



Illinois Department of Natural Resources

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JB Pritzker, Governor
Colleen Callahan, Director

Authorization for Incidental Take and Implementing Agreement

Pursuant to the Illinois Endangered Species Protection Act (Act) (520 ILCS 10/5.5) and the regulations adopted to implement the Act (17 Ill. Adm. Code 1080), authorization is hereby granted to Green River Wind Farm Phase 1, LLC (hereinafter referred to as Green River), a wholly-owned subsidiary of Geronimo Renewable Infrastructure Partners, L.P. for the incidental take of the State-endangered Blanding's Turtle (*Emydoidea blandingii*), and the State-threatened Ornate Box Turtle (*Terrapene ornata*), Plains Hog-nosed Snake (*Heterodon nasicus*), and Regal Fritillary (*Speyeria idalia*). The Illinois Department of Natural Resources (hereinafter referred to as Department) has determined that this taking is incidental to the construction, operation, and maintenance of the Green River Wind Farm in Lee and Whiteside Counties in Illinois.

Procedural History

The Department executed an Incidental Take Authorization to Green River Wind Farm Phase I, LLC (Wind Farm) on August 6, 2013. At that time, the Wind Farm was a wholly-owned subsidiary of Mainstream Renewable Power Ltd. The proposed project action area was over four times larger and configured differently than the current proposal. The Wind Farm was never constructed and none of the compliance requirements, including the mitigation responsibilities, of the former Incidental Take Authorization were performed. Therefore, the prior Authorization is considered null and void; and the current proposal is considered a separate and distinct project with no connection to the previously executed Incidental Take Authorization.

A Conservation Plan prepared by Stantec, on behalf of Green River, was submitted to the Department on October 11, 2018, as a request for authorization for the incidental take of Blanding's Turtle, Ornate Box Turtle, Plains Hog-nosed Snake, Regal Fritillary and two State-listed and Federally-listed bats. The Department requested additional information on November 20, 2018, as well as March 1, and July 5, 2019, to make the Conservation Plan complete as prescribed by Ill. Adm. Code 1080.10. Additional information was received by the Department on February 5, and May 22, 2019. The final Conservation Plan was accepted as complete by the Department on July 11, 2019.

On February 27, 2019, Green River requested a take authorization solely covering the turtles, snake, and butterfly, collectively known in the Conservation Plan as the Terrestrial Species, due to the increased risk to that suite of species during construction and due to the extended time necessary to receive take authorization from the US Fish and Wildlife Service (USFWS) for the two Federally-listed bat species. Per the Department's Section 6 Cooperative Agreement with the USFWS, as authorized under the federal Endangered Species Act, the Department may not issue take authorization for federally-listed species until such time that the USFWS has provided an

opinion. On March 2, 2019, the Department's Office of Legal Counsel provided guidance concurring that a take authorization for the terrestrial species only could precede the take authorization for bats. The risk of taking bats increases once operation begins. The public notice period and public comments will be detailed under #6 of the Compliance section below.

Compliance with the Illinois Endangered Species Protection Act

The Act includes six criteria which must be satisfied for the authorization of incidental take of an endangered or threatened species. These criteria and the Department's determination for each are listed below.

1. The taking will not be the purpose of, but will be only incidental to, the carrying out of an otherwise lawful activity:

The stated and apparent purpose of this proposed action is to construct, operate, and maintain a 194.25-megawatt (MW) wind farm located in Lee and Whiteside Counties. The wind project is located approximately nine (9) miles southeast of Sterling, Illinois and four (4) miles north of Walnut, Illinois. The wind farm will consist of 74 Siemens Gamesa G126 wind turbine generators (WTGs) and associated access roads, collector lines, crane paths, fiber optic line, substation, operations and maintenance (O&M) building, and laydown yard. Each WTG is manufactured off-site and consists of the tower, a nacelle that houses the generator and gearbox, and a three-blade rotor assembly, all of which are delivered to the project site and assembled on-site. Each WTG will be anchored to a steel-reinforced concrete foundation. The total maximum height of the WTG, from the base of the tower to the tip of the blade, is 485 feet (ft.), whereas the hub height is approximately 275 ft. The wind project also includes an underground power collection system between the pad-mounted transformers and a collector substation. All collector lines will be buried a minimum of 5 ft. The collector system will connect to the ComEd Schauff Road switchyard located immediately west of County Line Road and south of Hahnaman Road in Whiteside County. In addition to the WTGs and power collection system, access roads will be constructed to provide access to the turbines during and after construction. These access roads will be approximately 16-ft.-wide and will be constructed of crushed gravel/rock. The project O&M building is also located immediately west of County Line Road and south of Hahnaman Road in Whiteside County. Construction of the O&M building was completed in December 2018. The project substation pad is approximately 200 ft x 300 ft (approximately 1.5 acres in size). Permanent and temporary wind measurement towers, also known as MET towers, will be installed at the site and will be used for performance testing of the wind turbines to ensure that they meet the manufacturer's guarantees. Semi-trailer trucks, heavy machinery, and other equipment will be used to complete this project; which includes excavations, transportation of turbine components to and from the project site, and turbine assembly. Proposed activities may result in direct burial or crushing of and/or noise and vibration disturbance to the

Blanding's Turtle, Ornate Box Turtle, Plains Hog-nosed Snake, and Regal Fritillary during project activities.

Total estimated area of impact within species habitat for the immediately proposed actions is referred to as the Terrestrial Action Area and includes **1,745.1 acres**. The Department concurs that the take of Blanding's Turtle, Ornate Box Turtle, Plains Hog-nosed Snake, and Regal Fritillary that could result from the proposed project is not the purpose of Green River's activities but is incidental to the carrying out of an otherwise lawful activity.

2. The parties to the Conservation Plan will, to the maximum extent practicable, minimize and mitigate the impact caused by the taking:

Proposed avoidance, minimization and mitigation were included in Green River's Conservation Plan.

To meet the "maximum extent practicable" standard, additional minimization and/or mitigation measures may be required beyond those proposed by Green River, based on the life history needs of the Blanding's Turtle, Ornate Box Turtle, Plains Hog-nosed Snake, and Regal Fritillary. **All required minimization and mitigation measures are presented under the Authorization section below.**

3. The parties to the Conservation Plan will ensure that adequate funding for the Conservation Plan will be provided.

Green River states a portion of their overall budget for the wind project has been dedicated toward the implementation of the conservation measures.

The Department accepts this provision as assurance that adequate funding will be available to carry out the terms of the Conservation Plan.

4. Based on the best available scientific data, the Department has determined that the taking will not reduce the likelihood of survival or recovery of the endangered species or threatened species in the wild within the State of Illinois, the biotic community of which the species is a part, or the habitat essential to the species' existence in Illinois.

Blanding's Turtle (*Emydoidea blandingii*)

Blanding's Turtle is an Illinois state-endangered reptile species.

Habitat: The Blanding's Turtle is a semi-aquatic turtle species found in water bodies such as creeks, marshes, and ponds that are adjacent to sandy upland areas. They spend most of their time in water, though they are also known to leave the water to travel between ponds and for females to lay eggs. Blanding's Turtle enters a period of dormancy during the winter, during which they remain buried in the muddy bottoms of deep marshes, backwater pools, and streams.

Reproduction: Blanding's Turtle is a long-lived species, not reaching sexual maturity until 14-20 years of age. Mating likely occurs in April or early May, and nesting takes place from early June to early July. Eggs are typically laid in well-drained, sandy soil in a sunny upland area, and females may travel up to a mile over land to their nesting location. Clutch sizes are varied, ranging from 10-26 eggs per nest, and females only lay one clutch of eggs per year. Since nests are typically far from water, hatchlings must travel long distances after emerging from their nest, subjecting them to increased threat of predation, road mortality, and desiccation.

Population: The decline of Blanding's Turtle populations can be largely attributed to habitat loss and degradation, road and railroad mortality, and nest predation. With high levels of egg and juvenile mortality and low reproductive potential, Blanding's Turtle populations have had difficulty recovering. There are several captive breeding programs for this species in Illinois performing efforts to supplement the wild populations.

Range in Illinois: Blanding's Turtle is most often found in northern Illinois and sporadically found throughout the central part of the state. They have been observed in the last ten (10) years in 21 of 102 counties. There are currently 86 extant Element Occurrence Records for Blanding's Turtle in the Illinois Natural Heritage Database.

Incidental Take Authorizations: The Department has 23 previously issued or pending Incidental Take Authorizations for Blanding's Turtle. This is the second authorization to be granted for the potential take of Blanding's Turtle in Lee County. The first was granted to a wind farm adjacent to this proposed project. To the Department's knowledge, no individuals of the species have been directly taken as a result of the wind farm, however direct take could have occurred along public roadways and may remain unknown. No take authorizations for the species have been executed for Whiteside County. Previous projects in other counties included residential or commercial developments, highway and bridge construction, the construction of an athletic field, and the construction and maintenance of electrical lines.

Ornate Box Turtle (*Terrapene ornata*)

Ornate Box Turtle is an Illinois state-threatened reptile species.

Habitat: The Ornate Box Turtle inhabits prairie grasslands, pastures, fields, sandhills, and open woodland areas. The species is terrestrial but occasionally enters slow, shallow streams. For shelter, the Ornate Box Turtle burrows into friable soil or uses burrows made by other species. They hibernate through winter in burrows up to 5 feet in depth.

Distribution: Their overall range covers most of the central United States. The Ornate Box Turtle can be found from southeastern Wyoming to Wisconsin and Indiana, and south to Arizona and Louisiana.

Reproduction: Mating occurs in the spring or late summer. Nesting occurs between May and August. Females lay 1-2 clutches of 1-8 eggs each year. Eggs

hatch in 9-12 weeks. Males are sexually mature in 8-9 years, females in 10-11 years.

Population: The Ornate Box Turtle is at risk from increased urbanization, increased agriculture, road mortality, and poaching.

Range in Illinois: Ornate Box Turtle has been observed in the last ten (10) years in 29 of 102 Illinois counties. There are currently 56 extant Element Occurrence Records for Ornate Box Turtle in the Illinois Natural Heritage Database.

Incidental Take Authorizations: The Department has seven (7) previously issued or pending Incidental Take Authorizations for the Ornate Box Turtle. This is the second authorization to be granted in Whiteside County and second to be granted in Lee County. The project is adjacent to a wind energy project and an electric transmission line project for which two (2) Incidental Take Authorizations for Ornate Box Turtle were executed. To the Department's knowledge, no individuals of the species have been directly taken by either of the projects, however direct take could have occurred along public roadways or within burrows and would remain unknown. Indirect take through potential dispersal from preferred habitat, as well as relocation, has occurred. Previous projects in other counties for which take was authorized include a water line extension and a commercial development project.

Plains Hog-Nosed Snake (*Heterodon nasicus*)

Plains Hog-Nosed Snake is an Illinois State-threatened snake species.

Habitat: The Plains Hog-Nosed Snake inhabits prairies, sandhills, and semi-agricultural areas with sandy or gravelly soils. They are active from April to October and overwinter in burrows.

Distribution: Their overall range covers most of the central United States. They can be found as far north as Canada, extending south to northern Texas.

Reproduction: Mating occurs in the spring and eggs are laid in July. Females lay clutches of 3-23 eggs each year or every other year. Plains Hog-Nosed Snake is sexually mature in their second year of life.

Population: The Plains Hog-Nosed Snake is at risk from habitat loss or degradation. Conversion of prairie habitat to agriculture has been a main cause of decline.

Range in Illinois: The species is found in northwestern Illinois and in some eastern counties. Plains Hog-Nosed Snakes have been observed in the last ten (10) years in eight (8) of 102 Illinois counties including Carroll, Cass, Henry, JoDaviess, Lee, Mason, Morgan, and Whiteside. There are currently 14 extant Element Occurrence Records for Plains Hog-Nosed Snakes in the Illinois Natural Heritage Database.

Incidental Take Authorizations: The Department has six (6) previously issued or pending Incidental Take Authorizations for Plains Hog-Nosed Snakes. This is the second authorization to be granted in Whiteside County and second to be granted in Lee County. The project is adjacent to a wind energy project and an electric transmission line project for which two (2) Incidental Take Authorizations

for Plains Hog-nosed Snake were executed. To the Department's knowledge, no individuals of the species have been directly taken by either of the projects, however direct take could have occurred along public roadways or within burrows and would remain unknown. Indirect take through potential dispersal from preferred habitat, as well as relocation, has occurred. Previous projects in other counties for which take was authorized include a landfill recap, road improvements, and a water line extension.

