



Illinois Department of Natural Resources

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

Bruce Rauner, Governor
Wayne A. Rosenthal, 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 Hoopeston Wind, LLC (hereinafter referred to as Hoopeston) 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 the Department) has determined that the taking is incidental to activities associated with the operation of the Hoopeston Wind Project in Vermilion County, Illinois¹.

Procedural History

The Department received a Habitat Conservation Plan (HCP) prepared by Hoopeston Wind, LLC, K&L Gates LLP, and Stantec Consulting Services Inc., on behalf of Hoopeston on April 26, 2018, as a request for authorization for the incidental take of Indiana Bat and Northern Long-eared Bat. The Hoopeston HCP was approved by the US Fish and Wildlife Service (USFWS) and a federal Incidental Take Permit was issued on October 16, 2017. Pursuant to Ill. Adm. Code 1080.10, the approved HCP was accepted as complete in lieu of a State of Illinois conservation plan on May 23, 2018. The public notice period will be detailed under #6 of the Compliance section below.

Compliance with the Illinois Endangered Species Protection Act

The Act includes six criteria that 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 only be incidental to, the carrying out of an otherwise lawful activity:

The stated and apparent purpose of this proposed action is the continued operation of 49 Vestas V100 2.0 megawatt (MW) wind turbines generating up to 98 MW of

¹ The project site is approximately 20 miles north of Danville, Illinois, and the 49 turbines are interspersed across active farmland west of Highway 1 and east of Highway 49, west of Rossville and southwest of the town of Hoopeston.

electricity when operating at manufacturer's cut-in speed (the wind speed at which the turbines begin to generate power to send to the grid) of 3 meters/second (m/s) or 6.7 miles per hour (mph). Each turbine tower stands 95-meters-high (312-feet-high) at hub height with highest blade tip position at 145-meters-high (476-feet-high) and lowest blade tip position at 45-meters-high (148-feet-high). The project also includes an operations and maintenance facility, access roads, an underground electrical collection line system, a substation, and one permanent meteorological tower. **The project has been operational since March 2015.** Hoopeston estimates that there are approximately 6.5 acres of potential Indiana Bat and Northern Long-eared Bat roosting and summer maternity habitat within the 8,884-acre project area boundary (**permanent impact footprint of 34 acres**). Hoopeston anticipates that the continued operation of this project will not directly impact any Indiana Bat or Northern Long-eared Bat summer maternity habitat or winter hibernacula. Take of the Indiana Bat and Northern Long-eared Bat could occur as a result of 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 seasons. The take of Indiana Bat and Northern Long-eared Bat that could result from this project is not the purpose of Hoopeston's activities, but is incidental to the carrying out of an otherwise lawful activity.

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

Proposed minimization and mitigation measures were included in Hoopeston's HCP.

To meet the "maximum extent practicable" standard, additional minimization and/or mitigation measures may be required beyond those proposed by Hoopeston, 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 HCP will ensure that adequate funding for the HCP will be provided:

Hoopeston states that they will provide three separate assurances that all aspects of the HCP will occur. Hoopeston provided USFWS with evidence that they have signed a contract for the first year of monitoring and reporting on March 16, 2018, per their federal Incidental Take Permit requirement. Additionally, in accordance with the Incidental Take Permit issuance by USFWS on October 16, 2017, Hoopeston provided the USFWS with an irrevocable, non-transferable standby letter of credit issued by a United States commercial bank or a United States branch of a foreign commercial bank with sufficient assets in the United States, as

determined by USFWS, in the amount of \$2,500,000. Lastly, Hoopeston funded an escrow account within 90 days of issuance of their federal Incidental Take Permit to fund off-site mitigation actions. Hoopeston understands that if any additional activities are planned at the facility that may affect Indiana Bats, Northern Long-eared Bats, or other endangered or threatened species, coordination with the Department will be required.

It is the Department's opinion that Hoopeston's stated commitment to funding their proposed minimization and mitigation measures is sufficient to satisfy this criterion.

