



# 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 Morgan Solar 1, LLC and Morgan Solar 1b, LLC (hereinafter referred to as Morgan Solar), for the incidental take of the State-threatened Illinois Chorus Frog (*Pseudacris illinoensis*) and Regal Fritillary (*Speyeria idalia*). The Illinois Department of Natural Resources (hereinafter referred to as Department) has determined that this taking is incidental to Morgan Solar's development of two adjacent photovoltaic solar farms in Morgan County, Illinois.

### **Procedural History**

A Conservation Plan prepared by TRC Companies, Inc., on behalf of Morgan Solar, was submitted to the Department on June 21, 2019, as a request for authorization for the incidental take of the Illinois Chorus Frog and Regal Fritillary. The Department requested additional information on July 22, as well as, September 16, and November 5, 2019, to make the Conservation Plan complete as prescribed by Ill. Adm. Code 1080.10. Additional information was received by the Department on July 29, October 3, and November 15, 2019. The final Conservation Plan was accepted as complete by the Department on November 19, 2019. 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 and operate two adjacent photovoltaic solar energy farms at two sites selected in the Illinois Adjustable Block Program in Morgan County, Illinois. The solar project is located on the east side of Cemetery Road, north of Beauchamp Lane in Section 22, Township 16 North, Range 13 West in Morgan County, Illinois.

The solar farm shall consist of two separate, but adjacent sites designated for the two solar farms known as Morgan Solar 1 and Morgan Solar 1B. There is a shared

access road between the two sites and specific access roads to each site off the shared access road. Within each project area there will be a pad mounted step up transformer and an equipment pad. Over an approximately seven-month period, Morgan Solar will mobilize to the site; conduct surveying, grading, and install access road and fencing; install racking, solar panel modules, and interconnecting cable; construct equipment pads for mounting step-up transformers; plant seed mix; and test performance. The solar panels are expected to have a functional life of 30 years. However, equipment replacement and repowering could extend the functional life.

The proposed project activities may result in direct burial or crushing of, and/or noise and vibration disturbance to the Illinois Chorus Frog and Regal Fritillary.

Each solar site will consist of approximately 14 acres, respectively, inside security fencing. With the additional acreage for the access roads, the total estimated area of potential impact within species habitat for the proposed actions is 29.5 acres. After construction, operation of the solar farms will be significantly less disruptive with infrequent vehicle access on the gravel roads only. Most maintenance activities will be conducted on foot. The permanent infrastructure footprint in species habitat is **0.95 acre**. The Department concurs that the take of Illinois Chorus Frog and Regal Fritillary that could result from the proposed project is not the purpose of Morgan Solar'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 Morgan Solar's Conservation Plan.

To meet the "maximum extent practicable" standard, additional minimization and/or mitigation measures may be required beyond those proposed by Morgan Solar, based on the life history needs of the Illinois Chorus Frog 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.

Morgan Solar has adequate financial backing to support and implement all activities outlined in Morgan Solar's Conservation Plan. The costs of mitigation activities will be incorporated into the overall project budget.

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.

### **Illinois Chorus Frog (*Pseudacris illinoensis*)**

Illinois Chorus Frog is an Illinois state-threatened amphibian species.

**Habitat:** Illinois Chorus Frogs are 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. Like other frogs, Illinois chorus frogs go through development as tadpoles and then metamorphose into young frogs by late May to late June. The young frogs have been shown to migrate up to 0.9 kilometers (2,953 feet) from breeding ponds to burrowing sites. They locally migrate to underground burrows in June. They can move short distances and feed while buried. The fossorial habits of the Illinois chorus frog make surveys of their populations difficult except during the breeding season when they are vocalizing at their breeding ponds.

**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 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 success of breeding varies greatly between years depending on precipitation patterns and the persistence of the breeding ponds, as well as the potential detrimental introduction of fish to the ponds. 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 11 of 102 Illinois counties. There are currently 17 extant Element Occurrence Records for Illinois Chorus Frog in the Illinois Natural Heritage Database.

**Incidental Take Authorizations:** The Department has 26 previously issued or pending Incidental Take Authorizations for Illinois Chorus Frogs. This is the seventh authorization to be granted in Morgan County. Previously issued or pending Incidental Take Authorizations are located as close as 1 mile west of the project. The project is within the same project polygon or within 2 miles of four (4) Incidental Take Authorizations considered for potential take of Illinois Chorus Frog. These include a truck access road installation, transmission line extension, crude oil pipeline, and a coal ash pond closure project.

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### **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 (49 degrees North) into Oklahoma (36 degrees North). 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 13 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 fourth authorization to be granted in Morgan County and all lie within two miles of the proposed solar site. These projects included pipeline construction, electric transmission line construction, and coal ash pond closure.

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Based on the amount of habitat impacted by this project, the number of known occurrences of Illinois Chorus Frog 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 Morgan Solar 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 Morgan Solar's request for authorization of incidental take was published in the *Breeze Courier* (official state newspaper) on November 26, 2019, and in the *Jacksonville Courier* on November 26, December 2, and 10, 2019. A copy of the Conservation Plan was deposited at the M-C River Valley Public Library allowing for public review. The deadline for public comment was January 10, 2020. No comments were received from the public.