Regal Fritillary (*Speyeria idalia*)

Regal Fritillary is an Illinois State-threatened butterfly species.

Habitat: Regal Fritillary butterflies inhabit open grassy areas. They can also occur in savannas if trees are sufficiently sparse or clumped. Populations require large numbers of violet plants (*Viola* species), as these are the sole larval foodplants.

Distribution: They are found in north central United States from the Canadian border into Oklahoma. Historically they were found in the eastern states and New England. They are now extirpated in these areas and the only known populations are in Pennsylvania and Virginia.

Reproduction: Females lay up to 1000 eggs at once. They are placed near violets and hatch after 3-4 weeks. The larvae quickly seek a hibernation site and become active again in the spring. The pupal stage lasts about 3 weeks. Both sexes can mate shortly after emerging. Adult males live about a month, adult females live about two months.

Population: Regal Fritillary butterflies have lost approximately 40% of their historic range. Loss and fragmentation of habitat to agriculture, pesticides, overuse of prescribed burning, development, and reforestation are among the known threats to the Regal Fritillary.

Range in Illinois: The species is found at scattered locations throughout the northern and central part of the state. Regal Fritillary has been observed in the last ten (10) years in 14 of 102 Illinois counties. There are currently 14 extant Element Occurrence Records for Regal Fritillary in the Illinois Natural Heritage Database.

Incidental Take Authorizations: The Department has ten (10) previously issued or pending Incidental Take Authorizations for Regal Fritillary. This is the second authorization to be granted in Whiteside County and second to be granted in Lee County. The project is adjacent to a wind energy project and an electric transmission line project for which two (2) Incidental Take Authorizations for Regal Fritillary were executed. To the Department's knowledge, no individuals of the species have been directly taken by either of the projects, however direct take could have occurred along public roadways or within larval habitat and would remain unknown. Indirect take through potential dispersal from preferred habitat has likely occurred. Previous projects in other counties for which take was authorized or is pending include a landfill recap, road improvements, and a solar farm.

Based on the amount of habitat impacted by this project, the number of known occurrences of Blanding's Turtle, Ornate Box Turtle, Plains Hog-Nosed Snake, and Regal Fritillary in Illinois, an assessment of the potential effect of this project on individual species in the project footprint, the conservation methods included in this authorization for take and the conservation plan, and the understanding that vulnerability and recovery information on the species remains limited; it is the conclusion of the Department that the taking anticipated as a result of this project will not reduce the likelihood of survival or recovery of the species in the wild within the State of Illinois, the biotic community of which the species are a part, or the habitat essential to the species' existence in Illinois.

5. Any measures required under Section 5.5(b)(6) of the Act will be performed.

Additional measures are listed below under "Authorization." This authorization is, by definition, subject to those terms and conditions and the signature of a representative from Green River indicates their commitment to performing those measures.

6. The public has received notice of the application and has had the opportunity to comment before the Department made any decision regarding the application.

Public notice of Green River's request for authorization of incidental take was published in the *Breeze Courier* (official state newspaper) on July 17, 2019. The notice was also published in the *Daily Gazette* in Sterling and the *Dixon Telegraph* on July 17 and 24, 2019, and on August 1, 2019. A copy of the Conservation Plan was deposited in two locations including the Sterling Public Library and Geronimo Energy allowing for public review. The deadline for public comment was August 31, 2019. No comments were received from the public.

Authorization

It is the determination of the Department that the measures to be implemented by Green River will adequately minimize and mitigate the anticipated taking of Blanding's Turtle, Ornate Box Turtle, Plains Hog-nosed Snake, and Regal Fritillary associated with the construction, operation, and maintenance of the Green River Wind Farm in Lee and Whiteside Counties in Illinois. Further, the Department has concluded that the taking authorized herein will not reduce the likelihood of survival or recovery of the species in the wild within the State of Illinois, the biotic community of which the species is a part, or the habitat essential to the species existence in Illinois.

All terms and conditions included in the aforementioned Conservation Plan submitted by Green River to the Department are incorporated into this agreement by reference and are made a part thereof.

Pursuant to Section 5.5 of the Illinois Endangered Species Protection Act [520 ILCS 10/5.5] and the Administrative Rules for the Incidental Taking of Endangered and Threatened Species [Ill. Adm. Code 1080.40(b)], this authorization is issued subject to the following terms and conditions, which may include additions or modifications to the minimization and mitigation measures proposed by Green River in the Conservation Plan:

1. This authorization is effective upon the signature of the Department and shall remain in effect for a period of **thirty (30) years** from the date of the Department signature, unless terminated by written agreement of both parties.

This authorization may be revoked pursuant to the Act and Ill. Adm. Code 1080.80(b) if the Department finds that Green River has failed to comply with any of these terms and conditions or has been responsible for the taking of Blanding's Turtle, Ornate Box Turtle, Plains Hog-nosed Snake, and Regal Fritillary beyond that which is incidental to the construction, operation, and maintenance of the Green River Wind Farm in Lee and Whiteside Counties in Illinois.

2. The effective period of this authorization may be altered by mutual written agreement between Green River and the Department. The Illinois Endangered Species Protection Board shall be notified of such alteration.

Any substantive changes, including but not limited to a change in the project footprint or a change in the State-listed species which could potentially be affected, will require that a new Conservation Plan be submitted to the Department to initiate the review and public notice process as required by the Act.

3. This authorization may only be transferred upon approval and written authorization by the Department.
4. Notification to all on-site personnel shall be provided on the sensitive biological resources in the area; the identification of Blanding's Turtle, Ornate Box Turtle, Plains Hog-nosed Snake, and Regal Fritillary; regulations protecting the species; where the species might be found; avoidance areas; travel restrictions for equipment; how to report sightings or incidents that may involve take; the importance of avoiding take of the species; and response protocol if the species are found, including the chain of response personnel. **Green River shall submit a copy of the education materials to the Department.**
5. The Department reserves the right of entry by its staff or representatives to inspect potential habitat and species management practices.
6. Biological consultants employed by Green River shall hold the necessary permits for work with non-listed and listed species; these include an Illinois Department of Natural Resources (IDNR) Scientific Collection Permit as authorized under 17 Illinois Administrative Code 520, a Herptile Scientific Permit as authorized under 17 Illinois Administrative Code 885, and an IDNR Endangered Species Permit as

authorized under 17 Illinois Administrative Code 1070. Gloves shall always be worn when handling any species and properly disinfected or discarded between animals.

7. Green River shall notify the Department's Endangered Species Program by email correspondence of construction completion of the wind project. A **project status report** shall be submitted to the Department within **90 days** following completion (defined as operational) summarizing the implementation of minimization, mitigation, and restoration measures and evaluating the effectiveness or status of those measures and shall include a project photo log. The report shall also include a map, GPS coordinates, and photograph of any listed species found within the project footprint, description of any injuries or mortalities, and the disposition of any individuals that were injured or killed.
8. Notification of any Blanding's Turtle, Ornate Box Turtle, Plains Hog-nosed Snake, and/or Regal Fritillary present during the performance of the project shall be reported electronically to the Department within 48 hours of discovery accompanied by location information (photograph, map, and GPS coordinates). Any discoveries of additional State-listed species beyond those identified in this agreement **halts work** and shall be reported to the Department within 48 hours accompanied by location information.
9. Green River shall conduct, or cause to be conducted, the following pre-construction, construction, during construction, and/or post-construction efforts:
 - a. Green River will post signage in construction areas (e.g., turbine access roads, construction access routes, laydown areas, etc.), and if deemed necessary on public roads, alerting construction personnel to the presence of the listed species in the area.
 - b. Once the applicable permits have been obtained, if listed turtles or snakes are found in the construction area, they will simply be picked up and moved to a safer location outside of the construction area. If observed on public roads, contractors and staff will be instructed to avoid running the animal over. Any listed species observations will be immediately reported to the Department's District Natural Heritage Biologist (cell # 815-313-9306). Prior to implementation of this measure, Green River will prepare a turtle relocation plan that will be submitted to the IDNR for approval.
 - c. Non-cropped areas will be seeded to native vegetation. Use of the cropped areas will be determined by individual landowners, and it is assumed these areas would again be used for production of row crops.
 - d. Upon completion of construction, areas temporarily disturbed by the project as a result of miscellaneous excavation and trenching activities, fiber optic cable, and crane paths will be returned to pre-construction conditions.

The following conservation measures shall be implemented by Green River to avoid or minimize impacts to the **Blanding's Turtle during the turtle's active season (April 15 – October 30)**. **Outside of the active season, the species inhabits wet areas which are not proposed for direct impact:**

- e. During construction activities, including turbine erection and any miscellaneous excavation or trenching that could be required, at turbines within 0.6 mile of the Green River State Wildlife Area, (**Turbines E1, E2, E3, E4, E5, E10, D10, D11, D12, F1, F2, F3, and F4**) exclusion fence shall be installed around the perimeter of the work space to exclude turtles from the construction area. The fencing shall be installed with turn-back wings at each end facing away from the construction area. The silt fence shall be buried six (6) inches in the ground and staked to maintain an upright position.
- f. Once the silt fence is installed, and prior to further activities the biological monitor shall conduct a final pass through the area inside the silt fence to locate turtles within the isolation area and relocate them outside the construction area.
- g. If miscellaneous excavation or trenching is required within 0.6 mile of the Green River State Wildlife Area, a biological monitor shall accompany the construction crew to relocate turtles found during installation activities. The biological monitor shall conduct a visual encounter search within the construction corridor immediately ahead of the construction crew to locate turtles within the construction corridor and relocate them outside the construction area. In the event that a turtle nest is unearthed by the trenching activities, trenching would cease at that location, and the biological monitor will report the observation to the Department's District Natural Heritage Biologist (cell # 815-313-9306).
- h. For construction of crane paths within 0.6 mile of the Green River State Wildlife Area a biological monitor shall accompany the construction crew to relocate turtles found in the construction area. The biological monitor shall conduct a visual encounter search within the construction corridor immediately ahead of the construction crew to locate turtles within the construction corridor and relocate them outside the construction area.
- i. Once a crane path is no longer in use, if allowed by the landowner and if doing so will not damage environmentally sensitive areas, the area may be de-compacted to restore the loose soil conditions required by the turtles.
- j. In areas where silt fence is used for exclusion fencing, the fence shall be removed only after all construction and restoration activities in that area have been completed or the active season (April 15 – October 30) ends.
- k. Temporary and permanent stream crossings have been designed to allow for unrestricted movement of aquatic life, including the Blanding's Turtle.
- l. Directional boring will be implemented at all proposed collector line crossings. As a result, stream impacts, and impacts to Blanding's Turtle summer/winter habitat will be avoided during construction of collector lines. In addition, no directional boring would occur in the winter months when the turtles are hibernating.
- m. Temporary stream crossings will be removed following construction, and each stream crossing will be returned to pre-construction conditions.

For construction activities during the **Ornate Box Turtle's active season (April 15 – October 30)**, the following conservation measures shall be implemented by Green River to avoid or minimize impacts to the Ornate Box Turtle:

- n. No construction shall take place in areas identified as highly suitable for Ornate Box Turtle until the area has been cleared by a biological monitor trained in Ornate Box Turtle identification.
- o. For construction activities, including turbine erection and miscellaneous excavation or trenching that could be required, at **Turbines G2, G3, and G4**, silt fence shall be installed around the perimeter of the work space to exclude turtles from the construction area. The fencing shall be installed with turn-back wings at each end facing away from the construction area. The silt fence shall be buried six (6) inches in the ground and staked and maintained in an upright position.
- p. The biological monitor shall visually search the area to locate turtles within the work space and relocate them outside the work space. All applicable permits will be obtained.
- q. Once the silt fence is installed, and prior to further excavation activities the biological monitor shall conduct a final pass through the area inside the silt fence to locate turtles within the isolation area and relocate them outside the construction area.
- r. If miscellaneous excavation or trenching is required for underground collector lines associated with Turbines G2, G3, and G4, and a proposed fiber optic cable line located west of County Line Road, where trenching is the primary installation method, the biological monitor shall accompany the collector line or fiber optic installation crew to relocate turtles found during these activities. The biological monitor shall conduct a visual encounter search within the construction corridor immediately ahead of the installation crew to locate turtles within the construction corridor and relocate them outside the construction area.
- s. For construction of crane paths associated with G2, G3, and G4, the biological monitor shall accompany the construction crew to relocate turtles found in the construction area. The biological monitor shall conduct a visual encounter search within the construction corridor immediately ahead of the construction crew to locate turtles within the construction corridor and relocate them outside the construction area.
- t. Once a crane path is no longer in use, if allowed by the landowner and if doing so will not damage environmentally sensitive areas, the area may be de-compacted to restore the loose soil conditions required by the turtles.
- u. In areas where silt fence is used for exclusion fencing, the fence shall be removed only after all construction and restoration activities in that area have been completed or the active season (April 15 – October 30) ends.