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 are a part, or the habitat essential to the species' existence in Illinois:

Indiana Bat (*Myotis sodalis*)

Indiana Bat is a Federally-endangered and State-endangered 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 91 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. In 1990, biologists identified an Indiana Bat maternity colony along the Middle Fork of the Vermilion River south of Paxton. In 2010, biologists captured eight Indiana Bats, including four post-lactating females, a non-reproductive adult female, and three juveniles along the Middle Fork of the Vermilion River and its tributaries. In August 2014, biologists captured three post-lactating females and two adult males in the same area. These findings suggest Indiana Bat maternity colonies are annually present along the upper Middle Fork of the Vermilion River. However, the migration pathways of these bats remain unknown.

At Hoopeston, acoustic surveys were conducted within the project area in 2009, 2010, and 2014. Although calls of several *Myotis* species were recorded during the surveys, positive identification to species was not possible due to the quality of the calls and the overlap in call characteristics, so presence of Indiana Bat was not confirmed. A telemetry-based datalogger survey conducted in 2014 did not confirm migratory use of the project area by five (5) Indiana Bats radio-tagged in the nearby Middle Fork Forest Preserve, approximately 6 miles from the project area. Operational monitoring conducted in fall of 2015, in spring and fall of 2016, and in spring and fall of 2017 at Hoopeston have not detected any Indiana Bat mortality. However, two (2) Indiana Bat fatalities have been documented at nearby Fowler Ridge Wind Farm in Benton County, Indiana, approximately 12 miles from the project site.

Incidental Take Authorizations: The Department has six (6) pending or authorized Incidental Take Authorizations for Indiana Bats for two transmission lines, a pipeline, and three single-turbine wind installations. There has been one (1) other Incidental Take Authorization for Indiana Bat issued for a commercial wind installation known as Pioneer Trail Wind Farm approximately 15 miles northwest of Hoopeston in neighboring Ford and Iroquois Counties. This is the first authorization granted for the potential take of Indiana Bat in Vermilion County.

Northern Long-eared Bat (*Myotis septentrionalis*)

Northern Long-eared Bat is a Federally-threatened and State-threatened species.

Habitat: 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 Bat is 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 Bat hibernates 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 Bat is 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 41 of 102 Illinois counties. There are currently 81 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. In 2002, biologists captured 2 post-lactating females along the Middle Fork of the Vermilion River in Ford County. In 2010, biologists captured six northern long-eared bats, including four post-lactating females, a juvenile female, and an individual which escaped before processing, along the Middle Fork of the Vermilion River and its tributaries in Ford and Champaign Counties. In August 2014, biologists captured two post-lactating females and one adult male in the same area. These findings suggest northern long-eared bat maternity colonies are annually present along the upper Middle Fork of the Vermilion River. However, the migration pathways of these bats remain unknown.

At Hoopeston, acoustic surveys were conducted within the project area in 2009 and 2010. Although calls of several *Myotis* species were recorded during the surveys, positive identification to species was not possible due to the quality of the calls and the overlap in call characteristics; therefore presence of Northern Long-eared Bat was not confirmed. However, an additional acoustic survey conducted in fall 2014 did confirm the presence of Northern Long-eared Bat within the project area. A telemetry-based datalogger survey conducted in 2014 did not confirm migratory use of the project area by three (3) Northern Long-eared Bats radio-tagged in the nearby Middle Fork Forest Preserve, approximately 6 miles from the project area. Operational monitoring conducted in fall of 2015, in spring and fall of 2016, and in spring and fall of 2017 at Hoopeston have not detected any Northern Long-eared Bat mortality. However, two (2) Northern

Long-eared Bat fatalities have been documented at nearby California Ridge Wind Energy Facility, also in Vermillion County, and two (2) fatalities at Fowler Ridge Wind Farm in Benton County, Indiana, approximately 12 miles from the project site.

Incidental Take Authorizations: The Department has two (2) pending or authorized Incidental Take Authorizations for Northern Long-eared Bats for a pipeline and a wind farm. The one (1) other Incidental Take Authorization for Indiana Bat issued for a commercial wind installation known as Pioneer Trail Wind Farm is located approximately 15 miles northwest of Hoopston in neighboring Ford and Iroquois Counties. This is the first authorization to be granted for potential take of Northern Long-eared Bats in Vermillion County.

