



Illinois Department of Natural Resources

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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 Dakota Access Pipeline, LLC (hereinafter referred to as DAPL) for incidental take of Illinois chorus frog (*Pseudacris illinoensis*) and regal fritillary butterfly (*Speyeria idalia*). The Illinois Department of Natural Resources (hereinafter referred to as the Department) has determined that the taking is incidental to activities associated with the construction of an approximately 3.8-mile long 30-inch crude oil pipeline system through Morgan and Scott Counties, which is part of a larger construction project known as the Dakota Access Pipeline Project.¹

Procedural History

The Department received a conservation plan prepared by Burns & McDonnell for DAPL on April 27, 2015, as a request for authorization for the incidental take of Illinois chorus frog and regal fritillary butterfly. The Department requested additional information on May 22, and July 14, 2015, to make the conservation plan complete as prescribed by 17 Ill. Adm. Code 1080. That additional information was received by the Department on July 15, 2015. 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 construction of an approximately 3.8-mile long 30-inch crude oil pipeline system in Morgan and Scott Counties. The construction corridor will be approximately 125 feet in

¹ The proposed DAPL Project is an approximately 1,168-mile crude oil pipeline system through the states of North Dakota, South Dakota, Iowa, and Illinois, ultimately terminating in Patoka, Illinois. Within Illinois, the project involves the construction of approximately 186 miles of pipeline. More specifically, DAPL's Conservation Plan involves an area totaling approximately 3.8 miles located two miles south of Meredosia entering Morgan County at River Mile 69.6 and extending 2.1 miles southeast into Scott County, just east of the intersection of Smith Lake and Cemetery Roads. The alignment continues southeast approximately 1.7 miles until it crosses Illinois Route 100 at a point approximately 0.75 miles south of the intersection of Illinois Route 100 and Mueller Road.

width, consisting of a 50-foot permanent easement and 75 feet of temporary workspace. In standard conditions, the trench will be excavated to a depth of approximately eight feet to allow for a minimum of three feet of cover over the pipe. Within this portion of the Illinois River floodplain, the landcover is primarily agricultural within a mosaic of forest, grassland, wetland, and development. DAPL anticipates that the taking of Illinois chorus frog or regal fritillary butterfly could occur as a result of direct impact and/or habitat alteration during vegetative clearing, grading, trenching, pipe installation, trench backfilling, the use of construction equipment, and vehicle traffic. The take of Illinois chorus frog and/or regal fritillary butterfly that could result from these activities is not the purpose of DAPL's project, 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 minimization and mitigation measures were included in DAPL's conservation plan.

To meet the "maximum extent practicable" standard, additional minimization and/or mitigation measures may be required beyond those proposed by DAPL, based on the life history needs of the Illinois chorus frog or the regal fritillary butterfly. **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:

DAPL is a subsidiary to Energy Transfer Partners, L.P., and, as such, has adequate financial backing to support and implement the Conservation Plan and costs will be incorporated into the overall DAPL Project budget.

It is the Department's opinion that DAPL'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:

The **Illinois chorus frog** is listed as a threatened species in Illinois because of its limited range and threats to its habitat such as conversion to agricultural uses and development. The species has no formal federal conservation status, but the status of the Illinois chorus frog is currently under review by the U.S. Fish and Wildlife Service.

Illinois chorus frogs are found in areas of sandy soil. The frogs spend most of the year buried in the ground, emerging only to move to ponds where they mate and lay their eggs during February and March. Like other frogs, Illinois chorus frogs go through development as tadpoles and then metamorphose into young frogs by late May to mid-June. The young frogs have been shown to migrate up to 0.9 km (2,953 feet) from breeding ponds to burrowing sites. They are able to 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. The success of breeding varies greatly between years depending on precipitation patterns and the persistence of the breeding ponds.

The Illinois chorus frog is found at scattered locations in central, southwest, and extreme southern portions of Illinois. The range of the species is believed to be similar to historic times, but the abundance of the species within that range has diminished. Illinois chorus frogs also occur in parts of Missouri and Arkansas. The Illinois Natural Heritage Database includes 19 element occurrence records for the Illinois chorus frog that are classified as extant. Those populations are found in Alexander, Cass, Logan, Mason, Menard, Morgan, Scott and Tazewell Counties.