### **Authorization**

It is the determination of the Department that the measures to be implemented by Morgan Solar will adequately minimize and mitigate the anticipated taking of Illinois Chorus Frog and Regal Fritillary associated with the construction of two adjacent solar farms in Morgan County in Illinois. Further, the Department has concluded that the taking authorized herein will not reduce the likelihood of survival or recovery of Illinois Chorus Frog or Regal Fritillary 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 Morgan Solar 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 Morgan Solar 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) 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 Morgan Solar has failed to comply with any of these terms and conditions or has been responsible for the taking of Illinois Chorus Frog or Regal Fritillary beyond that which is incidental to the construction, operation, inspection, or maintenance of Morgan Solar's two adjacent solar farms in Morgan County, Illinois.

2. The effective period of this authorization may be altered by mutual written agreement between Morgan Solar 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 the Illinois Chorus Frog 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. **Morgan Solar 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 Morgan Solar 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, an IDNR Herptile Scientific Collection Permit as authorized under 17 Illinois Administrative Code 885, and an IDNR Endangered Species Permit as authorized under 17 Illinois Administrative Code 1070, and .
7. Morgan Solar shall notify the Department's Endangered Species Program by email correspondence of construction commencement and completion of the solar project development. A **project status report** shall be submitted to the Department within **90 days** following completion (completion defined as operation) 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 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. Notification of any Illinois Chorus Frog 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. Morgan Solar shall conduct, or cause to be conducted, the following pre-construction, construction, and/or post-construction efforts:
  - a. The preconstruction conditions of Illinois Chorus Frog and Regal Fritillary habitat within the area of the projects will be documented with on-site photographs prior to construction.
  - b. Daily tailgate meeting shall be implemented and will include information on species' identification, avoidance and maintaining Best Management Practices (BMPs).
  - c. The active project work areas will be assessed daily for sightings of the species. Observation of congregations of either Illinois Chorus Frog or Regal Fritillary will be documented with GPS and photographs, and immediately reported to the Department. Possible work arounds, project sequencing and modification of minimization BMPs will be considered. If congregations are observed, impacts to the congregations will be avoided. Truck grilles shall be checked daily at the end of the day and the presence of Regal Fritillaries shall be reported.
  - d. Construction will be limited to typical daytime working hours to minimize unintentional nighttime impacts to foraging or traversing Illinois Chorus Frog.
  - e. A project biologist will be contracted for the duration of the construction to evaluate species habitat and populations.
  - f. Installation of proper erosion control measures to minimize land disturbance and impacts to offsite wetland habitats shall be performed. Unintentional impacts to Illinois Chorus Frog burrows will also be reduced by installation and maintenance of proper erosion control measures.
  - g. Zones of soft soil rutting in areas of construction traffic will be protected with construction matting to minimize soil compaction and erosion.
  - h. Low ground pressure tires and/or low ground pressure tracked equipment will be used on construction vehicles to minimize soil compaction.
  - i. Native seed mixes will be utilized to reestablish vegetation in disturbed areas.
  - j. The soil profile in excavated areas, such as utility trenches, will be segregated based on soil horizon, and the soil profile reestablished upon filling of excavations.
  - k. Prior to the Illinois Chorus Frog breeding season (February through June), amphibian exclusion fencing will be installed to minimize access to construction travel ways. Exclusion fencing will be inspected weekly until construction is complete. If construction begins in the midst of breeding season, no obstruction shall be erected.
  - l. The security fences around both projects will be designed to allow for unrestricted passage of the Illinois Chorus Frog.
  - m. In the growing season when the pollinator seed mix is planted, the project area will be mowed to a height of 8-inches minimum two times with a flail-type mower to reduce the production of invasive and weed seeds, and to reduce growth of woody vegetation. The first mowing to be in midsummer and the