Based on the amount of habitat impacted by this project, the number of known occurrences of the endangered and threatened species in Illinois, an assessment of the potential effect of this project on the listed species in the project footprint, the conservation measures included in this authorization for incidental take, and the understanding that vulnerability and recovery information on the species remains limited; the Department has concluded that the taking proposed herein will not reduce the likelihood of survival or recovery of the Indiana Bat or the Northern Long-eared Bat 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.

This conclusion is further based on the following considerations:

Based on USFWS data, bat mortality studies as of summer 2017 at wind farms across the US reflect the confirmed loss of 10 Indiana bats and 42 northern long-eared bats. Known losses in the State of Illinois include 1 Indiana bat and 4 northern long-eared bats. With approximately 2,700 commercial-scale turbines currently operational in Illinois, and an estimation of total bat mortality (listed and non-listed) at 10 bats/year/turbine mortality; the documented losses of these two listed species equates to 0.019 % of estimated total bat mortality from turbines in Illinois based on available survey data. It is important to note, however, that the Department is not aware that any proportional relationship has been shown between total bat mortality and listed bat mortality.

Illinois wind turbine mortality survey data, consistent with regional and national data, reveal that three non-listed species of bats are most threatened by wind farm development. These include the eastern red bat (*Lasiurus borealis*), hoary bat (*Lasiurus cinereus*), and silver-haired bat (*Lasionycteris noctivagans*). *Myotis* species comprise only a tiny fraction of bats killed at Illinois wind turbines during normal operations. Limited data is available to support a determination of potential impacts to bats when turbines cut in at 3.0m/s. Minimization measures, such as feathering, have a proven record of reducing total bat mortality and

Myotis bat mortality and should reduce the risk of mortality for *Myotis* bats at Hoopeston.

White Nose Syndrome is the main threat to populations of Indiana bat and northern long-eared bat in Illinois. Losses to other causes (like wind installations) will become more important over time, but the Department believes the losses at Hoopeston permitted under this authorization will not cause a reduction in the survivability or recovery of the species in the wild in Illinois. Monitoring and adaptive management will ensure that this continues to be true.

Hoopeston has constructed the 49 turbines primarily on agricultural land with limited suitable habitat for day roosts or maternity colonies and no winter hibernacula. Suitable maternity colony and day roost habitat does exist nearby along the North Fork and the Middle Fork of the Vermilion River. Bats that may be taken by operation at Hoopeston are most likely to be individuals foraging or passing through the area during migration. A critical aspect missing from the best available science related to wind farm operation and the industry's interface with bats is a lack of understanding of bat migration and foraging behavior.

The USFWS estimates the 2017 hibernating population of Indiana bats in Illinois to number approximately 52,000. Because the northern long-eared bat prefers to hibernate in crevices, winter population estimates for this species are not as reliable, but (based on available survey data) this species is becoming rarer in Illinois. The nearest known hibernaculum for both species in Illinois is Blackball Mine in LaSalle County, approximately 75 miles northwest of the project area, although no evidence exists that Vermilion County bats migrate in that direction or to that location. Other potential hibernation sites exist in the State of Indiana which might be utilized by bats in the vicinity of Hoopeston. The pathway of both spring and fall migrations will strongly influence the exposure of listed bats to the risks of collision and barotrauma.

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

These measures are listed below under "Authorization." This authorization is, by definition, subject to those terms and conditions and the signature of a representative of Hoopeston 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 Hoopeston's request for authorization of incidental take was published in the *Breeze Courier* (official state newspaper) on June 6, 2018, and in the *Hoopeston Chronicle* on June 6, 13, 20, and 27, 2018. A copy of the HCP was deposited at the Hoopeston Public Library, where it was available for public review. The deadline for public comment was July 27, 2018.

One public comment was received by the Department. The comment was transmitted to Hoopeston on July 10, 2018. An analysis of the comment was received by the Department on July 30, 2018. No changes to the HCP were performed based on public comment.

Authorization

It is the determination of the Department that the measures that will be implemented by Hoopeston will adequately minimize and mitigate the anticipated taking of Indiana Bat and Northern Long-eared Bat incidental to activities associated the operation of the Hoopeston Wind Project in Vermilion County, Illinois. Further, the Department has concluded that the take authorized herein will not reduce the likelihood of survival or recovery of the Indiana Bat or Northern Long-eared Bat 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.

