



Illinois Department of Natural Resources

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

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 the Cass County Solar Project, LLC (hereinafter referred to as CCSP) for the incidental take of the State-threatened Illinois Chorus Frog (*Pseudacris illinoensis*), Ornate Box Turtle (*Terrapene ornata*), and Plains Hog-nosed Snake (*Heterodon nasicus*). The Illinois Department of Natural Resources (hereinafter referred to as Department) has determined that the taking is incidental to activities associated with the development and operation of a commercial scale photovoltaic solar energy project (hereinafter referred to as project) in Cass County, Illinois.

Procedural History

The Department received a Conservation Plan prepared by Environmental Consulting and Technology, Inc. on November 15, 2021, as a request for authorization for the incidental take of Illinois Chorus Frog, Ornate Box Turtle, and Plains Hog-nosed Snake. Additional information was requested by the Department on December 8, 2021, and April 12, 2022, to make the Conservation Plan complete as prescribed by 17 Ill. Adm. Code 1080.10. Additional information was received by the Department on March 30, May 4, and May 11, 2022. The final conservation plan was approved by the Department on May 11, 2022. 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 construct, operate, and decommission a 150-megawatt commercial scale solar energy system. The project components will include photovoltaic ("PV") solar panels that will be mounted on a single-axis tracking system with a 60+/- degree tilt, along with the associated infrastructure of above-ground low voltage cable management system, electric inverters, and transformers, underground electrical collection system, electrical collector substation, overhead transmission line, point of interconnection switchyard, an operations and maintenance ("O&M") building, battery storage,

solar met stations, supervisory control and data acquisition ("SCADA") hardware, control house for protective relay panels and site controllers, private access roads with gated ingress/egress points, security fencing and any associated facilities. Temporary facilities associated with construction will include construction laydown yards, which will be constructed with gravel over the soil, and after construction these areas will be restored to preconstruction soil conditions.

Take of Illinois Chorus Frog, Ornate Box Turtle, and Plains Hog-nosed Snake could occur as a result of crushing or burying by project traffic or heavy machinery during construction, and/or dispersal from suitable habitat due to increased noise and/or vibration. Additionally, routine operations after construction could result in take of listed species by occasional traffic on access roads, disruption of movement with fences, and/or conversion of habitat to paved or gravel surfaces.

Total estimated area of impact within suitable species habitat is **2,382 acres**, with **4.88 acres being permanent impacts** to suitable species habitat. The Department concurs that the take of Illinois Chorus Frog, Ornate Box Turtle, and Plains Hog-nosed Snake that could result from the proposed project is not the purpose of CCSP'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 measures were included in CCSP's conservation plan.

To meet the "maximum extent practicable" standard, additional minimization and/or mitigation measures may be required beyond those proposed by CCSP, based on the life history needs of the Illinois Chorus Frog, Ornate Box Turtle, and Plains Hog-nosed Snake. **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.

This project is being funded by the applicant, and all mitigation activities will be incorporated into the overall project budget. There are adequate funds to carry out all aspects of the Conservation Plan.

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

Illinois Chorus Frog (*Pseudacris illinoensis*) is an Illinois state-threatened amphibian species.

Habitat: The Illinois Chorus Frog is found in areas of sandy soil. The frogs spend most of the year buried 4-8 inches below the surface, emerging in February or March only to move to ephemeral ponds where they mate and lay their eggs. The species may intermittently burrow during the day in breeding season. They locally migrate to underground burrows in June.

Distribution: The current range of the species is similar to its historic range, but the abundance of the species within that range has diminished. Illinois Chorus Frogs also occur in parts of Missouri and Arkansas.

Reproduction: Illinois Chorus Frogs will emerge from their burrows and migrate up to 0.9 kilometers to ponds. Males will call to attract females. They will mate and lay eggs in several clusters of 10-40 eggs. Clutches of 400-700 eggs in total are attached to the underside of submerged vegetation. The species' life span is typically 2-3 years.

Population: Illinois Chorus Frogs are declining due to habitat loss caused by the draining of breeding sites for development, chisel-plow cultivation, and road mortality during migration to and from breeding sites.

Range in Illinois: Illinois Chorus Frogs are found at scattered locations in central, southwest, and extreme southern portions of Illinois. They have been observed in 10 of 102 counties, including Alexander, Cass, Fulton, Madison, Mason, Menard, Morgan, Pulaski, Scott, and Tazewell Counties. There are currently 53 extant (within last 10 years) Element Occurrence Records for Illinois Chorus Frog in the Illinois Natural Heritage Database.

Incidental Take Authorizations: The Department has twenty-nine (29) previously issued or pending Incidental Take Authorizations for Illinois Chorus Frog. This is the tenth authorization to be granted for the potential take of Illinois Chorus Frog in Cass County.

Ornate Box Turtle (*Terrapene ornata*) 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 Turtles have been observed in the last ten (10) years in 27 of 102 Illinois counties. There are currently 50 extant Element Occurrence Records for Ornate Box Turtle in the Illinois Natural Heritage Database.