The following conservation measures shall be implemented by Green River to avoid or minimize impacts to the Ornate Box turtle for construction activities **outside of the Ornate Box turtle's active season (October 30 – April 14)**:

- v. When excavation is occurring between October 30 and April 14 in areas field-verified as actively cropped during the growing season prior to construction, the presence of a biological monitor will not be required, except as provided in w. and x. below.

- w. A biological monitor shall be present during all excavation activities at Turbines G2, G3, and G4, and trenching activities west of County Line Road (fiber optic line). If turtles are unearthed, the biological monitor will report the observation to the Department's District Natural Heritage Biologist (cell # 815-313-9306). The Department will be contacted by Green River to determine proper care for the turtle until it can be released.
- x. For installation of underground collector lines, where trenching is the primary installation method, the biological monitor shall be present during trenching in the event that turtles are unearthed by the trenching activities. If turtles are found, the biological monitor will report the observation to the Department's District Natural Heritage Biologist (cell # 815-313-9306). Then, the Department will be contacted by Green River to determine proper care for the turtle until it can be released.

The following conservation measures shall be implemented by Green River to avoid or minimize impacts to the **Plains Hog-nosed Snake during the snake's active season (April 15 – October 30)**:

- y. During the installation of the proposed fiber optic cable line west of County Line Road. The biological monitor shall conduct a visual encounter search within the construction corridor immediately ahead of the installation crew to locate snakes and relocate them outside of the construction area.
 - z. Areas temporarily disturbed due to the installation of the fiber optic cable will be restored to pre-construction conditions.
10. Green River shall conduct, or cause to be conducted, post-construction monitoring by a qualified biologist:

Green River will fund a post-construction presence/probable absence survey for Blanding's Turtle, Ornate Box Turtle, and Plains Hog-Nosed Snake during the height of active season within or adjacent to the project area at a cost of up to \$20,000. The surveys will utilize either turtle dogs or trapping and will be conducted on private or state-owned property that contains highly suitable habitat. A study plan including specific survey methods will be submitted to IDNR prior to the start of the survey and the survey will be conducted within the first half of the permit term.

A report including, but not limited to, a description of the survey methodology utilized, duration, date, time, habitat description, the species and numbers of individuals located, photographs, and a map of survey locations shall be provided to the Department within 90 days of completion of each survey.

11. Green River shall conduct, or cause to be conducted, a survey for adult Regal Fritillary within the project footprint during the flight period in Year 5 following construction completion:

A study plan including specific survey methods will be submitted to IDNR prior to the start of the survey.

A report including, but not limited to, the survey methodology utilized, duration, date, time, habitat description, the species and numbers of individuals located, photographs, and a map of the species locations and survey coverage areas shall be provided to the Department within 90 days of completion of each survey.

12. Mitigation to the maximum extent practicable is required by the Act. Mitigation requirements for this authorization are as follows:
- a. Green River shall provide compensatory mitigation for the potential taking of Ornate Box Turtle, Blanding's Turtle, Plains Hog-nosed Snake, Regal Fritillary in the form of a monetary contribution of \$75,000 submitted to the Illinois Wildlife Preservation Fund to be earmarked for use within protected habitat and to bring conservation benefit to the species. Compensatory mitigation shall be provided **within 90 days of execution of this agreement.**
 - b. In addition, Green River split the purchase of a former agricultural field north of Jersey Road with another entity, which is the site of a ComEd switchyard currently under construction. The parcel is 40 acres in size, and the switchyard occupies approximately 15 acres on that parcel. The remaining 25 acres of potentially suitable habitat for the species shall be transferred to Middle Rock Conservation Partners, a local nonprofit organization, with the understanding that the remaining portions of the parcel not affected by switchyard construction will be restored to a sand prairie complex. Mitigation credit for 12.5 acres of the parcel is assigned to Green River. Evidence of the land transfer shall be provided to the Department **within 180 days of execution of this agreement.**
 - c. Green River shall provide \$31, 250 to Middle Rock Conservation Partners to support restoration of the mitigation parcel. Payment shall occur **within 90 days of execution of this agreement.**
 - d. The mitigation shall be provided as described above. Proof that mitigation has been satisfied shall be provided to the Department. Mitigation payments are nonrefundable, including events of revocation or termination.

Mitigation values are based on the Department's best current understanding of the species life history needs and impact analysis relevant to the project site's proposed conceptual design elements available at the time of review.

13. All reports, notifications, and other project documentation shall be submitted to:

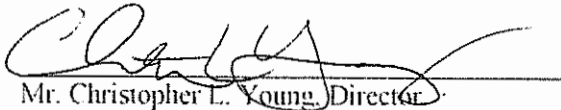
Illinois Department of Natural Resources
Office of Resource Conservation
Endangered Species Program – Incidental Take Authorization Coordinator
One Natural Resource Way
Springfield, IL 62702-1271

(217)557-8243
DNR.ITAcordinator@illinois.gov

The Department's Endangered Species Program shall provide all reports required under this agreement to the Illinois Endangered Species Protection Board and to the Department's Natural Heritage Database.

14. The Green River official identified below is authorized to execute this agreement. Execution by Green River indicates acceptance of all terms and conditions described in this authorization.
15. The execution of this agreement does not waive or excuse the responsibilities of Green River to comply with other Federal, State, or local regulations, including but not limited to obtaining any required permits for the execution of this project.

For the Illinois Department of Natural Resources:



Mr. Christopher L. Young, Director
Office of Resource Conservation

3/25/2020
Date

For the Green River Wind Farm:



Mr. Jeff Ringblom
Project Manager

March 19, 2020
Date



Illinois Department of Natural Resources

One Natural Resources Way Springfield, Illinois 62702-1271
www.dnr.illinois.gov

JB Pritzker, Governor
Colleen Callahan, Director

AMENDMENT TO INCIDENTAL TAKE AUTHORIZATION ISSUED TO GREEN RIVER ON MARCH 25, 2020 (IDNR ITA FILE #98)

Authorization for Incidental Take and Implementing Agreement

Pursuant to the Illinois Endangered Species Protection Act (Act) (520 ILCS 10/5.5) and the regulations adopted to implement the Act (17 Ill. Adm. Code 1080), authorization is hereby granted to Green River Wind Farm Phase 1, LLC (hereinafter referred to as Green River), a wholly-owned subsidiary of Geronimo Renewable Infrastructure Partners, L.P. for the incidental take of the State-threatened Black-billed Cuckoo (*Coccyzus erythrophthalmus*). The Illinois Department of Natural Resources (hereinafter referred to as Department) has determined that this taking is incidental to the operation, and maintenance of the Green River Wind Farm in Lee and Whiteside Counties in Illinois.

Procedural History

The Department executed an Incidental Take Authorization to Green River Wind Farm Phase I, LLC (Wind Farm) on August 6, 2013. At that time, the Wind Farm was a wholly owned subsidiary of Mainstream Renewable Power Ltd. The proposed project action area was over four times larger and configured differently than the current proposal. The Wind Farm was never constructed and none of the compliance requirements, including the mitigation responsibilities, of the former Incidental Take Authorization were performed. Therefore, the prior Authorization is considered null and void; and the current proposal is considered a separate and distinct project with no connection to the previously executed Incidental Take Authorization.

A Conservation Plan prepared by Stantec, on behalf of Green River, was submitted to the Department on October 11, 2018, as a request for authorization for the incidental take of Blanding's Turtle, Ornate Box Turtle, Plains Hog-nosed Snake, Regal Fritillary and two State-listed and Federally-listed bats. The Department requested additional information on November 20, 2018, as well as March 1, and July 5, 2019, to make the Conservation Plan complete as prescribed by Ill. Adm. Code 1080.10. Additional information was received by the Department on February 5, and May 22, 2019. The final Conservation Plan was accepted as complete by the Department on July 11, 2019.

On February 27, 2019, Green River requested a take authorization solely covering Blanding's Turtles, Ornate Box Turtle, Plains Hog-nosed Snake, and Regal Fritillary, collectively known in

the Conservation Plan as the Terrestrial Species, due to the increased risk to that suite of species during construction and due to the extended time necessary to receive take authorization from the US Fish and Wildlife Service (USFWS) for the two Federally-listed bat species. Per the Department's Section 6 Cooperative Agreement with the USFWS, as authorized under the federal Endangered Species Act, the Department may not issue take authorization for federally listed species until such time that the USFWS has provided an opinion. On March 2, 2019, the Department's Office of Legal Counsel provided guidance concurring that a take authorization for the terrestrial species only could precede the take authorization for bats.

The Terrestrial Species incidental take authorization was executed on March 25, 2020. It remains in full effect and is not altered by this additional agreement.

A separate Conservation Plan prepared by Stantec, on behalf of Green River was submitted to the Department on November 25, 2020, as a request for authorization for the incidental take of Black-billed Cuckoo. The Department requested additional information on December 15, 2020 to make the Conservation Plan complete as prescribed by Ill. Adm. Code 1080.10. Additional information was received by the Department on February 8, 2021. The final Conservation Plan was accepted as complete by the Department on February 22, 2021.

The public notice period and public comments will be detailed under #6 of the Compliance section below.

Compliance with the Illinois Endangered Species Protection Act

The Act includes six criteria which must be satisfied for the authorization of incidental take of an endangered or threatened species. These criteria and the Department's determination for each are listed below.

1. The taking will not be the purpose of, but will be only incidental to, the carrying out of an otherwise lawful activity:

The stated and apparent purpose of this proposed action is to operate and maintain a 194.25-megawatt (MW) wind farm located in Lee and Whiteside Counties. The wind project is located approximately nine (9) miles southeast of Sterling, Illinois and four (4) miles north of Walnut, Illinois. The wind farm will consist of 74 Siemens Gamesa G126 wind turbine generators (WTGs) and associated access roads, collector lines, crane paths, fiber optic line, substation, operations and maintenance (O&M) building, and laydown yard. Each WTG is manufactured off-site and consists of the tower, a nacelle that houses the generator and gearbox, and a three-blade rotor assembly, all of which were delivered to the project site and assembled on-site. Each WTG is anchored to a steel-reinforced concrete foundation. The total maximum height of the WTG, from the base of the tower to the tip of the blade is 485 feet (ft.), whereas the hub height is approximately 275 ft. The wind project also includes an underground power collection system between the pad-mounted transformers and a collector substation. All collector lines were buried a minimum of 5 ft. The collector system is connected to the

ComEd Schauff Road switchyard located immediately west of County Line Road and south of Hahnaman Road in Whiteside County. In addition to the WTGs and power collection system, access roads were constructed to provide access to the turbines during and after construction. These access roads are approximately 16-ft.-wide and constructed of crushed gravel/rock. The project O&M building is also located immediately west of County Line Road and south of Hahnaman Road in Whiteside County. Construction of the O&M building was completed in December 2018. Permanent and temporary wind measurement towers, also known as MET towers, were installed at the site and will be used for performance testing of the wind turbines to ensure that they meet the manufacturer's guarantees. Ongoing operation and maintenance activities may result in direct mortality by collision with turbines, transmission lines, and other project-related structures, especially during takeoff and landing. Barotrauma is less likely to be a source of mortality in birds than bats, and indirect effects by displacement from habitat, introduction of vertical surfaces, and noise, shadow flicker effects from operation of turbines.

Total estimated area of impact within species habitat for the immediately proposed actions is referred to as the Bat Action Area and includes **12,120 acres, including up to 74 WTGs, MET towers, and associated access roads.** The Department concurs that the take of Black-billed Cuckoo that could result from the proposed project is not the purpose of Green River's activities but is incidental to the carrying out of an otherwise lawful activity.

2. The parties to the Conservation Plan will, to the maximum extent practicable, minimize and mitigate the impact caused by the taking:

Proposed avoidance, minimization and mitigation were included in Green River's Conservation Plan.

