to occupied habitat for listed grassland bird species can be accomplished by leasing or purchasing suitable land, preferably in close proximity to a facility, establishing protective land agreements (e.g., deed restriction, conservation easement), and implementing a management regime that maintains the mitigation area as suitable grassland habitat for use by the affected species. **BEGIN CONFIDENTIAL INFORMATION<** [redacted]

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Based on NYSDEC recommendations, mitigation areas for permittee-implemented grassland bird habitat conservation need to open, contiguous, and at least 25 acres in size. The Applicant has identified a suitable land parcel for mitigation in the vicinity of the Facility Site in order to attain the required mitigation acreage. The proposed mitigation parcel and the proposed mitigation area within this parcel are depicted in **Figure 3**, and additional information for the proposed grassland bird mitigation area is provided in **Table 2**. The required mitigation acreage will be selected from this parcel, and the mitigation area will be at least 25 acres in size. However, if the option becomes available prior to Facility construction, the Applicant may instead elect to pay a mitigation fee into the Endangered and Threatened Species Mitigation Bank Fund.

Table 2. Proposed Grassland Bird Mitigation Area Information

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5.3 Grassland Bird Mitigation Area Suitability

The proposed grassland bird mitigation area is suitable for the purposes of providing a net conservation benefit to **BEGIN CONFIDENTIAL INFORMATION<** [redacted] **>END CONFIDENTIAL INFORMATION** Along with adequate overall area to mitigate for adverse modification impacts within multiple successional cycles, the proposed area also has the following advantages:

- The proposed mitigation area is located within the same region of New York State as the Facility Site.
- The proposed mitigation area exhibits similar, or higher quality, conditions relative to occupied habitat that will be affected by the Facility. For example, the ORES-identified occupied breeding habitat areas that will be affected by Facility are primarily composed of row cropland used for corn production based on 2023 USDA CroplandCROS data (USDA, 2023b) data. **BEGIN CONFIDENTIAL INFORMATION<** [redacted]

[redacted]>**END CONFIDENTIAL INFORMATION**.

- The proposed mitigation area is currently composed of open grassland/pasture areas and agricultural cover types that are suitable for use by the affected species under existing conditions, and can be enhanced by implementing use restrictions and a prescribed management regime (refer to Section 5.5 for additional details).
- The proposed mitigation area includes more than 25 acres of open field area.
- The proposed mitigation area includes more than 25 acres of open field area.

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5.4 [redacted]

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5.5 Grassland Habitat Mitigation Management, Monitoring, and Reporting

Based on review of NYSDEC best management practices for grassland birds (NYSDEC, 2024e), the following general practices will be considered for the proposed grassland bird mitigation area:

- Within fields over 25 acres in size, avoid mowing or conducting other management activities from April 23 to August 15, inclusive (the nesting season) and November 1 to March 31, inclusive (the wintering season), unless fields targeted for management have been surveyed to confirm that state listed endangered, threatened, and/or special concern grassland bird species are not nesting within or using the fields.
- Avoid disturbance from motorized vehicle operation or other loud noise from November 1 to March 31 to protect wintering raptors.
- Complete mowing or other management activities between August 16 and October 31, or conduct surveys to confirm that state listed endangered, threatened, and/or special concern grassland bird species are not nesting within or using the fields prior to conducting management activities during the nesting season or winter season.
- Manage land for a minimum of 5 years to begin showing benefits for grassland birds and continue appropriate management actions at defined intervals to achieve long-term suitability for the target species.

Based on these recommendations, as well as the specific habitat requirements of the listed species in question, Applicant proposes a mitigation area management regime that will include the following steps for the first 5-year successional cycle: (1) a baseline assessment of existing conditions at the mitigation area in 2024 and 2025; (2) preliminary site management activities in 2025 and 2026 (to define the mitigation area boundaries, establish optimal vegetation characteristics, reduce fragmentation of the grassland, and enhance existing habitat suitability); (3) prohibition of mechanized disturbance, loud noise, and public access within these managed areas during the wintering and nesting seasons (as defined by the NYSDEC); and (4) rotational maintenance mowing of one third of the mitigation area each year after preliminary site management activities to maintain and enhance grassland habitat during the first 5-year successional cycle.

The baseline assessment of existing conditions at the mitigation area will be performed between the winter of 2024 and the fall of 2025 to document existing vegetation characteristics, cover types, and habitat suitability during the wintering season and during the growing season. Following the baseline assessment, preliminary site management activities are anticipated to include: (1) marking the mitigation area boundaries with posted signs; (2) initial mowing of the mitigation area; and (3) clearing of trees and shrubs within select portions of the mitigation area (if necessary).