The Department has issued 16 previous authorizations for incidental take of Illinois chorus frogs. Project types included pipelines, electric transmission lines, dredged material placement, road construction, a wind farm, and a water treatment plant. For most projects, the primary threat of take is digging up Illinois chorus frogs that are within the soil at the construction site. Frogs can also be crushed by heavy machinery or trapped and buried in trenches. Measures implemented to minimize or mitigate the take of Illinois chorus frogs in previous projects have included excavation of breeding ponds, limitation of the area affected by construction, use of silt fences to exclude frogs from construction areas during their breeding season movement to ponds, inspection of trenches to detect entrapment of frogs, and avoidance of disturbance to breeding ponds. Some recipients of authorization for incidental take of Illinois chorus frogs have provided financial support for management of the species and/or research to enhance the conservation of the species.

DAPL has delineated 18.5 acres of habitat suitable for the Illinois chorus frog within and near the proposed pipeline corridor.

The **regal fritillary butterfly** is listed as a threatened species in Illinois because of declining numbers and reduction of its range in the State. The U.S. Fish and Wildlife Service was petitioned to list the butterfly in 2015. A status assessment is currently ongoing to determine if federal listing is warranted. The species probably once occurred wherever prairie habitat was present in Illinois, but has suffered from the ongoing loss of that habitat to development and conversion to

agriculture. Recent surveys have found regal fritillary butterflies in tallgrass prairies, wet meadows and other open habitats, often in sandy areas.

Regal fritillary butterflies depend on the presence of violets (*Viola* spp.) as a food source for their larval life stage and use many plants, including milkweeds (*Asclepias* spp.), native thistles (*Cirsium* spp.), coneflowers (*Echinacea* spp.), blazing stars (*Liatris* spp.), and wild bergamot (*Monarda fistulosa*) as nectar sources as adults. The species is univoltine (has only one generation per year). Eggs are laid in mid- to late summer and, upon hatching, the larvae immediately fall to the ground and enter diapause in the leaf litter. Larvae emerge to feed in the spring, go through a brief pupation in the summer and metamorphose to adults in June or July. This life cycle means that where regal fritillary butterflies occur, some life stage of the species is present throughout the year.

The Illinois Natural Heritage Database includes 19 element occurrence records for regal fritillary butterflies that are classified as extant. Those populations are found at scattered locations in Bureau, Carroll, Cass, Iroquois, Jo Daviess, Kankakee, LaSalle, Lee, Mason, McDonough, Menard, Morgan, Ogle, Scott, Tazewell, and Whiteside counties. Many of these populations are small and isolated, making them vulnerable to population collapse.

The Department has issued 5 previous authorizations for incidental take of regal fritillary butterflies. Project types included wind power projects, a pipeline, road improvements, and capping of a closed landfill. Measures implemented to reduce effects on regal fritillary butterflies included reduction of the project footprint and planting of appropriate larval food plants and adult nectar-source plants.

DAPL has delineated 15.6 acres of habitat suitable for the regal fritillary butterfly within and near the proposed pipeline corridor. Due to aerial movement, the species could occur throughout the project site during summer.

Based on the life history needs of each of the species, the number of known element occurrence records in the State, an assessment of the potential impact to individuals that make up the element occurrences in the project footprint, the conservation measures outlined herein, 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 the project will not reduce the likelihood of survival or recovery of the Illinois chorus frog and regal fritillary butterfly 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.

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 DAPL indicates an acceptance of and 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 DAPL's request for authorization of incidental take was published in the (Taylorville) Breeze Courier (official state newspaper) on August 4, 2015, and in the Jacksonville Journal-Courier on August 4, 11, and 18, 2015. The closing date for public comments was September 17, 2015. No comments were received from the public.