All terms and conditions included in the aforementioned HCP submitted by Hoopeston 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 Hoopeston in the HCP:

1. This authorization is effective upon the signature of the Department and shall remain in effect for a period of **twenty-eight (28) years** (expiration October 16, 2047), unless terminated by written agreement of both parties, for reasons which may include delisting of species, revocation by the Department due to lack of compliance, or relinquishment by Hoopeston due to a discontinuation of actions authorized by this agreement. The term of this authorization is synchronized with the USFWS Incidental Take Permit.

This authorization may be revoked pursuant to the Act and Ill. Adm. Code 1080.80(b) if the Department finds that Hoopeston has failed to comply with any of these terms and conditions or has been responsible for the taking of Indiana Bats or Northern Long-eared Bats beyond that which is incidental to activities associated with the operation of the Hoopeston Wind Project in Vermilion County, Illinois.

2. The effective period of this authorization may be altered by mutual written agreement between Hoopeston and the Department. The Illinois Endangered Species Protection Board shall be notified of any such alteration.
3. 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.

4. This authorization may only be transferred upon approval and written authorization by the Department.
5. Notification to all on-site personnel shall be provided on the Indiana Bat and the Northern Long-eared Bat in the area, the identification of these species, regulations protecting the species, where the species might be found, avoidance areas, travel restrictions for equipment and vehicles, how to report sightings or incidents that may involve take, and the importance of avoiding take of the species. **Hoopeston shall submit a copy of the education materials to the Department.**
6. The Department reserves the right of entry by its staff or representatives to inspect species, potential habitat within the area under lease-control by Hoopeston, species management and preservation practices, and data collection methodologies. Hoopeston's health and safety protocol shall be strictly adhered to. Hoopeston shall make pertinent records and materials relating to this permit available to the Department for examination on the premises or via electronic mail at reasonable times upon request by the Department or as otherwise authorized by law.
7. Biological consultants employed by Hoopeston shall be qualified in working with these species and 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.
8. Any discoveries of additional State-listed species beyond those identified in this agreement shall be reported to the Department within 48 hours of the discovery of such State-listed species carcass accompanied by location information (map and GPS coordinates) and photographs. If mortality has occurred, the carcass shall be retained and labeled.
9. Copies of any reports, updates, modifications or other project documentation required by the USFWS Incidental Take Permit issued on October 16, 2017, shall be provided concurrently to the Department. 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 discovery** 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 Department shall be notified and given the opportunity to collect such carcasses prior to their disposal by Hoopeston. Prior to disposal of any

Myotis carcass, the Department shall be contacted and given ninety (90) days to collect the carcass from Hoopeston.

10. Hoopeston shall submit an **annual project status report** to the Department by January 31 of each year this authorization is in effect summarizing the implementation or status of minimization, monitoring, adaptive management, and mitigation measures and evaluating the effectiveness of those measures. The report shall also include a map, GPS coordinates, and photographs 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.
11. Hoopeston shall conduct, or cause to be conducted, the following **mortality monitoring** efforts for bat fatalities around turbines:
 - a. Mortality monitoring shall continue to be conducted by a qualified consultant according to the protocol established in the HCP. Year numbers are understood to be synchronized with monitoring requirements under the USFWS Incidental Take Permit (i.e. Year 1 = 2018)
 - i. In Years 1 through 30, annual monitoring shall take place once per week from April 1 to October 15 (except as presented under ii. and iii. below). Forty-nine (49) turbine roads and pads (95-meter-radius from turbine) shall be searched for carcasses during annual monitoring surveys.
 - ii. In Years 1 through 3, intensive monitoring shall take place once per week from April 1 to May 15. Five (5) full 40-meter-radius plots and forty-four (44) roads and pads (95-meter-radius from turbine) shall be searched for carcasses. Annual monitoring as provided under i. above shall occur from May 16 to July 14. Intensive monitoring shall also take place twice per week from August 1 to October 15. Fifteen (15) full 40-meter-radius plots and 34 roads and pads (95-meter radius from turbine) shall be searched during this monitoring period.
 - iii. In Years 15 and 16, check-in monitoring shall take place once per week from April 1 to May 15 and twice per week from August 1 to October 15. Five (5) full 40-meter-radius plots and 44 roads and pads (95-meter-radius from turbine) shall be searched during these periods. Annual monitoring as provided under i. above shall occur from May 16 to July 14.
 - iv. In Years 1 through 30, adaptive management monitoring, if triggered, shall occur seasonally, as required, three times per week. Forty-nine (49) roads and pads (95-meter-radius from turbine) shall be searched during the season in which the adaptive management was triggered.
 - b. Mean searcher efficiency and carcass removal trial data from Years 1-3 will be used to determine total estimated site mortality unless annual variability is considered high, in which case bias trials shall be conducted every two (2) years or as determined by USFWS and the Department.
 - c. After Year 1-3 intensive monitoring, or once enough carcasses have been collected, a more accurate site-specific search area adjustment (i.e. larger search