Rotational maintenance mowing will then be performed in subsequent years, whereby a portion of the total mitigation acreage will be mowed each subsequent year to a target height range of approximately 6-12 inches (15-30 cm). The remaining portions of the mitigation area will not be mowed during a given year, thereby providing a broader range of different vegetation heights and composition throughout the successional cycle. The Applicant proposes dividing the proposed mitigation area into three rotational mowing zones with approximately equal areas. The anticipated timeline for mowing events in each rotational mowing zone is presented in **Table 3**.

BEGIN CONFIDENTIAL INFORMATION<[redacted]>**END CONFIDENTIAL INFORMATION** In this way, the mitigation area will be managed in order to provide suitable habitat for the species addressed by this NCBP.

At the end of the first 5-year successional cycle, the Applicant will identify vegetation management activities needed to retain conditions suitable for ongoing use by grassland bird species. If necessary, portions of the mitigation area will be mowed and/or brush-hogged between August 16 and October 31 to control woody vegetation that may have become established during the first successional cycle and restore optimal vegetation conditions. Depending on the level of woody vegetation encroachment, these activities may occur within only certain portions of the mitigation area, or throughout the entire mitigation area. This will serve as the start of the second 5-year successional cycle. A similar management regime will be implemented for the remaining years within the 30-year mitigation term, consisting of rotational maintenance mowing for multiple years, followed by end of cycle maintenance to control woody vegetation

(if necessary). Monitoring of vegetation/habitat conditions will occur during the first successional cycle. Based on ORES review and recommendations, the subsequent management regime will either follow the same regime for the rest of the mitigation term, or a new management regime will be developed in consultation with ORES.

In order to document that the mitigation area is being appropriately protected and managed, the Applicant proposes to: (1) record information regarding the timing of preliminary site management and yearly vegetation management activities; and (2) collect photographs of vegetation and habitat conditions before and after preliminary site management activities, before and after yearly vegetation management activities, and during the winter season. In addition, the Applicant will provide documentation indicating that mitigation area boundaries are marked with posted signs and that existing fence lines (if any) are maintained. The Applicant will also provide a discussion of any threats and/or risks to the target species that existed prior to implementation of the mitigation measures, and how such threats and/or risks were reduced or eliminated. Finally, if any state listed species are observed utilizing the mitigation area, these observations will be documented. This information will be collected each year during the first successional cycle and provided to ORES by December 31 of each calendar year.

BEGIN CONFIDENTIAL INFORMATION<[redacted]>**END CONFIDENTIAL INFORMATION** The anticipated timeline for mitigation activities is summarized in **Table 3**.

Table 3. Anticipated Timeline for Mitigation Activities

Term Year	Year	Mitigation Activity Type	Description of Mitigation Activities
N/A	2025	Baseline Assessment	Site visits to document existing conditions during the wintering and breeding seasons
N/A	2025-2026	Preliminary Site Management	Mark mitigation area boundaries; remove woody vegetation in select areas; prepare fields; perform initial mowing
1	2027	Annual Maintenance	Rotational mowing within the mitigation area (first third)
2	2028	Annual Maintenance	Rotational mowing within the mitigation area (second third)
3	2029	Annual Maintenance	Rotational mowing within the mitigation area (last third)
4	2030	Annual Maintenance	Rotational mowing within the mitigation area (first third)
5	2031	End of Cycle Maintenance	Mowing and/or woody vegetation control throughout all Zones as needed
6	2032	Annual Maintenance	Rotational mowing – Zone(s) to be identified in 2031 based on consultation with ORES
7	2033	Annual Maintenance	Rotational mowing – Zone(s) to be identified in 2031 based on consultation with ORES
8	2034	Annual Maintenance	Rotational mowing – Zone(s) to be identified in 2031 based on consultation with ORES
9	2035	Annual Maintenance	Rotational mowing – Zone(s) to be identified in 2031 based on consultation with ORES
10	2036	End of Cycle Maintenance	Mowing and/or woody vegetation control as needed – Zone(s) to be identified in consultation with ORES
11	2037	Annual Maintenance	Rotational mowing – Zone(s) to be identified in 2036 based on consultation with ORES
12	2038	Annual Maintenance	Rotational mowing – Zone(s) to be identified in 2036 based on consultation with ORES
13	2039	Annual Maintenance	Rotational mowing – Zone(s) to be identified in 2036 based on consultation with ORES
14	2040	Annual Maintenance	Rotational mowing – Zone(s) to be identified in 2036 based on consultation with ORES
15	2041	End of Cycle Maintenance	Mowing and/or woody vegetation control as needed – Zone(s) to be identified in consultation with ORES

