



Illinois Department of Natural Resources

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Pat Quinn, Governor
Marc Miller, Director

June 25, 2014

Mr. Kenneth Lynn, Consulting Environmental Scientist
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**RE: Ameren Grand Tower – Makanda Rebuild, Jackson County
IDNR Environmental Resources Review
EcoCAT Review #1411730**

Dear Mr. Lynn:

This letter provides IDNR's comments resulting from its review of the route between the Grand Tower Power Plant and the Makanda Substation for the proposed reconstruction of this powerline.

This review considered potential avian impacts; potential effects to species listed as endangered or threatened by the Illinois Endangered Species Protection Board and their essential habitats; potential effects to sites identified in the Illinois Natural Areas Inventory (INAI Sites); potential effects to State Parks; potential effects to large forest blocks or grasslands; and potential effects to wetland resources.

Eagles. Bald Eagle, *Haliaeetus leucocephalus*. More than 5,000 Bald Eagles, were present in Illinois during the Winter Count of 2014, shattering prior records. About 90% of these birds were concentrated along the Mississippi River, with most of the remainder concentrated along the Illinois River. An active Bald Eagle nesting site is located on the Big Muddy River below Horseshoe Bluff, approximately a half-mile north of the existing power line. The Department anticipates no adverse effect to this nesting location, but Ameren should remain cognizant of the potential for additional nests to be present at points along the route.

Golden Eagle, *Aquila chrysaetos*. This species seldom penetrates as far south as Jackson County. The Department is unaware of reports of this species along the approved route.

Both species are vulnerable to collision with power lines and electrocution while perching. *The Department recommends the design and configuration of the power line and its supporting structures employ the methods recommended by the Avian Power Line Interaction Committee (APLIC) to limit Eagle injury/mortality.*

As you know, each of these species is protected by the federal *Bald and Golden Eagle Protection Act*. *The Department recommends a late winter/early spring survey to assure that no new nests have been built within 660 feet of the proposed route, prior to beginning construction.* If such a nest is found, Ameren should promptly consult with the Fish & Wildlife Service to determine the best means of proceeding.

Endangered Bats. The **Gray Bat**, *Myotis grisescens*; the **Indiana Bat**, *Myotis sodalis*; and the **Northern Long-Eared Bat**, *Myotis septentrionalis* all occur in Jackson County. The Indiana Bat and Gray Bat are both federally-listed as endangered and state-listed as endangered. The Northern Long-Eared Bat is proposed to be federally-listed as endangered, with a final decision due no later than April 2, 2015, whereupon it will automatically become state-listed, as well, if not beforehand. The USFWS has already issued guidance stating that those operations which may result in taking the Northern Long-Eared Bat after that date should be treated as though they will take a listed species, beginning immediately.

The route of the power line also falls within the ranges of the **Southeastern Myotis**, *Myotis austroriparius*; the **Rafinesque's Big-Eared Bat**, *Corynorhinus rafinesquii*; and the **Eastern Small-footed Bat**, *Myotis leibii*. The Southeastern Myotis and Rafinesque's Big-Eared Bat are State-listed as endangered, while the Illinois Endangered Species Protection Board recently (February 2014) made a preliminary decision to list the Eastern Small-footed Bat as "threatened." (A final listing decision is anticipated late this year.) The Department recommends that Ameren monitor the proceedings of the Board through its web-page, <http://www.dnr.illinois.gov/espb/Pages/default.aspx>, to remain apprised of progress on this issue.

A winter hibernation record for the Rafinesque's Big-Eared Bat exists for a cave located near the power line corridor, suggesting the corridor is indeed within the summer range of this species. Jackson County lacks records for the Southeastern Myotis and the Eastern Small-Footed Bat, but this may be a reflection of low sampling effort rather than evidence of the absence of these species.

With the exception of the Small-Footed Bat, the primary risk of taking these bats is associated with clearing trees in which the bats are roosting. All of these species hibernate in the winter, so that *winter-season tree-clearing offers the lowest risk of taking them.* This period is considered to extend from November 15 to April 1. The Eastern Small-footed Bat roosts on the ground under rocks or debris, which presents different challenges. However, this species has very few records, which occur in extreme Southern Illinois, so the risk to this species is deemed low.