plot size) based on carcass distribution or other available information may be compelled by USFWS and the Department.

- d. **All carcasses of *Myotis* species found during standardized searches or incidentally shall be retained and reported to the Department within 48 hours of carcass discovery.** Prior to disposal of any *Myotis* carcass, the Department shall be contacted and given ninety (90) days to collect the carcass from Hoopeston. If identification of a *Myotis* carcass is uncertain, DNA analysis shall be conducted.
 - e. **Samples of wing tissue and hair from all Hoary Bats, Eastern Red Bats, and Silver-haired Bats** shall be preserved per University of Maryland 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.
 - f. **The Department reserves the right to compel Hoopeston to preserve and submit tissue samples to any future genetic studies which may be performed by academic institutions.**
 - g. **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 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. Hoopeston shall conduct, or cause to be conducted, the following **minimization measures** throughout the duration of operation of the wind energy facility:
- a. Any tree clearing or trimming to occur for Hoopeston operations or maintenance on trees with a diameter at breast height (DBH) of 3 inches or more shall take place between November 1 and March 31, or inspected by a qualified biologist to confirm no roosting bats are present prior to removal.
 - b. Turbine blades shall be feathered below the manufacturer's cut-in speed of 6.7 miles per hour (mph) or 3.0 meters/second (m/s) from sunset to sunrise during project operations; except as necessary to conduct testing, installation, and safety inspections of project equipment.
13. Hoopeston 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 60 individuals over the permit term:
- a. If during the first three (3) years of monitoring the estimated average take rate is between two (2) and four (4) Indiana Bats per year, or in any given year the estimated fatality rate over the past three years is between two (2) and four (4) Indiana Bats per year, or following the check-in monitoring period in Year 16, the

estimated average annual fatality rate over Years 1-16 is between two (2) and four (4) Indiana Bats per year, **and** the projection of estimated future mortality of Indiana Bats, based on the remaining term of the permit, is likely to exceed the USFWS-authorized estimate:

- i. Hoopeston shall increase cut-in speed by increments of 0.5 m/s (1.1 mph) at all Project turbines for seven (7) days on either side of the mortality event(s) in all future years, except as provided in Section 7.4.3 of the HCP. If take exceedance is calculated and no actual carcasses are in-hand, cut-in speed adjustments shall occur during the two-week period in which all bat fatalities are the highest. Cut-in speeds shall be raised at all Project turbines by 0.5 m/s unless Hoopeston demonstrates with available data that raising cut-in speeds at fewer turbines will be at least as effective.
 - ii. Hoopeston shall implement project-wide adaptive management monitoring during the appropriate season for two (2) additional years unless Hoopeston demonstrates with available data that monitoring at fewer turbines will be at least as effective.
- b. If during the first three years of monitoring the estimated average take rate is greater than four (4) Indiana Bats per year, **or** in any given year the estimated fatality rate over the past three years is greater than four (4) Indiana Bats per year, **or** following the check-in monitoring period in Year 16, the annual estimated fatality rate is greater than four (4) Indiana Bats per year, **and** the projection of estimated future mortality of Indiana Bats based on the remaining term of the permit is likely to exceed the authorized limit:
- i. Hoopeston shall increase cut-in speed by increments of 1.0 m/s at all Project turbines, seven (7) days on either side of the mortality event(s) in all future years, except as provided in Section 7.4.3 of the HCP. If take exceedance is calculated and no actual carcasses are in-hand, cut-in speed adjustments shall occur during the two-week period in which all bat fatalities are the highest. Cut-in speeds shall be raised at all Project turbines by 1.0 m/s unless Hoopeston demonstrates with available data that raising cut-in speeds at fewer turbines will be at least as effective.
 - ii. Hoopeston shall implement project-wide adaptive management monitoring during the appropriate season for two (2) additional years unless Hoopeston demonstrates with available data that monitoring at fewer turbines will be at least as effective.
- c. If the predicted future take of Indiana Bats, based on the remaining term of this authorization, is likely to exceed the authorized amount, Hoopeston shall meet and confer with USFWS and the Department in advance of the next monitoring period to evaluate available project-specific and/or other data concerning the potential cause of the fatalities, and determine the appropriate scope of additional adaptive management actions. Hoopeston, with guidance of USFWS and the Department, shall evaluate the following:
- i. The adjustment of operational protocols to further increase cut-in speeds during the appropriate period to stay within authorized levels of permitted take.