Term Year	Year	Mitigation Activity Type	Description of Mitigation Activities
16	2042	Annual Maintenance	Rotational mowing – Zone(s) to be identified in 2041 based on consultation with ORES
17	2043	Annual Maintenance	Rotational mowing – Zone(s) to be identified in 2041 based on consultation with ORES
18	2044	Annual Maintenance	Rotational mowing – Zone(s) to be identified in 2041 based on consultation with ORES
19	2045	Annual Maintenance	Rotational mowing – Zone(s) to be identified in 2041 based on consultation with ORES
20	2046	End of Cycle Maintenance	Mowing and/or woody vegetation control as needed – Zone(s) to be identified in consultation with ORES
21	2047	Annual Maintenance	Rotational mowing – Zone(s) to be identified in 2046 based on consultation with ORES
22	2048	Annual Maintenance	Rotational mowing – Zone(s) to be identified in 2046 based on consultation with ORES
23	2049	Annual Maintenance	Rotational mowing – Zone(s) to be identified in 2046 based on consultation with ORES
24	2050	Annual Maintenance	Rotational mowing – Zone(s) to be identified in 2046 based on consultation with ORES
25	2051	End of Cycle Maintenance	Mowing and/or woody vegetation control as needed – Zone(s) to be identified in consultation with ORES
26	2052	Annual Maintenance	Rotational mowing – Zone(s) to be identified in 2051 based on consultation with ORES
27	2053	Annual Maintenance	Rotational mowing – Zone(s) to be identified in 2051 based on consultation with ORES
28	2054	Annual Maintenance	Rotational mowing – Zone(s) to be identified in 2051 based on consultation with ORES
29	2055	Annual Maintenance	Rotational mowing – Zone(s) to be identified in 2051 based on consultation with ORES
30	2056	End of Cycle Maintenance	Mowing and/or woody vegetation control – Zone(s) to be identified in consultation with ORES; final mitigation management event

5.6 Declaration of Covenants and Restrictions

This NCBP anticipates that the Applicant will enter a protective land agreement for the mitigation parcel identified in Section 5.2, or similar suitable land, and that the Applicant will implement site management of the mitigation parcel in accordance with the provisions of the NCBP herein. The Applicant will provide proof of entering the land agreement to ORES prior to construction once the agreement have been executed and will notify ORES in writing that it has completed preliminary site management of the mitigation area. If ORES agrees that preliminary site management of the mitigation area is completed, the Applicant will be instructed to execute and record a Declaration of Covenants and Restrictions that is approved by ORES. The Applicant shall record the Declaration of Covenants and Restrictions within 30 days of its execution in the office of the recording officer for the applicable county where the mitigation parcel is situated in the manner prescribed by Article 9 of the Real Property Law.

The Declaration of Covenants and Restrictions will incorporate by reference the measures required by this NCBP, which will primarily include the activities associated with management of the mitigation area to maintain habitat as open grassland and documentation of vegetation and habitat conditions. In addition, the Declaration of Covenants and Restrictions shall protect the mitigation area from being used for purposes incompatible with grassland bird habitat mitigation during the 30-year mitigation term.

As an alternative to physical mitigation, the Applicant may elect to pay a mitigation fee commensurate with the actual acreage of occupied habitat taken into the Endangered and Threatened Species Mitigation Bank Fund. Documentation of this payment would be provided to ORES, as required.

5.7 Financial Assurance

Funding for the implementation of this NCBP will be provided by the Applicant. As set forth in the previous sections, the actions required for grassland bird mitigation area management will include: (1) preliminary site management at the start of the first five-year successional cycle; (2) yearly vegetation management to maintain optimal vegetation and habitat conditions; and (3) mowing and vegetation control every five years. The Applicant and/or one or more contractors hired by the Applicant will perform management activities. Funding will also be provided by the Applicant for the mitigation monitoring and reporting activities described in Section 5.5. Once a mitigation option has been selected for **BEGIN CONFIDENTIAL INFORMATION**<[redacted]>**END CONFIDENTIAL INFORMATION**, the Applicant will also provide funding to implement the associated mitigation actions, and a document demonstrating the Applicant's financial and technical capability and commitment will be provided to ORES.