If tree-clearing must occur outside of the period above, *the Department recommends acoustic and mist-netting surveys to determine which bats are present along the corridor.* Mist-netting activities, which require permission from both federal and state agencies, should be supplemented by radio-telemetry. Female Indiana Bats forage an average distance of 2.5 miles from a primary roost tree. Hence, a mist-net capture of lactating females may not indicate a roost tree near the area of primary interest. Radio-telemetry aids in identifying the specific locations of roosts.

Both state and federal statutes provide procedures for obtaining permission to take listed bats incidentally during other lawful activities, such as power line construction. However, the procedures differ in important respects, and state and federal permits must be obtained separately, if avoidance

measures are deemed insufficient to guarantee no prohibited taking will occur. Such permits often take several months or years to obtain, so early planning is recommended.

Other Endangered/Threatened Plants and Animals. **Timber Rattlesnake, *Crotalus horridus*.** The area of the proposed action is extensively occupied by a large and important population of the state-listed threatened Timber Rattlesnake. This locality is deemed to be very important to the conservation and recovery of this species in Illinois. The proposed action is likely to adversely affect this species through the disruption of denning areas, basking sites, foraging/dispersal areas, and the incidental injury or death of individual animals. Forest openings are attractive to Rattlesnakes because they provide basking opportunities and their edges likely provide a higher density of prey.

The Department believes the surest means of avoiding the incidental take of Timber Rattlesnakes and of minimizing adverse effects is to limit the period in which work can be done in the proposed right-of-way and access roads to dates between November 16 and March 15. In this timeframe, Rattlesnakes generally have reached and remain in winter hibernation sites (dens) and, if dens are not directly affected, they will not be exposed to harm from vehicles, tree-felling, mowing, or encounters with workers.

However, maintenance tasks and emergencies may occur at other times during the term of the special use permit which would, unavoidably, require workers to use heavy equipment in the right-of-way at times when Rattlesnakes are active and are likely present. Such activities are likely to, at a minimum, harass Rattlesnakes and potentially result in their injury or death. Additionally, Ameren may find it infeasible to complete reconstruction of the powerline within such a restriction. *Consequently, the Department recommends Ameren seek an Incidental Take Authorization from the Department of Natural Resources to assure that such incidental taking is minimized and that appropriate mitigation for taking is provided.* Within the Conservation Plan required for such authorization, Ameren may prioritize various sectors of the project to minimize incidental taking.

Mowing of herbaceous vegetation, in particular, is a threat to this species. Mowing blades should be set at least 18-24 inches high to avoid killing snakes, but even then the vehicles on which mowers are mounted pose the threat of incidental mortality. *The Department recommends that mowing activities in the summer be restricted to the hottest parts of the day when snakes are seeking refuge from the heat, between noon and four pm. Careful consideration should be given to the timing of mowing activities and the types of equipment employed for this task to minimize snake mortality.* Nevertheless, one or more instances of mortality are likely to occur over a 20-year period. An Incidental Take Authorization may be necessary to address these issues.

Open rights-of-way are inviting to recreationists and other forest users for hiking or the operation of off-road or all-terrain vehicles. *The Department recommends Ameren work with National Forest officials and, where appropriate, private fee owners to explore the potential to prohibit or enforce restrictions on such uses of the right-of-way by the public,* since such activities are also likely to result in the loss of Rattlesnakes when human-snake interactions occur.

Eastern Wood Rat, *Neotoma floridana*. The Department of Natural Resources has been working for more than a decade to successfully recover a viable population of the state-listed endangered Eastern Wood Rat. One focal point of this effort has been the area associated with the Little Grand Canyon and the bluffs above the Big Muddy River. The proposed action will pass very near established locations for this species, and may

pass through areas occupied by this species which have not yet been documented. *The Department recommends careful biological surveys of those habitats most likely to support this species for indications the areas are occupied by the Eastern Wood Rat.*

The species does not hibernate, but remains active year-round, including breeding. If nests or food caches are found in areas to be cleared, it will be virtually impossible to accomplish the project without harassing or harming the animals using that habitat. Impacts may be especially severe since it is anticipated that clearing will occur in the winter. Even if individuals are not directly harmed, the loss of nests and food caches may result in the loss of individuals to starvation or predation.