- second to be in early fall. Following the first growing season, mowing shall only be performed one time per year in late summer.
- n. Post-construction, the laydown area will be removed, the site will be seeded with the project seed mix. The site access roads, equipment pads and solar array foundations will remain for the duration of the farm.
  - o. There will be no prescribed burns within the project footprint or on the parcel. Mowing within the fence line will be performed on an as-needed basis, based upon vegetation height. It is anticipated that the pollinator-friendly seed mix will require little maintenance. The site will be monitored and removal performed for infestations of invasive/exotic and/or noxious weeds and any trees or shrubs that would potentially shade the solar array.
  - p. The post-construction conditions of species habitat within the area of the projects will be documented at the same locations as the preconstruction photographs to allow for comparison of habitat conditions.
  - q. The decommissioning process shall be initiated upon the termination of the lease with the landowner and will involve the following: removal of the perimeter fences, removal of concrete foundations, removal of all metal structures (mounting racks and trackers), removal of all PV modules, removal of steel piles, removal of above- ground and underground cables, transformers, inverters, fans, switch boxes, fixtures, restoring the premises to its original condition, restoring access roads only if requested by landowner.
10. Morgan Solar shall conduct, or cause to be conducted, post-construction monitoring by a qualified biologist a thorough visual survey for Illinois Chorus Frog and Regal Fritillary in and around the project site in the form of routine observations and reporting of road kills by operations staff in conjunction with their normal duties. The Department shall be notified of any Illinois Chorus Frog or Regal Fritillary observations or road kills.
- a. **Illinois Chorus Frog call surveys shall be performed during early spring of the third and sixth year after construction.** Nighttime audible call surveys no earlier than thirty minutes after sunset shall be performed during Year 3 post-restoration by qualified contractors during active breeding season (March to May, generally, but specifically calls in local areas may only last approximately two weeks). Surveys shall be conducted when the temperature is above 0° C and wind speed is below 30 km/hr. Listening posts shall be targeted at no less than 4 known or modeled ponds dispersed in the vicinity of Morgan Solar. 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), other noise, water presence/absence, and a notation of whether the call emanates from within the solar site or outside (note direction). If dry conditions preclude Illinois Chorus Frog breeding/calling in Year 3 and/or Year 6, the surveys shall be conducted in Year 4 and/or Year 7. Mapping of all ephemeral wet areas potentially utilized by Illinois Chorus Frog in the vicinity shall be provided to the Department with notations on depth of water and presence/absence of emergent vegetation and tadpoles, if accessible. The



results of the Illinois Chorus Frog surveys will be submitted to the IDNR Incidental Take Authorization Coordinator within 90 days of the field survey.

- b. **Regal Fritillary visual identification surveys of adult butterflies shall be performed in late June/early July of the third and sixth year after construction prior to any site mowing.** Surveys shall occur between 10AM and 2PM, no less than three surveyors shall be spaced approximately 20-feet-apart across to perform passes (paying special attention to milkweed), note presence/absence of adults of the species, location of individual or distance from solar site, behavior (basking, flying, or nectaring), if nectaring – note flower species, other butterfly species noted, and an inventory of all blooming vegetation species (of particular note are adult and larval food sources - prairie forbs and violet species). Attempt photographs of the Regal Fritillary, if possible. The results of the Regal Fritillary surveys shall be submitted to the IDNR Incidental Take Authorization Coordinator within 90 days of the field surveys.
- c. The condition of the areas of planted vegetation shall be documented after anticipated germination to verify establishment of the desired plant communities.
- d. **The conditions of the planted areas shall be documented every five years following project construction.** The survey will have four objectives, and these are (1) determine if prairie species are present for the Illinois Chorus Frog, (2) determine if violet species are present for the Regal Fritillary larva, (3) determine if nectar species are present as required for the lifecycle of the Regal Fritillary, and (4) evaluate if invasive species are present. The results of the vegetation monitoring will be submitted to the Department's Incidental Take Authorization Coordinator within 90 days of the field surveys.
- e. Vegetation surveys are to include timed meander surveys in both Morgan Solar 1 and Morgan Solar 1B. Visual sampling inventories of violet densities are to be based on 200 paired one-meter square quadrats. At each location one quadrat shall be located beneath the solar panels and one quadrat shall be located between the rows of panels.
- f. **A report including, but not limited to, a description of the survey methodology utilized including duration, date, time, habitat description, photographs, and a map of survey locations and the locations of Illinois Chorus Frog and Regal Fritillary shall be provided to the Department within 90 days of completion of each survey.**

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

- a. The permanent impact footprint to the Illinois Chorus Frog and Regal Fritillary habitat resulting from the Morgan Solar projects is **0.95 acres**. Mitigation of impacts to listed species habitat is calculated at a ratio of 5.5:1 acre. The resulting mitigation acreage total is 5.2 acres. Based on an equivalent land value of \$2,000 per acre, Morgan Solar 1, LLC and Morgan Solar 1b, LLC are each contributing \$5,200 to the Illinois Wildlife Preservation Fund (\$10,400 in total) to bring conservation benefit to the Illinois Chorus Frog and the Regal Fritillary.

- b. The mitigation shall be provided to the Department **within 90 days of execution of this agreement**. 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, local real estate values, and impact analysis relevant to the project site's proposed conceptual design elements available at the time of review.

12. 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

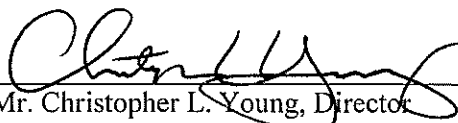
(217)557-8243  
DNR.ITAcoordinator@illinois.gov


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.

13. The Morgan Solar official identified below is authorized to execute this agreement. Execution by Morgan Solar indicates acceptance of all terms and conditions described in this authorization.
14. The execution of this agreement does not waive or excuse the responsibilities of Morgan Solar 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 Morgan Solar 1, LLC and Morgan Solar 1b, LLC:*

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

  
\_\_\_\_\_  
Mr. Tom Hunt  
Authorized Representative

3/5/2020  
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Date

3/4/2020  
\_\_\_\_\_  
Date