Authorization

It is the determination of the Department that the measures to be implemented by DAPL will adequately minimize and mitigate the anticipated taking of the Illinois chorus frog and regal fritillary butterfly incidental to activities associated with the construction of an approximately 3.8-mile long 30-inch crude oil pipeline system in Morgan and Scott Counties, which is part of a larger pipeline project known as the DAPL Project. The covered area that is the subject of this authorization is described on Page 1. Further, the Department has concluded that the take authorized herein will not reduce the likelihood of survival or recovery of the Illinois chorus frog or regal fritillary butterfly 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 DAPL to the Department are incorporated into this agreement by reference and 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 the applicant in the conservation plan:

- This authorization is effective upon the signature of the Department and shall remain in effect for a period of seven (7) 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 DAPL has failed to comply with any of these terms and conditions or has been responsible for the taking of the Illinois chorus frog and/or the regal fritillary butterfly beyond that which is incidental to activities associated with the construction of approximately 3.8 miles of 30-inch crude oil pipeline in Morgan and Scott Counties, which is part of a larger construction project known as the DAPL Project.

- The effective period of this authorization may be altered by mutual written agreement between DAPL 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 Illinois endangered or threatened 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.

- This authorization is non-transferable.
- On-site personnel shall be educated on the sensitive biological resources in the area, the identification of Illinois chorus frog and regal fritillary butterfly, 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. DAPL shall submit a copy of the education materials to the Department.
- The Department reserves the right of entry to inspect potential habitat and species management practices.
- Environmental Inspectors employed by DAPL shall hold the necessary permits for work with non-listed and listed species; these include an IDNR Scientific Collection Permit and an IDNR Endangered Species Permit.
- DAPL shall notify the Department's Endangered Species Program of construction commencement and completion of the pipeline project. The Department shall be informed of any State-listed species sighting and provided location information (photograph and GPS coordinates) within 48 hours of such sighting. The Department shall be notified immediately of the discovery of dead specimens and will provide guidance on preservation and disposition.
- DAPL shall conduct, or cause to be conducted, the following pre-construction or during-construction efforts:
 - Where groundbreaking occurs, all measures of erosion control shall be implemented and monitored for effectiveness. An appropriate native seed mix shall be used to stabilize areas.
 - Soil profile shall be segregated to ensure reestablishment of pre-disturbance profile.
 - In travel ways, matting shall be utilized to reduce compaction in soft or wet areas. When and where appropriate, low ground pressure tires shall be utilized.
 - During breeding season of the Illinois chorus frog (February to June), temporary exclusion fencing shall be installed and inspected. All trenches shall be inspected daily. If frogs are found in any condition, DAPL

representatives shall call the local District Heritage Biologist at 217-653-2236 for retrieval.

- Periodic monitoring for migrating congregations of Illinois chorus frogs within travel corridors and work areas during breeding season shall occur and impact to congregations during migration shall be avoided.
- Periodic monitoring for the regal fritillary butterfly shall occur and impact to any congregations shall be avoided.

- DAPL shall restore all temporary travel areas, work areas, and pipeline right-of-way per the conservation plan. All non-agricultural lands shall be planted in appropriate native species. Adult (prairie forbs, including but not limited to butterfly milkweed, common milkweed, yarrow, pale-purple coneflower, and rattlesnake master) and larval (violets, including but not limited to Johnny jump-up and birdsfoot violet) food sources for the regal fritillary butterfly shall be planted within appropriate areas of the right-of-way. If plantings are unsuccessful, supplementation shall occur. DAPL shall provide vegetation summary memorandums to the Department for **three years following construction completion** with mapping of vegetated areas, species lists, and photographs.

- **Within 60 days of construction completion**, DAPL shall provide the Department with a project status report summarizing the implementation of minimization, mitigation, and restoration measures and evaluating the effectiveness of those measures. If any Illinois chorus frogs and/or regal fritillary butterflies were encountered during the project; this report shall also include a map of where the species were found, a description of any injuries or mortalities, and the disposition of any individuals that were injured or killed.