To meet the "maximum extent practicable" standard, additional minimization and/or mitigation measures may be required beyond those proposed by Green River, based on the life history needs of the Black-billed Cuckoo. **All required minimization and mitigation measures are presented under the Authorization section below.**

3. The parties to the Conservation Plan will ensure that adequate funding for the Conservation Plan will be provided.

Green River states a portion of their overall budget for the wind project has been dedicated toward the implementation of the conservation measures.

The Department accepts this provision as assurance that adequate funding will be available to carry out the terms of the Conservation Plan.

4. Based on the best available scientific data, the Department has determined that the taking will not reduce the likelihood of survival or recovery of the endangered species or threatened species in the wild within the State of Illinois, the biotic community of which the species is a part, or the habitat essential to the species' existence in Illinois.

Black-billed Cuckoo (*Coccyzus erythrophthalmus*) is a State-threatened migratory bird species.

Habitat: Black-billed Cuckoos when in their breeding habitat are typically found in deciduous forest, but will also use open woodlands, thickets, and riparian vegetation.

Distribution: Black-billed Cuckoos are found over much of Eastern North America at various times of the year. Their breeding distribution ranges from portions of Alberta to Nova Scotia in Canada to Montana, Wyoming, eastern Colorado, north-central Texas, Alabama, and the Carolinas. The winter, non-breeding distribution includes the Southeastern states, Bermuda, lowlands of Mexico along the Gulf, and down into Central and northern South America.

Reproduction: Black-billed Cuckoos nest in deciduous trees, shrubs, or brambles, and occasionally coniferous trees such as hemlock. Nests are flimsy, shallow cups constructed of twigs and grasses and lined with dead or green leaves, pine needles, stalks, plant fibers, rootlets, mosses, and spider webs. Both adults help build the nest, and the female may start laying eggs in it before the nest is completed. They lay clutches of 2-5 greenish blue eggs. The incubation period of black-billed cuckoo eggs is 10-11 days. Nestlings are helpless after hatching but fledge the nest within 6-7 days. The period between egg laying to fledging of young is among the shortest for any bird species. Like Old World cuckoos, the Black-billed Cuckoo is known to occasionally lay its eggs in other birds' nests (brood parasitism).

Population: Black-billed Cuckoo populations are threatened by habitat loss and fragmentation. Their main prey of caterpillars makes them also susceptible to pesticide use. Black-billed Cuckoos are frequently killed by collisions with TV towers, tall buildings, and other structures during nighttime migration. Populations tend to fluctuate considerably from year to year as the individuals follow outbreaks of prey, making it difficult to accurately estimate population numbers.

Range in Illinois: Black-billed Cuckoos, a breeding resident of Illinois, can be found in areas throughout the state from late April to early October, after which they migrate to South America for the winter. Black-billed Cuckoos have been observed breeding in 11 of 102 Illinois counties. There are currently 14 extant Element Occurrence Records for Black-billed Cuckoo in the Illinois Natural Heritage Database.

Incidental Take Authorizations: The Department has 6 previous or pending Incidental Take Authorizations for Black-billed Cuckoo. This is the first authorization to be granted for Black-billed Cuckoo in Lee and Whiteside Counties. Previous projects have included an electrical transmission line and wind energy facilities.

Based on the amount of habitat impacted by this project, the number of known occurrences of Black-billed Cuckoo in Illinois, an assessment of the potential effect of this project on individual species in the project footprint, the conservation methods included in this authorization for take and the conservation plan, and the understanding that vulnerability and recovery information on the species remains limited; it is the conclusion of the Department that the taking anticipated as a result of this project will not reduce the likelihood of survival or recovery of the species in the wild within the State of Illinois, the biotic community of which the species are a part, or the habitat essential to the species' existence in Illinois.

5. Any measures required under Section 5.5(b)(6) of the Act will be performed.

Additional measures are listed below under "Authorization." This authorization is, by definition, subject to those terms and conditions, and the signature of a representative from Green River indicates their commitment to performing those measures.

6. The public has received notice of the application and has had the opportunity to comment before the Department made any decision regarding the application.

Public notice of Green River's request for authorization of incidental take was published in the *Breeze Courier* (official state newspaper) on March 3, 2021. The notice was also published in the *Daily Gazette* in Sterling and the *Dixon Telegraph* on March 3, March 10, March 18, 2021. A copy of the Conservation Plan was deposited in two locations including the Sterling Public Library and Geronimo Energy allowing for public review. The deadline for public comment was April 18, 2021. One comment was received from the public.

Authorization

It is the determination of the Department that the measures to be implemented by Green River will adequately minimize and mitigate the anticipated taking Black-billed Cuckoo associated with the operation and maintenance of the Green River Wind Farm in Lee and Whiteside Counties in Illinois. Further, the Department has concluded that the taking authorized herein will not reduce the likelihood of survival or recovery of the species in the wild within the State of Illinois, the biotic community of which the species is a part, or the habitat essential to the species' existence in Illinois.

All terms and conditions included in the aforementioned Conservation Plan submitted by Green River to the Department are incorporated into this agreement by reference and are made a part thereof.

Pursuant to Section 5.5 of the Illinois Endangered Species Protection Act [520 ILCS 10/5.5] and the Administrative Rules for the Incidental Taking of Endangered and Threatened Species [Ill. Adm. Code 1080.40(b)], this authorization is issued subject to the following terms and conditions, which may include additions or modifications to the minimization and mitigation measures proposed by Green River in the Conservation Plan:

1. This authorization is effective upon the signature of the Department and shall remain in effect for a period of **thirty (30) years** from the date of the Department signature, unless terminated by written agreement of both parties. **This agreement does not authorize take of any species except the Black-billed Cuckoo.**

Notwithstanding the above paragraph, due to the length of this Authorization, the Department reserves the right to reassess the terms of this Authorization every five years. If during reassessment the Department determines that Black-billed Cuckoo have become more imperiled than when the species and impact analyses were initially conducted, the Department may request an amendment to this Authorization or additional mitigation by Green River. If the Department and Green River cannot reach an agreement, this Authorization will be terminated. Termination of this Authorization under this provision does not prevent Green River from applying for a new Incidental Take Authorization for this project.

This authorization may be revoked pursuant to the Act and Ill. Adm. Code 1080.80(b) if the Department finds that Green River has failed to comply with any of these terms and conditions or has been responsible for the taking of Black-billed Cuckoo beyond that which is incidental to the operation and maintenance of the Green River Wind Farm in Lee and Whiteside Counties in Illinois.

2. The effective period of this authorization may be altered by mutual written agreement between Green River and the Department. The Illinois Endangered Species Protection Board shall be notified of such alteration.

Any substantive changes, including but not limited to a change in the project footprint or a change in the State-listed species which could potentially be affected, will require that a new Conservation Plan be submitted to the Department to initiate the review and public notice process as required by the Act. *For the purposes of this authorization, an increase in the turbine cut-in speed implemented based on mortality or estimated mortality of Black-billed Cuckoo in accordance with the adaptive management provisions of this Authorization, as well as the introduction of acoustic deterrents, as approved by the Department, shall not be considered a substantive change.*

3. This authorization may only be transferred upon approval and written authorization by the Department.
4. Notification to all on-site personnel shall be provided on the sensitive biological resources in the area; the identification of Black-billed Cuckoo; regulations

protecting the species; where the species might be found; avoidance areas; travel restrictions for equipment; how to report sightings or incidents that may involve take; the importance of avoiding take of the species; and response protocol if the species are found, including the chain of response personnel. **Green River shall submit a copy of the education materials to the Department.**

5. The Department reserves the right of entry by its staff or representatives to inspect potential habitat and species management practices.
6. Biological consultants employed by Green River shall hold the necessary permits for work with non-listed and listed species; these include an Illinois Department of Natural Resources (IDNR) Scientific Collection Permit as authorized under 17 Illinois Administrative Code 520, and an IDNR Endangered Species Permit as authorized under 17 Illinois Administrative Code 1070.
7. Notification of any Black-billed Cuckoo present during the performance of the project shall be reported electronically to the Department within 48 hours of discovery accompanied by location information (photograph, map, and GPS coordinates).
8. Any discoveries of additional State-listed species beyond those identified in this agreement shall be reported to the Department within 48 hours accompanied by location information.
9. Green River shall conduct, or cause to be conducted, the following pre-construction or operational efforts:
 - a. Minimizing the number of turbines that were located within 1,000 feet of woodlots,
 - b. Avoiding siting turbines in wetlands, to the extent practicable,
 - c. Installing an underground electrical collection system, where practicable,
 - d. Installing bird diverters at 20-foot intervals where crossing habitat resources such as wetlands and woodlots, and following other provisions of the Avian Power Line Interaction Committee,
 - e. Minimization of facility lighting by using motion detectors where possible, directing lights downward, and lighting turbines in accordance with Federal Aviation Administration minimum requirements,
 - f. Replacing temporary meteorological towers with non-guyed lattice towers,
 - g. Installing spark arrestors on all electrical equipment.
10. Green River shall conduct, or cause to be conducted, post-construction monitoring by a qualified biologist:
 - a. Routine bat monitoring shall be conducted and include reporting on any bird fatality data and shall include reporting carcasses of listed species and eagles.
 - b. Intense bat monitoring will be conducted from May 15 to October 15 during the first three years of operation. Green River targeted an overall detection

probability of at least 20% for the Intense Monitoring periods. The variables included the search interval (how often searches are being conducted at each turbine) and the proportion of road and pad searches to full plot searches (80 x 80m cleared plots). To achieve an overall detection probability equal to or above 0.2, Green River proposes:

1. Twice-weekly searches at all turbines (search interval of 3.5 days)
2. 35% full plots
3. 65% roads and pads

Green River will use the results of each year's monitoring to inform the monitoring protocols for the following year, with a goal of an overall detection probability between equal to, or above, 0.2 for each year of intense bat monitoring. If no Indiana Bat and/or Northern Long-ear Bat carcasses are found after the first 3 years of intense monitoring, this results in 90% confidence that 6 or fewer Indiana Bats and/or 6 or fewer Northern Long-eared Bats have been taken over the course of the 3 years.

Concurrent with the first year of Intense Monitoring, Green River shall conduct on night of mist net surveys at or near the four sites where mist net surveys were conducted in 2016 to determine if either of the listed bat species are present in the vicinity of the project. These surveys will be conducted during the summer months when bats are more likely to be present. The results of the mist net survey shall be provided to the Department upon completion.

- c. The results of the initial three years of Intense Bat Monitoring shall be used to inform the Annual Bat monitoring protocols. It is assumed that Intense Bat Monitoring will confirm that summer risk to the covered bat species is limited to Northern Long-eared bats at turbines within 1,000 ft of suitable habitat (23 turbines). Therefore, Green River proposes to conduct Annual Bat Monitoring at those 23 turbines from May 15 through July 31, and at all Project turbines from August 1 through October 15.

Green River targeted an overall detection probability equal to or above 5% for the Annual Bat Monitoring periods. To achieve an overall detection probability equal to or above 0.05 Green River proposes:

1. Once-weekly searches at all turbines (search interval of 7 days)
2. 100% roads and pads (n = 23 during summer, and n = 74 during fall migration)

Green River will use the results of each year's monitoring to inform the monitoring protocols for the following year, with a goal of an overall detection probability equal to or above 0.05 for each year of Annual Bat monitoring.

- d. **All carcasses of Black-billed Cuckoos found during standardized searches or incidentally shall be reported to the Department within 24 hours of positive identification.**

- e. **A report including, but not limited to, the bat survey methodology utilized, maps of turbines searched, and all fatalities observed, shall be submitted to the Department by April 1 summarizing the monitoring results from the previous year.** For each listed bird fatality, the following data shall be included: turbine location (turbine number and GPS coordinates), distance and bearing to turbine, species, sex, adult/juvenile, reproductive status, the potential date of fatality, wind speed profile sunset to sunrise during night preceding potential date of fatality, weather conditions, power production profile for the responsible turbine on estimated date of fatality, and photographs of the carcass.

11. Mitigation to the maximum extent practicable is required by the Act. Mitigation requirements for this authorization are as follows:

Green River shall contribute **\$25,000** to the Illinois Wildlife Preservation Fund, with those funds earmarked for management of, or to bring conservation benefit to, Black-billed Cuckoo.

Mitigation values are based on the Department's best current understanding of the species life history needs and impact analysis relevant to the project site's proposed conceptual design elements available at the time of review.