Incidental Take Authorizations: The Department has fourteen (14) previously issued or pending Incidental Take Authorizations for the Ornate Box Turtle. This is the first authorization to be granted in Cass County. Previous projects in other counties for which take was authorized include a water line extension, wind farm developments, electric transmission lines, mine vent shafts, a commercial development project, and a solar energy facility.

Plains Hog-Nosed Snake (*Heterodon nasicus*) is an Illinois State-threatened snake species.

Habitat: Plains Hog-Nosed Snakes inhabit 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 Snakes are sexually mature in their second year.

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

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

Incidental Take Authorizations: The Department has nine (9) previously issued or pending Incidental Take Authorizations for Plains Hog-Nosed Snakes. This is the second in Cass County. Previous authorizations were for landfill recap, road improvement, and wind farm construction.

Based on the amount of habitat impacted by this project, the number of known occurrences of the Illinois Chorus Frog, Ornate Box Turtle, and Plains Hog-nosed Snake 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 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 these 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 CCSP 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 CCSP's request for authorization of incidental take was published in the *Breeze Courier* (official state newspaper) on May 19, 2022. The notice was also published in the *Cass County Star Gazette* on May 19, May 26, June 2, and June 9, 2022. A copy of the Conservation Plan could be reviewed at the Beardstown Houston Memorial Library. The deadline for public comment was July 9, 2022. No comments were received from the public.

Authorization

It is the determination of the Department that the measures that will be implemented by CCSP will adequately minimize and mitigate the anticipated taking of Illinois Chorus Frog associated with the development and operation of a commercial scale photovoltaic solar energy project in Cass County, 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 are a part, or the habitat essential to the species' existence in Illinois.

All terms and conditions included in the aforementioned conservation plan submitted by CCSP 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 CCSP in the conservation plan:

1. This authorization is effective upon the signature of the Department and shall remain in effect for a period of **forty (40)** 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 CCSP has failed to comply with any of these terms and conditions or has been responsible for the taking of the Illinois Chorus Frog, Ornate Box Turtle, or Plains Hog-nosed Snake beyond that which is incidental to activities associated with the development and operation of a photovoltaic solar farm in Cass County, Illinois.

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 Illinois Chorus Frog, Ornate Box Turtle, or Plains Hog-nosed Snakes 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 minimization or mitigation by CCSP. Further, if during reassessment the Department determines that the level of minimization and mitigation no longer meets the requirement of 520 ILCS 10/5.5 for minimization and mitigation to the maximum extent practicable for the potential take, the Department may request an amendment to this Authorization or additional minimization or mitigation by CCSP. If an agreement cannot be reached between the Department and CCSP, this ITA will be terminated. Termination pursuant to this paragraph does not prohibit the CCSP for applying for an new ITA.

2. The effective period of this authorization may be altered by mutual written agreement between CCSP and the Department. The Illinois Endangered Species Protection Board shall be notified of any 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; provided however, the Department acknowledges that prior to operation of the project, a portion of the underlying fee interest in the Solar Project switchyard (the "Switchyard") will be transferred to [Ameren Services Company as agent for Ameren Illinois Company d/b/a/ Ameren Illinois ("Ameren")]. Ameren is separately pursuing its own Incidental Take Authorization for the Switchyard (the "Ameren Switchyard ITA"). Upon transferring fee ownership of the Switchyard to Ameren, this Incidental Take Authorization shall automatically partially terminate as to the Switchyard and the Ameren Switchyard ITA, upon execution, shall govern in its place.

4. Notification to all on-site personnel shall be provided on the sensitive biological resources in the area; the identification of Illinois Chorus Frog; 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; the importance of avoiding take of the species; and response protocol if individuals are found, including the chain of response personnel. **CCSP 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 species, potential habitat and species management practices.
6. Biological consultants employed by CCSP 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, 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 individuals.
7. CCSP shall notify the Department's Endangered Species Program by email correspondence of construction commencement and completion of the project construction and decommissioning of the project in Cass County. A project status report shall be submitted to the Department within 90 days following completion of construction and decommissioning of the project summarizing the implementation of minimization, mitigation, and restoration measures and evaluating the effectiveness of those measures and shall include a project photo log. The report shall also include a map and GPS coordinates 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. 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 (photograph, map, and GPS coordinates).
9. CCSP shall conduct, or cause to be conducted, the following pre-construction, construction, or post-construction efforts:
 - a. Trenches shall be backfilled within 12 hours of excavation.
 - b. In the case of unforeseen circumstances, any open trench shall be inspected the next morning before construction activities resume.
 - c. If a trench must cross sandy soils, the top soil shall be removed from the area and set aside for replacement upon completion. To the extent practicable, soil layers shall not be mixed and replaced in the order they were originally encountered.
 - d. During the months of February, March, and April, daily construction activities must cease prior to sunset