The Applicant, a subsidiary of Liberty Renewables Inc., is well positioned to finance the implementation of the NCBP. Liberty Renewables Inc. was formed through an equal partnership between two internationally successful wind energy companies (Natural Forces and ProWind Renewables) who have a combined operating portfolio of over 55 wind projects in Canada and Europe. Liberty Renewables Inc. is well-capitalized and has sufficient access to capital on short notice. The Applicant possesses the project development experience, technical expertise, financial resources, and commitment to deliver the planned Facility and its associated mitigation requirements. This supports the finding that the implementation of the

NCBP will be economically feasible and financially viable. Therefore, ORES should find that the Applicant has the financial wherewithal to carry out the mitigation obligations under Section 94-c relating to endangered and threatened avian species, and as presented in this NCBP.

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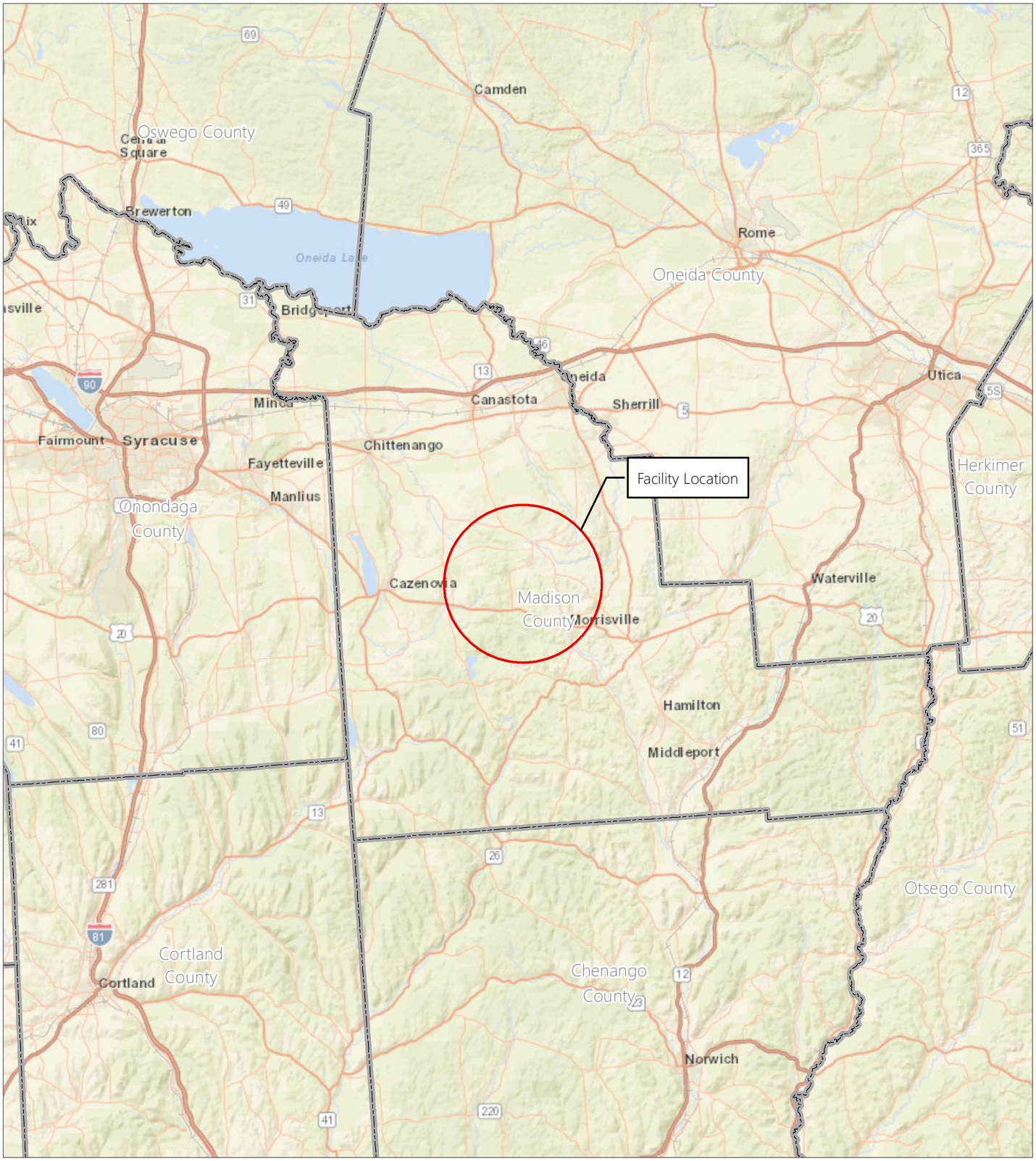
FIGURES