Consequently, if this species is shown to be occupying the proposed right-of-way, *the Department recommends Ameren seek an Incidental Take Authorization from the Department of Natural Resources to assure that such incidental taking is minimized and that appropriate measures are taken to assure the survival of affected individuals. Within the Conservation Plan required for such authorization, the applicant may propose conservation measures which will preserve the progress made to date in recovering this species.*

Tree clearing may offer some opportunities to mitigate inroads to Eastern Wood Rat habitat. *Short-term impacts could be offset by creating large brush piles (e.g., 30-50 feet long, 20-30 feet wide, 10-feet high) every half-mile along the edge of the right-of-way to create a high-quality corridor for dispersal and colonization.* However, the United States Forest Service would likely have to approve such measures.

Marsh Rice Rat, *Oryzomys palustris*. This species may be locally abundant in the Oakwood Bottoms sector of the proposed project area, in Sections 8 and 9. During one three-day trapping effort in the late 1990's, forty-four Rice Rats were captured along the Big Muddy Levee Road in Section 9. Individuals have also been captured in or along the existing right-of-way in Section 8. Given the extensive tree-clearing and road improvements anticipated to occur in these Sections, including the Big Muddy Levee Road, it is highly likely that essential habitat of the Rice Rat will be disturbed and that Rice Rats will be displaced, injured, or killed in the course of the proposed action. This species may occur in suitable habitat elsewhere within the project area.

It is possible this species may be de-listed by the Illinois Endangered Species Protection Board in late 2014. However, this action may be delayed or not occur. The Department recommends Ameren monitor the Board through its web-page, <http://www.dnr.illinois.gov/esp/esp/Pages/default.aspx>, to remain apprised of progress on this issue. *The Department recommends intensive surveys to quantify the size of the local population and the extent of its occupation of proposed work areas.* If present to any degree, an Incidental Take Authorization from the Department of Natural Resources should be considered.

Copperbelly Water Snake, *Nerodia erythrogaster neglecta*. The Illinois Endangered Species Protection Board has made a preliminary decision (February 2014) to list this species as "threatened" in Illinois. However, the Board has been urged to reconsider this decision. A final decision is expected before the end of 2014. The Department recommends that Ameren monitor the proceedings of the Board through its web-page, <http://www.dnr.illinois.gov/esp/esp/Pages/default.aspx>, to remain apprised of progress on this issue.

The Copperbelly is widely distributed in Southern Illinois, including Jackson County, and is likely present along the power line corridor near streams and wetlands. The primary risks of taking would result from crushing by vehicles, ROW maintenance (mowing), and harassment/persecution by employees.

At present, this species is protected under Part 880.70 of the Department's Administrative Rules, which prohibits any take of this species in fourteen counties but does not bar taking in Jackson County. Incidental Take Authorizations are not provided for in the *Fish & Aquatic Life Code*, 515 ILCS 5. The Department plans to repeal Part 880.70, but this action has not yet been formally proposed. Ameren should monitor the Illinois Register, published by the Secretary of State, to monitor rulemaking by the Department regarding this species.

On May 30, 2014, Illinois' 98th General Assembly enacted Senate Bill 0902, the *Herptiles-Herps Act*. Upon the Governor's signature, the new law will become effective on January 1, 2015. If the Copperbelly Water Snake is not listed by the Illinois Endangered Species Protection Board, it will be covered by the new statute, which will supersede provisions of the *Fish & Aquatic Life Code*. The *Herptiles-Herps Act* does not contain provisions for Incidental Take Authorization, but does allow land owners to give written authorization to take non-listed snakes on their property. Note that this provision will apply to ALL snakes Ameren employees or agents may encounter. Ameren should monitor the Illinois Register, published by the Secretary of State, to monitor rulemaking by the Department to implement the new statute.