- e. During the months of February, March, and April, a biological monitor shall be on site daily, and weekly the remainder of the year.
 - f. If large congregations of Illinois Chorus Frogs are observed, the Department shall be notified within 48 hours.
 - g. Fencing shall contain a minimum one six-inch wide wildlife passage gap every 100 feet. This may be accomplished with openings or a raised fence bottom.
 - h. Security lighting needs shall be evaluated to decrease impacts on wildlife.
 - i. Post-construction, a seed mix consisting of native and non-native (non-invasive) prairie grass and forb species requiring minimal maintenance shall be planted under and between rows of panels. These shall be warm and cool-season grasses that do not exceed 1 foot in mature height.
 - j. Once vegetation is established (roughly 3 years post-construction), mowing shall occur no more than twice annually, and no lower than 6 inches. Mowing shall only occur between April 15 and October 20 during daylight hours.
 - k. Broadcast herbicide applications shall not occur. Only targeted applications shall occur near the infrastructure (e.g., woody plants growing within the solar arrays,)
 - l. Approximately 26.83 acres of sandy soil within Project fencing will be planted with a sparse native seed mix containing three native grasses and three native wildflowers.
10. CCSP shall conduct, or cause to be conducted, post-construction surveys for Illinois Chorus Frog during the species' active period and in the vicinity project area following construction completion.
- a. All Illinois Chorus Frog surveys shall be coordinated with the Department's survey efforts for this species in the same area.
 - b. Post-construction calling surveys for Illinois Chorus Frogs targeting all ponds within 0.3 miles of construction (i.e. where landowner permission is granted, and/or where ponds are within 100 ft. of public roads) for two (2) of the five (5) years post-construction. If rainfall is substantially lower than average, CCSP will confer with the Department about postponing surveys to a year with better conditions to evaluate the presence of the Illinois Chorus Frog.
 - c. Illinois Chorus Frog call surveys shall be performed during early spring of the year following construction of the project. Nighttime audible call surveys shall be performed by qualified contractors at least 30 minutes after sunset, and end by midnight, during active breeding season (late February to late March, generally, but calls in local areas may only last approximately two weeks). Surveys shall be conducted when the temperature is above 32° F and wind speed is below 18 miles/hour with a lack of heavy rainfall. Listening posts shall be targeted as provided above in (a.). *Illinois Chorus Frog survey data sheets shall reflect date, location, time, air temperature, humidity, wind speed, moon visibility, precipitation, number of minutes at each listening post (no less than fifteen minutes), number of cars that passed, other human-caused noise, water presence/absence, and a notation of whether the call emanates from within the project boundary or outside (note direction). Mapping of all ephemeral wet areas potentially utilized by Illinois Chorus Frogs in the survey area shall be provided*

to the Department with notations on depth of water and presence/absence of emergent vegetation and tadpoles, if accessible.

- d. **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, the survey methodology utilized, area covered and time duration, a description and map of each habitat surveyed, the number of individuals located, the estimated life stage of each individual encountered (juvenile/adult) if possible, and a map of the species locations shall be provided to the Department within 90 days of survey completion.

11. CCSP shall conduct, or cause to be conducted, post-construction surveys for Plains Hog-nosed Snake and Ornate Box Turtles during the species' active period and in the vicinity of the project area following completion.
 - a. Post-construction surveys shall occur during the height of active season within or adjacent to the project area in Years 1-3 following completion of construction. The monitoring will document vegetation and habitat condition, and wildlife usage.
 - b. Three monitoring events shall be conducted between July 1 and September 1 of each of the three years.

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, the survey methodology utilized for each species, area covered and time duration, a description and map of each habitat surveyed, the number of individuals located, the estimated life stage of each individual encountered (juvenile/adult) if possible, and a map of the species locations shall be provided to the Department within 90 days of survey completion.

12. Mitigation to the maximum extent practicable is required by the Act. CCSP shall submit mitigation to the Illinois Department of Natural Resources - Illinois Wildlife Preservation Fund in the amount of **\$3,850.00 within 90 days of execution of this agreement**. The mitigation will be earmarked to bring conservation benefit to the Illinois Chorus Frog. 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:

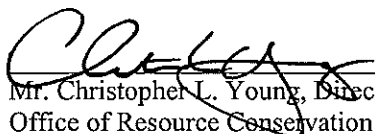
Illinois Department of Natural Resources
Office of Resource Conservation
Endangered Species Program – Incidental Take Authorization Coordinator
One Natural Resource Way
Springfield, IL 62702-1271

(217)557-8243
DNR.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.

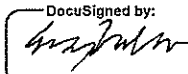
14. The CCSP official identified below is authorized to execute this agreement. Execution by CCSP indicates acceptance of all terms and conditions described in this authorization.
15. The execution of this agreement does not waive or excuse the responsibilities of CCSP to comply with other Federal, State, 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

Sept 13, 2022
Date

For Cass County Solar Project, LLC:

DocuSigned by:

260EBF12492644F
Ms. Emily Truebner

9/8/2022
Date