12. Green River shall conduct, or cause to be conducted, the following adaptive management measures in the event that take of Black-billed Cuckoos may be exceeding authorized take limit of 3 individuals per year over the permit term:
 - a. Green River shall meet and confer with the Department to determine the potential cause of mortality. If mortality is related to Project operation, then Green River will develop additional conservation measures as needed in coordination with the Department.
 - b. Post-construction monitoring will be conducted the following year in which fatalities were detected to determine if additional measures were successful at reducing mortality.
 - c. If no spatial, weather, or temporal patterns emerge as potential causes for the fatality, no new conservation measures will be implemented based on a single year exceeding the anticipated take. However, if subsequent years also document more than 3 Black-billed Cuckoo fatalities, Green River shall coordinate with the Department to determine the need to implement additional conservation measures, and if needed, pursue an amendment to the ITA.
13. All reports, notifications, and other project documentation shall be submitted to:

Illinois Department of Natural Resources
Office of Resource Conservation
Endangered Species Program – Incidental Take Authorization Coordinator
One Natural Resource Way

Springfield, IL 62702-1271

(217)557-8243

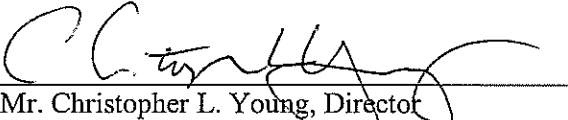
DNR.ITAcoordinator@illinois.gov

The Department's Endangered Species Program shall provide all reports required under this agreement to the Illinois Endangered Species Protection Board and to the Department's Natural Heritage Database.


14. The Green River official identified below is authorized to execute this agreement. Execution by Green River indicates acceptance of all terms and conditions described in this authorization.
15. The execution of this agreement does not waive or excuse the responsibilities of Green River to comply with other Federal, State, or local regulations, including but not limited to obtaining any required permits for the execution of this project.

For the Illinois Department of Natural Resources:

For the Green River Wind Farm:



Mr. Christopher L. Young, Director
Office of Resource Conservation

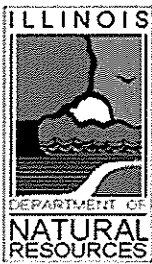


Mr. Jeff Ringblom
Project Manager

July 16, 2021

Date

Date



Illinois Department of Natural Resources

One Natural Resources Way Springfield, Illinois 62702-1271
www.dnr.illinois.gov

JB Pritzker, Governor
Colleen Callahan, Director

AMENDMENT TO INCIDENTAL TAKE AUTHORIZATION ISSUED TO GREEN RIVER ON MARCH 25, 2020 (IDNR ITA FILE #98)

Authorization for Incidental Take and Implementing Agreement

Pursuant to the Illinois Endangered Species Protection Act (Act) (520 ILCS 10/5.5) and the regulations adopted to implement the Act (17 Ill. Adm. Code 1080), authorization is hereby granted to Green River Wind Farm Phase I, LLC (hereinafter referred to as Green River), developed and managed by National Grid Renewables, formerly known as Geronimo Energy, for the incidental take of the Federally and State-endangered Indiana Bat (*Myotis sodalis*) and Federally and State-threatened Northern Long-eared Bat (*Myotis septentrionalis*). The Illinois Department of Natural Resources (hereinafter referred to as Department) has determined that this taking is incidental to the operation, and maintenance of the Green River Wind Farm in Lee and Whiteside Counties in Illinois.

Procedural History

The Department executed an Incidental Take Authorization to Green River Wind Farm Phase I, LLC (Wind Farm) on August 6, 2013. At that time, the Wind Farm was a wholly owned subsidiary of Mainstream Renewable Power Ltd. The proposed project action area was over four times larger and configured differently than the current proposal. The Wind Farm was never constructed and none of the compliance requirements, including the mitigation responsibilities, of the former Incidental Take Authorization were performed. Therefore, the prior Authorization is considered null and void; and the current proposal is considered a separate and distinct project with no connection to the previously executed Incidental Take Authorization.

A Habitat Conservation Plan (HCP) prepared by Stantec, on behalf of Green River, was submitted to the Department on October 11, 2018, as a request for authorization for the incidental take of Blanding's Turtle, Ornate Box Turtle, Plains Hog-nosed Snake, Regal Fritillary and two Federally and State-listed bats. Pursuant to Ill. Adm. Code 1080.10, the HCP was accepted in lieu of a State of Illinois Conservation Plan. The Department requested additional information on November 20, 2018, as well as March 1, and July 5, 2019, to make the Conservation Plan complete as prescribed by Ill. Adm. Code 1080.10. Additional information was received by the Department on February 5, and May 22, 2019. The final Conservation Plan was accepted as complete by the Department on July 11, 2019.

On February 27, 2019, Green River requested a take authorization solely covering Blanding's Turtles, Ornate Box Turtle, Plains Hog-nosed Snake, and Regal Fritillary, collectively known in the Conservation Plan as the Terrestrial Species, due to the increased risk to that suite of species during construction and due to the extended time necessary to receive take authorization from the US Fish and Wildlife Service (USFWS) for the two Federally-listed bat species. Per the Department's Section 6 Cooperative Agreement with the USFWS, as authorized under the federal Endangered Species Act, the Department may not issue take authorization for federally listed species until such time that the USFWS has provided an opinion. On March 2, 2019, the Department's Office of Legal Counsel provided guidance concurring that a take authorization for the Terrestrial Species could precede the take authorization for bats.

The Terrestrial Species take authorization was executed on March 25, 2020. It remains in full effect and is not altered by this additional agreement.

The Green River Wind HCP was approved by the US Fish and Wildlife Service (USFWS) and a federal Incidental Take Permit (ITP) was issued on July 29, 2022. The permit number is ESPER0047664.

The public notice period and public comments will be detailed under #6 of the Compliance section below.

Compliance with the Illinois Endangered Species Protection Act

The Act includes six criteria which must be satisfied for the authorization of incidental take of an endangered or threatened species. These criteria and the Department's determination for each are listed below.

1. The taking will not be the purpose of, but will be only incidental to, the carrying out of an otherwise lawful activity:

The stated and apparent purpose of this proposed action is to operate and maintain a 194.25-megawatt (MW) wind farm located in Lee and Whiteside Counties. The wind project is located approximately nine (9) miles southeast of Sterling, Illinois and four (4) miles north of Walnut, Illinois. The wind farm consists of 74 Siemens Gamesa G126 wind turbine generators (WTGs) and associated access roads, collector lines, crane paths, fiber optic line, substation, operations and maintenance (O&M) building, and laydown yard. Each WTG was manufactured off-site and consists of the tower, a nacelle that houses the generator and gearbox, and a three-blade rotor assembly, all of which were delivered to the project site and assembled on-site. Each WTG is anchored to a steel-reinforced concrete foundation. The total maximum height of the WTG, from the base of the tower to the tip of the blade is 485 feet (ft.), whereas the hub height is approximately 275 ft. The wind project also includes an underground power collection system between the pad-mounted transformers and a collector substation. All collector lines were buried a minimum of 5 ft. The collector system is connected to the ComEd Schauff Road switchyard located immediately west of County Line Road

and south of Hahnman Road in Whiteside County. In addition to the WTGs and power collection system, access roads were constructed to provide access to the turbines during and after construction. These access roads are approximately 16-ft.-wide and constructed of crushed gravel/rock. The project O&M building is also located immediately west of County Line Road and south of Hahnman Road in Whiteside County. Construction of the O&M building was completed in December 2018. The turbines have been operational since October 2019. Permanent and temporary wind measurement towers, also known as MET towers, were installed at the site, and will be used for performance testing of the wind turbines to ensure that they meet the manufacturer's guarantees. Proposed activities may result in direct collision with or barotrauma (injury caused by the sudden pressure changes near turbine blades) caused by active wind turbines, particularly during Spring and Fall migration season to the Indiana Bat and Northern Long-eared Bat during project activities.

Total estimated area of impact within species habitat for the immediately proposed actions is referred to as the Bat Action Area and includes **12,120 acres**, including up to 74 WTGs, MET towers, and associated access roads. The Department concurs that the take of Indiana Bat and Northern Long eared Bat that could result from the proposed project is not the purpose of Green River's activities but is incidental to the carrying out of an otherwise lawful activity.

2. The parties to the Conservation Plan will, to the maximum extent practicable, minimize and mitigate the impact caused by the taking:

Proposed avoidance, minimization and mitigation were included in Green River's Conservation Plan.

To meet the "maximum extent practicable" standard, additional minimization and/or mitigation measures may be required beyond those proposed by Green River, based on the life history needs of the Indiana Bat and Northern Long-eared Bat. **All required minimization and mitigation measures are presented under the Authorization section below.**

3. The parties to the Conservation Plan will ensure that adequate funding for the Conservation Plan will be provided.

Green River states a portion of their overall budget for the wind project has been dedicated toward the implementation of the conservation measures. Funding assurances for additional mitigation, if required to cover the difference between the mitigation conducted to date and potential future mitigation up to the permitted level of take, will be analyzed annually, and proof of the funding will be provided to the USFWS and Department by January 1 of the year preceding when take is calculated to exceed the existing mitigation.

The Department accepts this provision as assurance that adequate funding will be available to carry out the terms of the Conservation Plan.

4. Based on the best available scientific data, the Department has determined that the taking will not reduce the likelihood of survival or recovery of the endangered species or threatened species in the wild within the State of Illinois, the biotic community of which the species is a part, or the habitat essential to the species' existence in Illinois.
-

Indiana Bat (*Myotis sodalis*) is a Federally endangered and State-endangered flying mammalian species.

Habitat: Indiana Bat hibernates in the winter, primarily in caves and abandoned mines. The species prefers the coldest part of the cave, where they are found huddled in large clusters of 500-1000 bats. In the summer, preferred habitat for this nocturnal insectivore consists of wooded areas, often near streams. The species is typically found beneath the exfoliating bark of trees.

Distribution: Their overall range covers much of the eastern United States. Populations migrate as far south as Georgia and Alabama. They are found as far north as Michigan, Vermont, and New York. The species has disappeared from most of its former range in the northeastern United States.

Migration: The species is migratory, traveling up to 300 miles between winter and summer habitats. Migrants will leave hibernation sites in March and April. They return to hibernacula in August or September. Staging or swarming occurs in September and October at the mouths of caves.

Reproduction: Mating occurs from late August to early October, prior to hibernation. Females store sperm through the winter and ovulation takes place in the spring. Females give birth to a single pup in June or July. Young can fly at 25-37 days.

Population: Indiana Bats hibernate in large groups, making them highly susceptible to White-nose Syndrome (confirmed in Illinois in 2013) during the winter months. The low reproductive rate of bats coupled with the vulnerability to disease afflicting the species at hibernacula is a cause of concern for potentially severe population level declines. Human disturbance in caves may disrupt hibernation, causing unnecessary burning of fat reserves that bats need to get through the winter. Removal of forested summer habitat may also lead to population decline.

Range in Illinois: Indiana Bats are extant (found in the last 10 years) in 42 of 102 Illinois counties. There are currently 76 extant Element Occurrence Records for Indiana Bats in the Illinois Natural Heritage Database. These records include both hibernacula and locations at which bats have been captured during surveys conducted during the summer breeding season. Data reflect the presence of Indiana bats at Illinois maternity colonies and/or day roosts as early as April 12 and as late as October 6. Locations are scattered across much of the southern ¾ of Illinois. While the range of Indiana bats in Illinois is broad, declines in the

number of bats found at traditional hibernacula indicate that the species remains in jeopardy. However, the migration pathways of these bats remain unknown.

Incidental Take Authorizations: The Department has eleven (11) pending or authorized Incidental Take Authorizations for Indiana Bats for two transmission lines, a pipeline, landfill, wind farms, and three single-turbine wind installations. There have been six (6) other Incidental Take Authorizations for Indiana Bat issued for commercial wind installations. This is the first authorization granted for the potential take of Indiana Bat in Lee and Whiteside Counties.

Northern Long-eared Bat (*Myotis septentrionalis*) is a Federally threatened and State-threatened flying mammalian species.

Habitat: The Northern Long-eared Bat hibernates in the winter, primarily in caves and abandoned mines. The species prefers cold, humid areas. They are most likely to be found in cracks or crevices, rather than huddled in large groups. In the summer, preferred habitat for this nocturnal insectivore consists of large, contiguous forested areas. The species roosts in live and dead trees, and occasionally in human structures such as bridges and barns.

Distribution: They are distributed in patches in eastern and north-central United States and southern Canada. The overall summer and winter ranges are the same.

Migration: Northern Long-eared Bats are commonly a local migrant, only traveling up to 50 miles between winter and summer habitats.