- DAPL shall conduct, or cause to be conducted, post-construction surveys including:
 - Nighttime audible call surveys no earlier than thirty minutes after sunset shall be performed during Year 3 post-restoration by qualified contractors twice (approximately 15 days apart) within the same breeding season (March to May). 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 along corridor. 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 corridor or outside (note direction). If dry conditions preclude Illinois chorus frog breeding/calling in Year 3, the surveys shall be conducted in Year 4. Mapping of all ephemeral wet areas potentially utilized by Illinois chorus frog along the corridor shall be provided to the Department with notations on depth of water and presence/absence of emergent vegetation and tadpoles.
 - During Year 3 post-restoration or concurrent with frog survey year, one regal fritillary butterfly survey performed by a qualified contractor shall occur between June 30 and July 20 along the length of the pipeline corridor covered

by this authorization noting presence/absence of adults of the species, perpendicular distance of individual from corridor, behavior (basking, flying, or nectaring), if nectaring – note flower species, and including an inventory of all blooming species (of particular note are adult and larval food sources - prairie forbs and violet species).

- **Maps and reports for each of the species shall be submitted within 60 days of survey completion.**

- Mitigation to the maximum extent practicable is required by the Act. Mitigation requirements for this authorization are calculated as follows:
 - suitable habitat for both species overlaps, therefore potential habitat impact totals 18.5 acres separated below into trench line and buffer impact or temporary workspace impact,
 - the applicant's estimate of trench line and buffer impact to suitable habitat acreage of Illinois chorus frog and regal fritillary butterfly (3.9 acres),
 - *multiplied* by the Department's standard mitigation ratio of 5.5:1 equaling **21.45 mitigation acres**, ($3.9 \times 5.5 = 21.45$),
 - *plus* the applicant's estimate of temporary workspace acreage within suitable habitat (14.6 acres), *multiplied* by a ratio of 3.5:1,
 - temporary workspace acreage *multiplied* by an occupancy rate for the Illinois chorus frog of 0.56 applied only to the non-groundbreaking acreage (this number is derived from Bradley Cosentino's "Monitoring plan to detect trends in occupancy of Illinois chorus frogs" prepared for the Illinois Department of Natural Resources, 2014) equaling **28.62 mitigation acres**, ($14.6 \times 3.5 \times 0.56 = 28.62$).
 - The *sum* of 21.45 and 28.62 is **50.07 total mitigation acres**.

DAPL shall choose either to perform habitat creation, restoration, acquisition, protection, or species research to the benefit of the Illinois chorus frog and the regal fritillary butterfly; OR to apply an in-lieu compensatory mitigation payment based on an estimated applicable land value in the affected county of \$2,200.00 per acre. **The total conservation benefit value or in-lieu compensatory mitigation due to the Department for this project is \$110,154.00.** Mitigation settlement dollars paid to the Department are placed in the Illinois Wildlife Preservation Fund and earmarked for the conservation benefit of the State-listed species potentially impacted. Mitigation payments are non-refundable, including in events of revocation or termination.

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

- DAPL shall submit reports on all surveys within 60 days of survey completion.

- All reports and other documentation required by this authorization shall be submitted to:

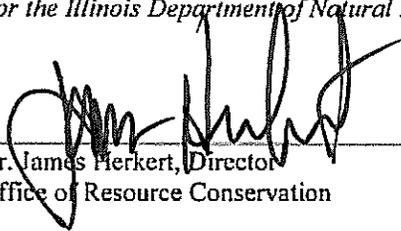
Illinois Department of Natural Resources
Endangered Species Program
Incidental Take Authorization Coordinator
One Natural Resources Way
Springfield, IL 62702-1271

(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.

- The DAPL official identified below is authorized to execute this agreement. Execution by DAPL indicates acceptance of all terms and conditions described by this authorization.

For the Illinois Department of Natural Resources:

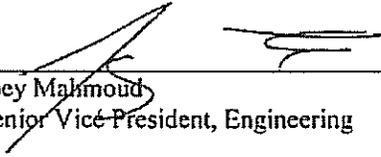


Dr. James Merkert, Director
Office of Resource Conservation

Date

2-25-16

For Dakota Access Pipeline, LLC:



Joey Mahmoud
Senior Vice-President, Engineering

Printed Name and Title

Date

2/1/16