- ii. The installation of proven, cost-effective bat deterrent devices at the turbine or group of turbines implicated in the find, should that technology become commercially available.
 - iii. Implement additional adaptive management monitoring as appropriate to assess effectiveness of implemented measures and ensure compliance with this authorization.
 - d. If an Indiana Bat carcass is found AND the estimated fatality of the species is greater than 2 bats/year, adaptive management shall be implemented in consultation with USFWS and the Department based on the specific circumstances.
14. Hoopeston 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 60 individuals over the permit term:
- a. If during the first three (3) years of monitoring the estimated average take rate is between four (4) and six (6) Northern Long-eared Bats per year, or in any given year the estimated fatality rate over the past three years is between four (4) and six (6) Northern Long-eared Bats per year, or following the check-in monitoring period in Year 16, the average estimated annual fatality rate over Years 1-16 is between four (4) and six (6) Northern Long-eared Bats per year, and the projection of estimated future mortality of Northern Long-eared Bats, based on the remaining term of the permit, is likely to exceed the USFWS-authorized limit:
 - i. Hoopeston shall increase cut-in speed by increments of 0.5 m/s (1.1 mph) at all Project turbines seven (7) days on either side of the mortality event(s) in all future years, except as provided in Section 7.4.3 of the HCP. If take exceedance is calculated and no actual carcasses are in-hand, cut-in speed adjustments shall occur during the two-week period in which all bat fatalities are the highest. Cut-in speeds shall be raised at all Project turbines by 0.5 m/s unless Hoopeston demonstrates with available data that raising cut-in speeds at fewer turbines will be at least as effective.
 - ii. Hoopeston shall implement project-wide adaptive management monitoring during the appropriate season for two (2) additional years unless Hoopeston demonstrates with available data that monitoring at fewer turbines will be at least as effective.
 - b. If during the first three (3) years of monitoring the estimated average take rate is greater than six (6) Northern Long-eared Bats per year, or in any given year the estimated fatality rate over the past three years is greater than six (6) bats per year, or following the check-in monitoring period in Year 16, the annual estimated fatality rate is greater than six (6), and the projection of future mortality of Northern Long-eared Bats based on the remaining term of the period is likely to exceed the authorized limit:
 - i. Hoopeston shall increase cut-in speed by increments of 1.0 m/s at all Project turbines seven (7) days on either side of the mortality event(s) in all future years, except as provided in Section 7.4.3 of the HCP. If take exceedance is calculated and no actual carcasses are in-hand, cut-in speed

adjustments shall occur during the two-week period in which all bat fatalities are the highest. Cut-in speeds shall be raised at all Project turbines by 1.0 m/s unless Hoopeston demonstrates with available data that raising cut-in speeds at fewer turbines will be at least as effective.