Reproduction: Mating occurs in late summer or early fall, prior to hibernation. Females store sperm through the winter, though some females may mate again at spring emergence. Females give birth to a single pup between May and July, depending on the location (typically late June to early July in Illinois).

Population: Northern Long-eared Bats hibernate in caves where the fungus that causes White-nose Syndrome is found. The low reproductive rate of bats coupled with the vulnerability to disease afflicting the species at hibernacula is a cause of concern for potentially severe population level declines. Northern Long-eared Bats are sensitive to disturbance during hibernation, which causes bats to deplete their energy reserves. Habitat fragmentation of mature forest habitat is also a threat.

Range in Illinois: Northern Long-eared Bat is extant in 38 of 102 Illinois counties. There are currently 64 extant Element Occurrence Records for Northern Long-eared Bat in the Illinois Natural Heritage Database. These occurrences include both summer locations of roost and/or maternity colonies and winter hibernacula. Data reflect the presence of Northern Long-eared Bat at Illinois maternity colonies and/or day roosts as early as April 16 and as late as October 3. Locations are scattered across the entire state.

Incidental Take Authorizations: The Department has six (6) pending or authorized Incidental Take Authorizations for Northern Long-eared Bats for a

pipeline and wind farms. This is the first authorization to be granted for potential take of Northern Long-eared Bats in Lee and Whiteside Counties.

Based on the amount of habitat impacted by this project, the number of known occurrences of Indiana Bats and Northern Long-eared Bats in Illinois, an assessment of the potential effect of this project on individual species in the project footprint, the conservation methods included in this authorization for take and the conservation plan, and the understanding that vulnerability and recovery information on the species remains limited; it is the conclusion of the Department that the taking anticipated as a result of this project will not reduce the likelihood of survival or recovery of the species in the wild within the State of Illinois, the biotic community of which the species are a part, or the habitat essential to the species' existence in Illinois.

5. Any measures required under Section 5.5(b)(6) of the Act will be performed.

Additional measures are listed below under "Authorization." This authorization is, by definition, subject to those terms and conditions, and the signature of a representative from Green River indicates their commitment to performing those measures.

6. The public has received notice of the application and has had the opportunity to comment before the Department made any decision regarding the application.

Public notice of Green River's request for authorization of incidental take was published in the *Breeze Courier* (official state newspaper) on July 17, 2019. The notice was also published in the [Sterling] *Daily Gazette* and the *Dixon Telegraph* on July 17, and 24, 2019, and on August 1, 2019. A copy of the Habitat Conservation Plan was deposited in two locations including the Sterling Public Library and Geronimo Energy allowing for public review. The deadline for public comment was August 31, 2019. No comments were received from the public.

Authorization

It is the determination of the Department that the measures to be implemented by Green River will adequately minimize and mitigate the anticipated taking Indiana Bat and Northern Long-Eared Bat associated with the operation, and maintenance of the Green River Wind Farm in Lee and Whiteside Counties in Illinois. Further, the Department has concluded that the taking authorized herein will not reduce the likelihood of survival or recovery of the species in the wild within the State of Illinois, the biotic community of which the species is a part, or the habitat essential to the species' existence in Illinois.

All terms and conditions included in the aforementioned HCP submitted by Green River to the Department are incorporated into this agreement by reference and are made a part thereof.

Pursuant to Section 5.5 of the Illinois Endangered Species Protection Act [520 ILCS 10/5.5] and the Administrative Rules for the Incidental Taking of Endangered and Threatened Species [Ill. Adm. Code 1080.40(b)], this authorization is issued subject to the following terms and conditions, which may include additions or modifications to the minimization and mitigation measures proposed by Green River in the Conservation Plan

1. This authorization is effective upon the signature of the Department and shall remain in effect for a period of **thirty (30) years** from the date of the Department signature, unless terminated by written agreement of both parties.

Notwithstanding the above paragraph, due to the length of this Authorization, the Department reserves the right to reassess the terms of this Authorization every five years. If during reassessment the Department determines that Indiana Bats or Northern Long-Eared Bats have become more imperiled than when the species and impact analyses were initially conducted, the Department may request an amendment to this Authorization or additional mitigation by Green River. If the Department and Green River cannot reach an agreement, this Authorization will be terminated. Termination of this Authorization under this provision does not prevent Green River from applying for a new Incidental Take Authorization for this project.

This authorization may be revoked pursuant to the Act and Ill. Adm. Code 1080.80(b) if the Department finds that Green River has failed to comply with any of these terms and conditions or has been responsible for the taking of Indiana Bat and Northern Long-eared Bat beyond that which is incidental to the operation and maintenance of the Green River Wind Farm in Lee and Whiteside Counties in Illinois.

2. The effective period of this authorization may be altered by mutual written agreement between Green River and the Department. The Illinois Endangered Species Protection Board shall be notified of such alteration.

Any substantive changes, including but not limited to a change in the project footprint or a change in the State-listed species which could potentially be affected, will require that a new Conservation Plan be submitted to the Department to initiate the review and public notice process as required by the Act. **For the purposes of this authorization, an increase in the turbine cut-in speed implemented based on mortality or estimated mortality of Indiana Bats and/or Northern Long-eared Bats in accordance with the adaptive management provisions of this Authorization, as well as the introduction of acoustic deterrents, as approved by the Department, shall not be considered a substantive change. Additionally, implementation of new technological solutions that are as or more protective of Indiana Bats and Northern Long-eared Bats as the below-described curtailment protocol, as determined by the Department, shall not be considered a substantive change.**

3. This authorization may only be transferred upon approval and written authorization by the Department.

4. Notification to all on-site personnel shall be provided on the sensitive biological resources in the area; the identification of Indiana Bat and Northern Long-eared Bat; regulations protecting the species; where the species might be found; avoidance areas; travel restrictions for equipment; how to report sightings or incidents that may involve take; the importance of avoiding take of the species; and response protocol if the species are found, including the chain of response personnel. **Green River shall submit a copy of the education materials to the Department.**
5. The Department reserves the right of entry by its staff or representatives to inspect potential habitat and species management practices.
6. Biological consultants employed by Green River shall hold the necessary permits for work with non-listed and listed species; these include an Illinois Department of Natural Resources (IDNR) Scientific Collection Permit as authorized under 17 Illinois Administrative Code 520, and an IDNR Endangered Species Permit as authorized under 17 Illinois Administrative Code 1070.
7. Notification of any Indiana Bat and Northern Long-eared Bat carcass present during the operation of the project shall be reported electronically to the Department within 48 hours of positive identification accompanied by location information (photograph(s), map, and GPS coordinates).
8. Any discoveries of additional State-listed species beyond those identified in this agreement shall be reported to the Department within 48 hours of identification accompanied by location information.
9. Copies of any reports, updates, modifications, or other project documentation required by the USFWS Incidental Take Permit issued on July 29, 2022, shall be provided concurrently to the Department. An annual report is due to USFWS and the Department by January 31 following each year of monitoring. Likewise, all reports under this authorization shall be provided to the USFWS unless USFWS determines in writing that such submissions are not necessary. This includes, but is not limited to, reports of fatalities of any Indiana Bats or Northern Long-eared Bats **within 48 hours of positive identification** of a carcass of one of those species. Per the HCP, Indiana Bat and Northern Long-eared Bat carcasses shall be turned over to the USFWS; provided, however, that in the event that USFWS does not have interest in such carcasses, the Illinois Bat Conservation Program (hereinafter referred to as IBCP) shall be notified and given the opportunity to collect such carcasses prior to their disposal by Green River. Prior to disposal of any *Myotis* carcass, the Department and IBCP shall be contacted and given ninety (90) days to collect the carcass from Green River.
10. Green River shall conduct, or cause to be conducted, the following pre-construction, construction, and/or post-construction efforts:

- a. Tree clearing shall only occur during the winter in accordance with bat guidelines (trees shall only be removed from October 15 to March 31) unless USFWS and the Department agree to an alternative method for clearing (such as conducting surveys prior to clearing outside the winter months).
- b. Shall include the implementation of a 5.0 m/s cut-in speed curtailment strategy. This proposed action includes operational adjustments that dictate when turbines are feathered (i.e., to reduce the blade angle to the wind to slow or stop the turbine from spinning). Below the cut-in speed, turbine blades would be feathered so that they do not spin until a designated cut-in speed is reached.
- c. The turbines shall be feathered thirty (30) minutes before sunset to thirty (30) minutes after sunrise below the manufacture's cut-in speed (3 m/s) during the spring migration period (March 15 to July 31) and during the rest of the bat active season (August 1 to October 31) when temperatures are below 50 degrees F. Between May 16 and July 31, when temperatures are above 50 degrees F at night, the cut-in speed will be raised to 5.0 m/s at the 24 turbines within 1,000 feet of suitable habitat. Between August 1 and October 31, when temperatures are above 50 degrees F at night, the cut-in speed will be raised to 5.0 m/s at all turbines. The feathering/out in process will be computer controlled on a real-time basis. Accordingly, turbines will cut-in or be feathered throughout the night as the wind speed fluctuates above and below the specified cut-in speed. This curtailment protocol may be modified based on new technologies so long as any modifications are as or more protective to the Indiana and Northern Long-eared Bats.

Turbine Group	Temperature	Date		
		March 15 – May 15	May 16 – July 31	August 1 – October 31
Turbines >1,000 ft from suitable habitat	< 50°F	Feather below 3.0 m/s	Feather below 3.0 m/s	Feather below 3.0 m/s
	> 50°F			Feather below 5.0 m/s
Turbines <1,000 ft from suitable habitat	< 50°F		Feather below 3.0 m/s	Feather below 3.0 m/s
	> 50°F		Feather below 5.0 m/s	Feather below 5.0 m/s

11. Green River shall conduct, or cause to be conducted, post-construction monitoring by a qualified biologist:

- a. Intense bat monitoring will be conducted from May 15 to October 15 during the first three years after ITP issuance, and again during years 15 -17 (unless other years are mutually agreed upon by the USFWS, Department, and Green River). Green River targeted an overall detection probability of at least 20% for the Intense Monitoring periods. The variables included the search interval (how often searches are being conducted at each turbine) and the proportion of

road and pad searches to full plot searches (80-meter x 80 meter cleared plots). To achieve an overall detection probability equal to or above 0.2, Green River proposes:

1. Twice-weekly searches at all turbines (search interval of 3.5 days)
2. 35% full plots
3. 65% roads and pads

Green River will use the results of each year's monitoring to inform the monitoring protocols for the following year, with a goal of an overall detection probability equal to, or above, 0.2 for each year of intense bat monitoring.

- b. The results of the initial three years of Intense Bat Monitoring shall be used to inform the Annual Bat monitoring protocols. Green River assumes that Intense Bat Monitoring will confirm that summer risk to the covered bat species is limited to Northern Long-eared bats at turbines within 1,000 ft of suitable habitat (24 turbines). Therefore, Green River proposes to conduct Annual Bat Monitoring at those 24 turbines from May 15 through July 31, and at all Project turbines from August 1 through October 15.

Green River targeted an overall detection probability equal to or above 5% for the Annual Bat Monitoring periods. To achieve an overall detection probability equal to or above 0.05 Green River proposes:

1. Once-weekly searches at all turbines (search interval of 7 days)
2. 100% roads and pads (n = 24 during summer, and n = 74 during fall migration)

Green River will use the results of each year's monitoring to inform the monitoring protocols for the following year, with a goal of an overall detection probability equal to or above 0.05 for each year of Annual Bat monitoring.

- c. If, during intense bat monitoring, a carcass of an Indiana Bat or Northern Long-eared Bat is found at a turbine further than 1,000 feet from suitable habitat, then annual bat monitoring will be adjusted to include additional turbines as needed.
- d. Mortality monitoring shall also include search efficiency and carcass removal/persistence trials as described in the HCP. These shall use non-listed bat carcasses from onsite or veterinary labs, or brown mice or small black rats if 40 bat carcasses are not available.
- e. **All carcasses of *Myotis* species, and carcasses of any Tri-Colored Bats (*Perimyotis subflavus*) found during standardized searches or incidentally discovered shall be retained and reported to the Department within 48 hours of carcass identification.** Prior to disposal of any *Myotis* and/or *Perimyotis subflavus* carcass, the Department shall be contacted and given ninety (90) days to collect the carcass from Green River. If identification of a *Myotis* carcass is uncertain, the carcass shall be submitted for DNA analysis and identification.