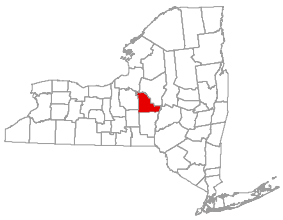
Figure 1. Regional Facility Location



Hoffman Falls Wind Project

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

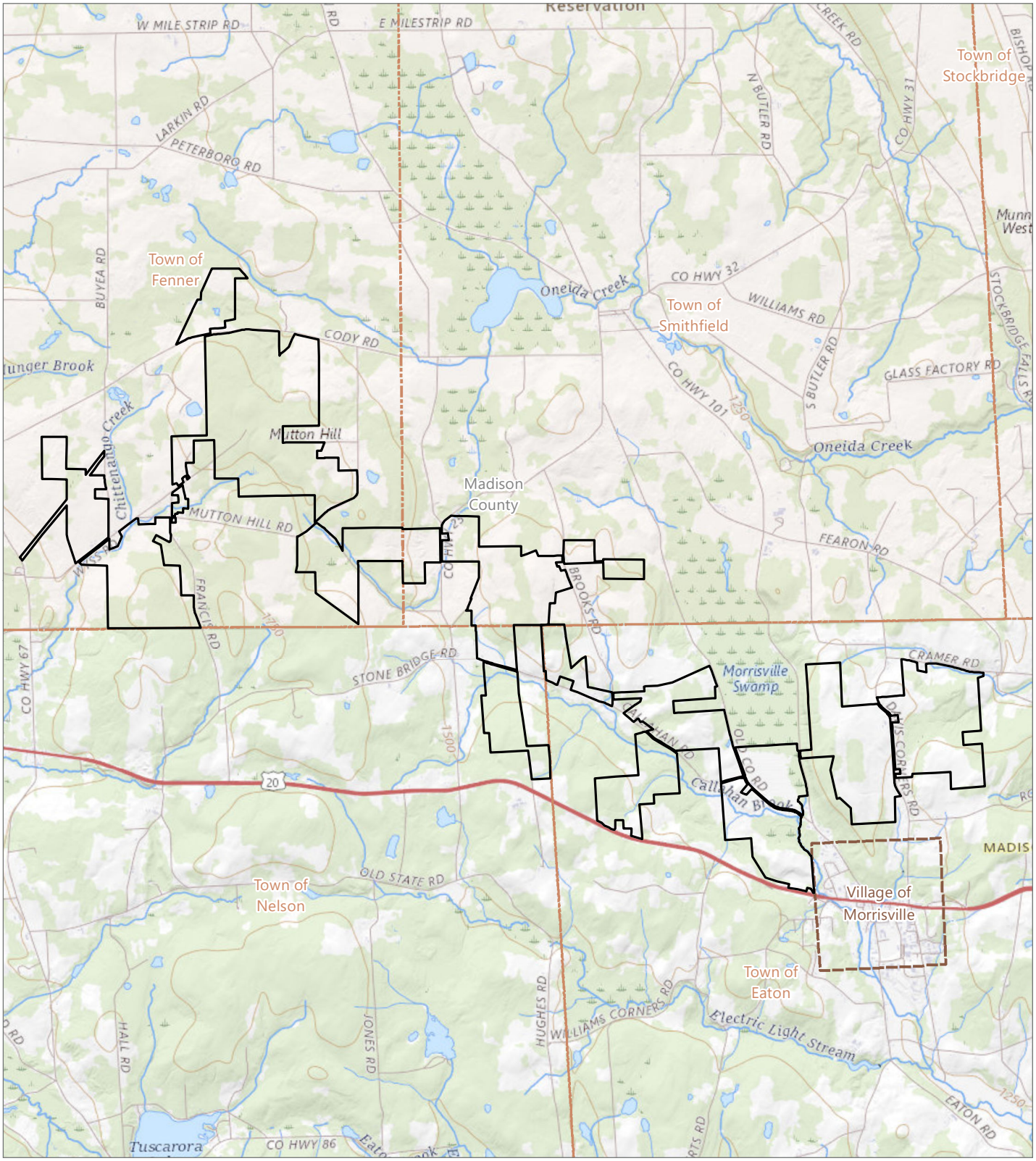
Net Conservation Benefit Plan



0 2.5 5 10
Miles

Prepared October 16, 2023
Basemap: Esri "World Street Map" map service

Figure 2. Facility Site



Hoffman Falls Wind Project

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

Net Conservation Benefit Plan

Facility Site

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Prepared February 1, 2024
Basemap: Esri "USGS Topo" map service

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