- ii. Hoopeston shall implement project-wide adaptive management monitoring during the appropriate season for two (2) additional years unless Hoopeston demonstrates with available data that monitoring at fewer turbines will be at least as effective.
- c. If the predicted future take of Northern Long-eared Bats, based on the remaining term of this authorization, is likely to exceed the authorized amount, Hoopeston shall meet and confer with USFWS and the Department in advance of the next monitoring period to evaluate available project-specific and/or other data concerning the potential cause of the fatalities, and determine the appropriate scope of additional adaptive management actions. Hoopeston, with guidance of USFWS and the Department, shall evaluate the following:
 - i. The adjustment of operational protocols to further increase cut-in speeds during the appropriate period to stay within authorized levels of permitted take.
 - ii. The installation of proven, cost-effective bat deterrent devices at the turbine or group of turbines implicated in the find, should that technology become commercially available.
 - iii. Implement additional monitoring as appropriate to assess effectiveness of implemented measures and ensure compliance with this authorization.
- d. If a Northern Long-eared Bat carcass is found AND the estimated fatality of the species is greater than 2 bats/year, adaptive management shall be implemented in consultation with USFWS and the Department based on the specific circumstances.
- e. 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. Mitigation to the maximum extent practicable is required by the Act. Mitigation requirements for this authorization are as follows:

In consultation with USFWS, Hoopeston conducted a Resource Equivalency Analysis, identifying the restoration of at least 165 acres of habitat-appropriate compensation for the estimated level of potential take of Indiana Bat and Northern Long-eared Bat as a result of this project. Hoopeston estimates that it will cost \$3,000 per acre to enhance, restore and/or protect the 165 acres of land. In order to mitigate for the potential take of Indiana Bat and Northern Long-eared Bat, Hoopeston shall create a mitigation account of \$495,000 for the purpose of funding habitat enhancement, restoration and protection projects focused on the species.

- a. Per the APEX Clean Energy Mitigation Plan – Hoopeston Wind (dated March 1, 2018), Hoopeston shall work with a nonprofit conservation organization to implement mitigation efforts on 165 acres of agricultural land in Coles County.

- b. Implementation of management actions shall be performed as provided in the Mitigation Plan.
- c. To facilitate knowledge of the effectiveness of the mitigation's conservation benefit to the species potentially taken, baseline bat species data has been collected utilizing acoustic methods, roost counts, and mist-netting in the vicinity of the mitigation acres to confirm presence of the species. Bat surveys shall occur again near the end of the permit term during Years 28 or 29 following the same survey methodology performed during the baseline effort. Bat surveys on the mitigation parcels shall not replace or reduce any aspect of the tasks agreed to in the Mitigation Plan previously executed between Hoopeston, USFWS and the nonprofit conservation organization.
- d. **Hoopeston shall submit an annual mitigation status report to the Department by April 30 of each year.** The reports shall detail expenditures made during the preceding calendar year and the current balance of the funds until fully expended. The report shall include details about what projects are ongoing or have been completed, supplemented with photographs, maps, project targets, and standards.

Per the USFWS Incidental Take Permit #TE54252C-0 issued October 16, 2017, Condition T, mitigation funds deposited into the Escrow account shall not be refunded to Hoopeston unless the Permit is terminated by USFWS or relinquished by Hoopeston prior to the expenditure of such funds for mitigation purposes. Upon termination or relinquishment, unspent funds shall be refunded to Hoopeston less any outstanding mitigation requirements for take that has already occurred.

16. 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

Or electronically to: 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.

- 17. The Hoopeston official identified below is authorized to execute this agreement. Execution by Hoopeston indicates acceptance of all terms and conditions described in this authorization.
- 18. The execution of this agreement does not waive or excuse the responsibilities of Hoopeston 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 Hoopeton Wind, LLC:

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

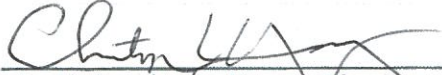
Name

Title

Date

Date

For the Illinois Department of Natural Resources:



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

For Hoopston Wind, LLC:



Name WILLEM MAEDA

AUTHORIZED SIGNATORY

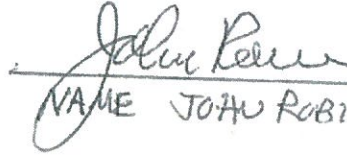
Title

6/19/19

Date

6/17/2019

Date



NAME JOHN ROBINS

AUTHORIZED SIGNATORY

TITLE

6/13/2019

DATE