- f. **All carcasses of Hoary Bats, Eastern Red Bats, and Silver-haired Bats shall be preserved per IBCP protocol** and submitted to their bat genomics laboratory until such time that the lab is no longer conducting population genetic studies on these species, which mortality surveys in Illinois show are the species most at risk of take.
- g. **The Department reserves the right to compel Green River to preserve and submit tissue samples and metadata to IBCP for future genetic studies which may be performed.**
- h. **A report including, but not limited to, the bat survey methodology utilized, maps of turbines searched, and all fatalities observed, shall be submitted to the Department by January 31 summarizing the monitoring results from the previous year.** For each bat fatality, the following data shall be included: turbine location (turbine number and GPS coordinates), distance and bearing to turbine, species, sex, adult/juvenile, reproductive status, the potential date of fatality, wind speed profile sunset to sunrise during night preceding potential date of fatality, weather conditions, power production profile for the responsible turbine on estimated date of fatality, and photographs of the carcass.

12. Mitigation to the maximum extent practicable is required by the Act. Mitigation requirements for this authorization are as follows:

- a. Green River shall protect 123.4 acres of summer Indiana Bat and Northern Long-eared Bat habitat in Vermillion County, Illinois, as specified in the mitigation plan in Appendix C of the Conservation Plan.
- b. Within 60 days of permit issuance, Green River shall provide proof of contract completion and payment to the mitigation entity for the execution of the mitigation described in the HCP.

Mitigation values are based on the Department's best current understanding of the species life history needs and impact analysis relevant to the project site's proposed conceptual design elements available at the time of review.

13. Green River shall conduct, or cause to be conducted, the following adaptive management measures in the event that take of **Indiana Bats** may be exceeding the USFWS-authorized take limit of 30 individuals over the permit term:

- a. If after the first three (3) years of monitoring the average annual take rate is between the estimated take and the permitted take, AND projected take over the 30-year term is between the estimated take and the permitted take:
 - 1. Green River shall increase mitigation to account for the higher level of take (additional mitigation) **OR**
 - 2. Increase cut-in speeds by 0.5 m/s to stay within mitigated levels in whichever seasons are affected
- b. If during the first three years of monitoring the average annual take rate is above the permitted take AND, projected take over the 30-year permit term is above the permitted take:

1. Green River shall increase cut-in speed by increments of 0.5 m/s in whichever seasons are affected to stay within mitigated levels **AND**
 2. Conduct two years of “Intense Monitoring” to ensure that take reduces by enough to keep the Project below permitted levels.
- c. If the average annual take rate is below the estimated take, **AND** projected take over the 30-year permit is below the estimated take (as determined with the “reversion test” within Evidence of Absence estimates at 0.1 for the average annual fatality rate)
1. Green River shall decrease cut-in speeds by 0.5 m/s in whichever seasons are affected **AND**
 2. Conduct two (2) years of intense monitoring to ensure that take remains below the permitted levels.

14. Green River shall conduct, or cause to be conducted, the following adaptive management measures in the event that take of **Northern Long-eared Bats** may be exceeding the USFWS-authorized take limit of 90 individuals over the permit term:

- a. If after the first three (3) years of monitoring the average annual take rate is between the estimated take and the permitted take, **AND** projected take over the 30-year term is between the estimated take and the permitted take:
 1. Green River shall increase mitigation to account for the higher level of take (additional mitigation) **OR**
 2. Increase cut-in speeds by 0.5 m/s to stay within mitigated levels in whichever seasons are affected
- b. If during the first three years of monitoring the average annual take rate is above the permitted take **AND**, projected take over the 30-year permit term is above the permitted take:
 1. Green River shall increase cut-in speed by increments of 0.5 m/s in whichever seasons are affected to stay within mitigated levels **AND**
 2. Conduct two years of “Intense Monitoring” to ensure that take reduces by enough to keep the Project below permitted levels.
- c. If the average annual take rate is below the estimated take, **AND** projected take over the 30-year permit is below the estimated take (as determined with the “reversion test” within Evidence of Absence estimates at 0.1 for the average annual fatality rate)
 1. Green River shall decrease cut-in speeds by 0.5 m/s in whichever seasons are affected **AND**
 2. Conduct two (2) years of intense monitoring to ensure that take remains below the permitted levels.
- d. Should the USFWS 4(d) rule provisions be reversed, the adaptive management triggers and responses found under #13 above shall apply to Northern Long-eared Bats.

15. All reports, notifications, and other project documentation shall be submitted to:

Illinois Department of Natural Resources

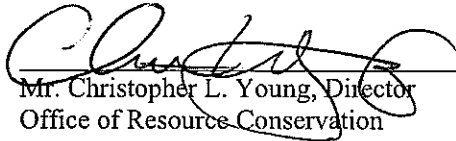
Office of Resource Conservation
Endangered Species Program – Incidental Take Authorization Coordinator
One Natural Resource Way
Springfield, IL 62702-1271

(217)557-8243
DNR.ITAcoordinator@illinois.gov

The Department's Endangered Species Program shall provide all reports required under this agreement to the Illinois Endangered Species Protection Board and to the Department's Natural Heritage Database.

16. The Green River official identified below is authorized to execute this agreement. Execution by Green River indicates acceptance of all terms and conditions described in this authorization.
17. The execution of this agreement does not waive or excuse the responsibilities of Green River to comply with other Federal, State, or local regulations, including but not limited to obtaining any required permits for the execution of this project.

For the Illinois Department of Natural Resources:

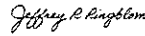


Mr. Christopher L. Young, Director
Office of Resource Conservation

11/1/2022

Date

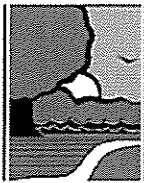
For the Green River Wind Farm:



Mr. Jeff Ringblom
Project Manager

Oct 25, 2022

Date



**SECOND AMENDMENT TO
INCIDENTAL TAKE AUTHORIZATION
ISSUED TO GREEN RIVER
ON MARCH 25, 2020
(IDNR ITA FILE #98)**

Authorization for Incidental Take and Implementing Agreement

Pursuant to the Illinois Endangered Species Protection Act (Act) (520 ILCS 10/5.5) and the regulations adopted to implement the Act (17 Ill. Adm. Code 1080), authorization is hereby granted to Green River Wind Farm Phase 1, LLC (hereinafter referred to as Green River), a wholly owned subsidiary of Geronimo Renewable Infrastructure Partners, L.P., by this Amendment for the incidental take of the State-endangered Upland Sandpiper (*Bartramia longicauda*). The Illinois Department of Natural Resources (hereinafter referred to as Department) has determined that this taking is incidental to the operation, and maintenance of the Green River Wind Farm in Lee and Whiteside Counties in Illinois.

Procedural History

The Department executed an Incidental Take Authorization to Green River Wind Farm Phase I, LLC (Wind Farm) on August 6, 2013. At that time, the Wind Farm was a wholly owned subsidiary of Mainstream Renewable Power Ltd. The proposed project action area was over four times larger and configured differently than the current proposal. The Wind Farm was never constructed and none of the compliance requirements, including the mitigation responsibilities, of the former Incidental Take Authorization were performed. Therefore, the prior Authorization executed in 2013 is considered null and void; and the current proposal is considered a separate and distinct project with no connection to the previously executed Incidental Take Authorization.

A Habitat Conservation Plan (HCP) prepared by Stantec, on behalf of Green River, was submitted to the Department on October 11, 2018, as a request for authorization for the incidental take of Blanding's Turtle, Ornate Box Turtle, Plains Hog-nosed Snake, Regal Fritillary and two State-listed and Federally-listed bats. The Department requested additional information on November 20, 2018, as well as March 1, and July 5, 2019, to make the Conservation Plan complete as prescribed by Ill. Adm. Code 1080.10. Additional information was received by the Department on February 5, and May 22, 2019. The final Conservation Plan was accepted as complete by the Department on July 11, 2019.

On February 27, 2019, Green River requested a take authorization solely covering Blanding's Turtles, Ornate Box Turtle, Plains Hog-nosed Snake, and Regal Fritillary, collectively known in the Conservation Plan as the Terrestrial Species, due to the increased risk to that suite of species during construction and due to the extended time necessary to receive take authorization from the

US Fish and Wildlife Service (USFWS) for the two Federally-listed bat species. The Terrestrial Species incidental take authorization was executed on March 25, 2020. It remains in full effect and is not altered by this additional agreement.

A separate Conservation Plan prepared by Stantec, on behalf of Green River was submitted to the Department on November 25, 2020, as a request for authorization for the incidental take of Black-billed Cuckoo. The Department requested additional information on December 15, 2020, to make the Conservation Plan complete as prescribed by Ill. Adm. Code 1080.10. Additional information was received by the Department on February 8, 2021. The final Conservation Plan was accepted as complete by the Department on February 22, 2021.

The Green River Wind HCP was approved by USFWS, and a federal Incidental Take Permit (ITP) was issued on July 29, 2022. The Permit number is ESPER0047664. The Department executed an amendment for Indiana Bat and Northern Long-eared Bat on November 2, 2022.

A separate Conservation Plan prepared by Stantec, on behalf of Green River was submitted to the Department on October 17, 2023, as a request for authorization for the incidental take of Upland Sandpiper. On November 16, 2023, the applicant was notified that the Conservation Plan was accepted without any additional information needed to meet the conditions prescribed by Ill. Adm. Code 1080.10.

The public notice period and public comments will be detailed under #6 of the Compliance section below.

Compliance with the Illinois Endangered Species Protection Act

The Act includes six criteria which must be satisfied for the authorization of incidental take of an endangered or threatened species. These criteria and the Department's determination for each are listed below.

1. The taking will not be the purpose of, but will be only incidental to, the carrying out of an otherwise lawful activity:

The stated and apparent purpose of this proposed action is to operate and maintain a 194.25-megawatt (MW) wind farm located in Lee and Whiteside Counties. The wind project is located approximately nine (9) miles southeast of Sterling, Illinois and four (4) miles north of Walnut, Illinois. The wind farm consists of 74 Siemens Gamesa G126 wind turbine generators (WTGs) and associated access roads, collector lines, crane paths, fiber optic line, substation, operations, and maintenance (O&M) building, and laydown yard. Each WTG is manufactured off-site and consists of the tower, a nacelle that houses the generator and gearbox, and a three-blade rotor assembly, all of which were delivered to the project site and assembled on-site. Each WTG is anchored to a steel-reinforced concrete foundation. The total maximum height of the WTG, from the base of the tower to the tip of the blade is 485 feet (ft.), whereas the hub height is approximately 275 ft. The wind project also includes an underground power collection system

between the pad-mounted transformers and a collector substation. All collector lines were buried a minimum of 5 ft. The collector system is connected to the ComEd Schauff Road switchyard located immediately west of County Line Road and south of Hahnman Road in Whiteside County. In addition to the WTGs and power collection system, access roads were constructed to provide access to the turbines during and after construction. These access roads are approximately 16-ft.-wide and constructed of crushed gravel/rock. The project O&M building is also located immediately west of County Line Road and south of Hahnman Road in Whiteside County. Construction of the O&M building was completed in December 2018. Permanent and temporary wind measurement towers, also known as MET towers, were installed at the site, and will be used for performance testing of the wind turbines to ensure that they meet the manufacturer's guarantees. Ongoing operation and maintenance activities may result in direct mortality by collision with turbines, transmission lines, and other project-related structures, especially during takeoff and landing. Barotrauma is less likely to be a source of mortality in birds than bats, and indirect effects by displacement from habitat, introduction of vertical surfaces, and noise, shadow flicker effects from operation of turbines.

Total estimated area of impact within species habitat for the immediately proposed actions is referred to as the Bat Action Area and includes 12,120 acres, including up to 74 WTGs, MET towers, and associated access roads. The Department concurs that the take of Upland Sandpiper that could result from the proposed project is not the purpose of Green River's activities but is incidental to the carrying out of an otherwise lawful activity.

2. The parties to the Conservation Plan will, to the maximum extent practicable, minimize and mitigate the impact caused by the taking:

Proposed avoidance, minimization and mitigation were included in Green River's Conservation Plan.

To meet the "maximum extent practicable" standard, additional minimization and/or mitigation measures may be required beyond those proposed by Green River, based on the life history needs of the Upland Sandpiper. **All required minimization and mitigation measures are presented under the Authorization section below.**

3. The parties to the Conservation Plan will ensure that adequate funding for the Conservation Plan will be provided.

Green River states a portion of their overall budget for the wind project has been dedicated toward the implementation of the conservation measures.

The Department accepts this provision as assurance that adequate funding will be available to carry out the terms of the Conservation Plan.

4. Based on the best available scientific data, the Department has determined that the taking will not reduce the likelihood of survival or recovery of the endangered species or threatened species in the wild within the State of Illinois, the biotic community of which the species is a part, or the habitat essential to the species' existence in Illinois.

Upland Sandpiper (*Bartramia longicauda*) is an Illinois State-endangered bird species.

Habitat: The Upland Sandpipers live in grasslands exclusively. The preferred grassland has level topography with a minimum amount of taller vegetation at the edges, especially Kentucky bluegrass (*Poa pratensis*) and other shorter grass species. Additionally, crop fields and airports that have a similar structure to grasslands may be used.

Distribution: Upland Sandpipers are widespread in the United States and are found in 48 of the 50 states.

Reproduction: Upland Sandpipers arrive in Illinois in mid-April, nests are built in early May, and eggs are laid in mid-May through June. Nests are constructed on the ground in dense grass. There are 4 eggs per clutch, with one brood per year. Offspring can fly at 30-34 days after hatching. Fall migration begins as early as July, with Illinois populations leaving in September to winter in South America east of the Andes, predominately in Argentina and Uruguay.

Population: Upland Sandpiper are at risk from historical over hunting, habitat loss due to urbanization, farming practices including grazing animals trampling nests, natural forest succession, pesticide use, and predation. In their wintering grounds, habitat has been converted to agriculture.

Range in Illinois: Upland Sandpipers have been observed in 11 of 102 counties in Illinois. There are currently 12 extant Element Occurrence Records for Upland Sandpipers in the Illinois Natural Heritage Database.

Incidental Take Authorizations: This is the sixth ITA issued for Upland Sandpiper. The previous ITAs have been for pipeline maintenance, water main installation, and wind farm operation. This is the first ITA for Upland Sandpiper in Lee and Whiteside Counties.

Based on the amount of habitat impacted by this project, the number of known occurrences of Upland Sandpiper in Illinois, an assessment of the potential effect of this project on individual species in the project footprint, the conservation methods included in this authorization for take and the conservation plan, and the understanding that vulnerability and recovery information on the species remains limited; it is the conclusion of the Department that the taking anticipated as a result of this project will not reduce the likelihood of survival or recovery of the species in the wild within the State of Illinois, the biotic community of which the species are a part, or the habitat essential to the species' existence in Illinois.

5. Any measures required under Section 5.5(b)(6) of the Act will be performed.

Additional measures are listed below under “Authorization.” This authorization is, by definition, subject to those terms and conditions, and the signature of a representative from Green River indicates their commitment to performing those measures.

6. The public has received notice of the application and has had the opportunity to comment before the Department made any decision regarding the application.

Public notice of Green River’s request for authorization of incidental take was published in the *Breeze Courier* (official state newspaper) on December 20, 2023. The notice was also published in the *Daily Gazette* in Sterling and the *Dixon Telegraph* on December 20, December 27, 2023, and January 4, 2024. A copy of the Conservation Plan was deposited in two locations including the Sterling Public Library and Dixon Public Library allowing for public review. The deadline for public comment was February 5, 2024. No comments were received from the public.

Authorization

It is the determination of the Department that the measures to be implemented by Green River will adequately minimize and mitigate the anticipated taking Upland Sandpiper associated with the operation and maintenance of the Green River Wind Farm in Lee and Whiteside Counties in Illinois. Further, the Department has concluded that the taking authorized herein will not reduce the likelihood of survival or recovery of the species in the wild within the State of Illinois, the biotic community of which the species is a part, or the habitat essential to the species’ existence in Illinois.

All terms and conditions included in the aforementioned Conservation Plan submitted by Green River to the Department are incorporated into this agreement by reference and are made a part thereof.

Pursuant to Section 5.5 of the Illinois Endangered Species Protection Act [520 ILCS 10/5.5] and the Administrative Rules for the Incidental Taking of Endangered and Threatened Species [Ill. Adm. Code 1080.40(b)], this authorization is issued subject to the following terms and conditions, which may include additions or modifications to the minimization and mitigation measures proposed by Green River in the Conservation Plan:

1. This authorization is effective upon the signature of the Department and shall remain in effect for a period of **thirty (30) years** from the date of the Department signature, unless terminated by written agreement of both parties. **This agreement does not authorize take of any species except the Upland Sandpiper.**

The existing Authorizations for the Terrestrial Species, Black Billed Cuckoo, Indiana Bat, and Northern Long-eared Bat are not modified and remain in effect until March 25, 2050.

Notwithstanding the above paragraph, due to the length of this Authorization, the Department reserves the right to reassess the terms of this Authorization every five years. If during reassessment the Department determines that Upland Sandpiper have become more imperiled than when the species and impact analyses were initially conducted, the Department may request an amendment to this Authorization or additional mitigation by Green River. If the Department and Green River cannot reach an agreement, this Authorization will be terminated. Termination of this Authorization under this provision does not prevent Green River from applying for a new Incidental Take Authorization for this project.

This authorization may be revoked pursuant to the Act and Ill. Adm. Code 1080.80(b) if the Department finds that Green River has failed to comply with any of these terms and conditions or has been responsible for the taking of Upland Sandpiper beyond that which is incidental to the operation and maintenance of the Green River Wind Farm in Lee and Whiteside Counties in Illinois.

2. The effective period of this authorization may be altered by mutual written agreement between Green River and the Department. The Illinois Endangered Species Protection Board shall be notified of such alteration.

Any substantive changes, including but not limited to a change in the project footprint or a change in the State-listed species which could potentially be affected, will require that a new Conservation Plan be submitted to the Department to initiate the review and public notice process as required by the Act. **For the purposes of this authorization, an increase in the turbine cut-in speed implemented based on mortality or estimated mortality of Upland Sandpiper in accordance with the adaptive management provisions of this Authorization, as well as the introduction of acoustic deterrents, as approved by the Department, shall not be considered a substantive change.**

3. This authorization may only be transferred upon approval and written authorization by the Department.
4. Notification to all on-site personnel shall be provided on the sensitive biological resources in the area; the identification of Upland Sandpiper; regulations protecting the species; where the species might be found; avoidance areas; travel restrictions for equipment; how to report sightings or incidents that may involve take; the importance of avoiding take of the species; and response protocol if the species are found, including the chain of response personnel. **Green River shall submit a copy of the education materials to the Department.**

5. The Department reserves the right of entry by its staff or representatives to inspect potential habitat and species management practices.
6. Biological consultants employed by Green River shall hold the necessary permits for work with non-listed and listed species; these include an Illinois Department of Natural Resources (IDNR) Scientific Collection Permit as authorized under 17 Illinois Administrative Code 520, and an IDNR Endangered Species Permit as authorized under 17 Illinois Administrative Code 1070.
7. Notification of any Upland Sandpiper present during the performance of the project shall be reported electronically to the Department within 48 hours of discovery accompanied by location information (photograph, map, and GPS coordinates).
8. Any discoveries of additional State-listed species beyond those identified in this agreement shall be reported to the Department within 48 hours accompanied by location information.
9. Green River conducted, or caused to be conducted, the following pre-construction or operational efforts:
 - a. Minimizing the number of turbines that were located within 1,000 feet of woodlots,
 - b. Avoiding siting turbines in wetlands, to the extent practicable,
 - c. Installing an underground electrical collection system, where practicable,
 - d. Installing bird diverters at 20-foot intervals where crossing habitat resources such as wetlands and woodlots, and following other provisions of the Avian Power Line Interaction Committee,
 - e. Minimization of facility lighting by using motion detectors where possible, directing lights downward, and lighting turbines in accordance with Federal Aviation Administration minimum requirements,
 - f. Replacing temporary meteorological towers with non-guyed lattice towers,
 - g. Installing spark arrestors on all electrical equipment.The Department accepts these efforts were completed prior to this Authorization.
10. Green River shall conduct, or cause to be conducted, post-construction monitoring by a qualified biologist:
 - a. This monitoring shall follow the protocol and schedule for bats as described in the HCP.
 - b. For years where bat monitoring is not required, Green River Wind is only obligated to report incidental mortalities.
 - c. **All carcasses of Upland Sandpipers found during standardized searches or incidentally shall be reported to the Department within 48 hours of positive identification.**
 - d. **A report including, but not limited to, the bat survey methodology utilized, maps of turbines searched, and all fatalities observed, shall be**

submitted to the Department by April 1 summarizing the monitoring results from the previous year. This report may be the same as submitted to the USFWS For each listed bird and bat fatality, the following data shall be included: turbine location (turbine number and GPS coordinates), distance and bearing to turbine, species, sex, adult/juvenile, reproductive status, the potential date of fatality, wind speed profile sunset to sunrise during night preceding potential date of fatality (if can be determined), weather conditions, power production profile for the responsible turbine on estimated date of fatality, and photographs of the carcass.

11. Mitigation to the maximum extent practicable is required by the Act. Mitigation requirements for this authorization are as follows:

Green River shall contribute **\$25,000** to the Illinois Wildlife Preservation Fund, with those funds earmarked for management of or to bring conservation benefit to Upland Sandpiper. Payment shall be made within 90 days of execution of this Authorization.

Mitigation values are based on the Department's best current understanding of the species life history needs and impact analysis relevant to the project site's proposed conceptual design elements available at the time of review.

12. Green River shall conduct, or cause to be conducted, the following adaptive management measures in the event that take of Upland Sandpiper may be exceeding authorized take limit of one (1) individual per year over the permit term:
- a. Green River shall meet and confer with the Department to determine the potential cause of mortality. If mortality is related to Project operation, then Green River will develop additional conservation measures as needed in coordination with the Department.
 - b. Post-construction monitoring will be conducted the following year in which fatalities were detected to determine if additional measures were successful at reducing mortality.
 - c. If no spatial, weather, or temporal patters emerge as potential causes for the fatality, no new conservation measures will be implemented based on a single year exceeding the anticipated take. However, if subsequent years also document more than 1 Upland Sandpiper fatality, Green River shall coordinate with the Department to determine the need to implement additional conservation measures, and if needed, pursue an amendment to the ITA.

13. All reports, notifications, and other project documentation shall be submitted to:

Illinois Department of Natural Resources
Office of Resource Conservation
Endangered Species Program – Incidental Take Authorization Coordinator
One Natural Resource Way
Springfield, IL 62702-1271

(217)557-8243
DNR.ITAcoordinator@illinois.gov


The Department's Endangered Species Program shall provide all reports required under this agreement to the Illinois Endangered Species Protection Board and to the Department's Natural Heritage Database.

14. The Green River official identified below is authorized to execute this agreement. Execution by Green River indicates acceptance of all terms and conditions described in this authorization.

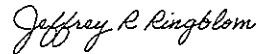
15. The execution of this agreement does not waive or excuse the responsibilities of Green River to comply with other Federal, State, or local regulations, including but not limited to obtaining any required permits for the execution of this project.

For the Illinois Department of Natural Resources:

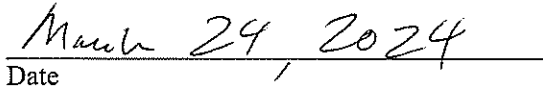
For the Green River Wind Farm:

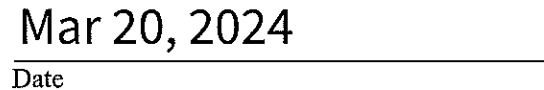
 3/24/24

Mr. Christopher L. Young, Director
Office of Resource Conservation



Mr. Jeff Ringblom
Project Manager


Date


Date



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Final Audit Report

2024-03-20

Created:	2024-03-18
By:	Jacky Gilles (jgilles@nationalgridrenewables.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAUffEKIDGkwYEBqMecVCV31h6fn83Bqi6

"98_Green River Wind_ITAamendment_US_final_3-13-24" History

-  Document created by Jacky Gilles (jgilles@nationalgridrenewables.com)
2024-03-18 - 8:15:31 PM GMT
-  Document emailed to Jeff Ringblom (jeff@nationalgridrenewables.com) for signature
2024-03-18 - 8:16:03 PM GMT
-  Email viewed by Jeff Ringblom (jeff@nationalgridrenewables.com)
2024-03-20 - 12:52:30 PM GMT
-  Document e-signed by Jeff Ringblom (jeff@nationalgridrenewables.com)
Signature Date: 2024-03-20 - 2:07:32 PM GMT - Time Source: server
-  Agreement completed.
2024-03-20 - 2:07:32 PM GMT