Migratory Birds. The proposed action may have adverse effects on the essential habitat of a number of migratory bird species by reducing the size of several large forest blocks important to the reproduction of interior forest birds, such as the state-listed endangered **Swainson's Warbler**, *Limnothlypis swainsonii*, and the state-listed threatened **Cerulean Warbler**, *Dendroica cerulea*. However, if tree removal occurs in the winter, it will minimize the potential for incidental taking of these species. Winter tree-removal will also avoid adverse effects to the state-listed endangered **Mississippi Kite**, *Ictinia mississippiensis*. *Tree removal at other times should be preceded by surveys to avoid the possible disturbance of nesting territories.*

State-listed Endangered Plants. Six or more species of state-listed endangered plants may be affected by the proposed action. Under state law, a listed plant cannot be taken without the express written permission of the land owner. [520 ILCS10/3(3).] For much of the route, the land owner is the Shawnee National Forest. Hence, Forest officials must authorize Ameren to "take" any state-listed plants and have the discretion to establish terms and conditions under which plants may be taken, if at all. Otherwise, any harm to state-listed plants caused by Ameren will be unlawful.

In this context, "take" means, in reference to plants and plant products, to collect, pick, cut, dig up, kill, destroy, bury, crush, or *harm in any manner*. [Emphasis added. 520 ILCS 10/2.]

Of greatest concern is the state-listed endangered **Finger Dogshade**, *Cynosciadium digitatum*, a member of the carrot family. All populations of this plant ever identified in Illinois have been located in the Oakwood Bottoms Recreation Area of the Shawnee National Forest. These populations have been in Section 8 and 9, often in proximity to railroads, roads, and powerlines. This plant, an annual, is usually found in oak-hickory forest openings. It requires more light than penetrates a closed canopy, but cannot tolerate exposure to full sunlight. In the past, populations have consisted of from only a few to more than one thousand plants. Most past populations have been reduced or eliminated due to canopy closure.

Widening access roads and widening the right-of way may introduce light into portions of the forest which have been too dark for this species in the recent past, but where a seed bank persists which may take advantage of brighter conditions. However, it is also possible that existing plants are located in areas which will be disturbed or will be exposed to full sunlight as a result of the proposed action and cannot survive in the new environment. This, too, would be a form of prohibited taking.

The Department recommends careful botanical surveys of proposed work areas in the Oakwood Bottoms in an effort to identify and delineate any current locations of this species, so that Forest officials can determine the best means, consistent with the proposed action, of conserving this plant. Judicious thinning of the canopy in select areas adjacent to the proposed right-of-way may be an appropriate form of mitigation for any losses of this species.

The state-listed endangered **Hairy Synandra**, *Synandra hispidula*, a member of the mint family, is another species likely to be affected by the proposed action. A half-dozen or so large populations of this species, occurring in stands of up to several thousand individual plants, have been located in the past along the valley of Cedar Creek (Little Grand Canyon), near and on either side (north and south) of the existing powerline corridor. The plant is often found adjacent to and just below terrace forests.

The state-listed threatened **Squirting Cucumber**, *Melothria pendula*, has been reported as recently as 2013 *from within the powerline rights-of-way* crossing Fountain Bluff. It has also been reported in clearings and along the railroad in the valleys of Cedar Creek and Cave Creek. This plant is also an annual, but one which enjoys full sunlight. It can be affected by construction and also by mowing, but can also be overwhelmed by competing taller growth. The proposed action may benefit the species, but individual plants may be damaged or destroyed in the process.

The state-listed endangered **Arkansas Mannagrass**, *Glyceria arkansana*, has been reported from clearings in the Oakwood Bottoms and from Cave and Cedar Creek valleys. This perennial is an obligate or facultative wetland plant.

The state-listed threatened **French's Shooting-Star**, *Dodecatheon frenchii*, can be found at the drip-line below cliffs and bluffs. It has been reported from Cave and Cedar Creek valleys. This species is particularly sensitive to disturbance of its very specific and rare habitat.

The state-listed threatened **Southern Grape Fern**, *Botrychium biternatum*, has also been reported from Cave and Cedar Creek valleys. The Illinois Endangered Species Protection Board has made a preliminary decision (February 2014) to list this species as "endangered" in Illinois. However, this change in status will not alter the plant's legal protection. A final decision is expected before the end of 2014.

The Department recommends careful botanical surveys of all work areas to be disturbed to identify and delineate any state-listed flora which may be present. The Department emphasizes that, in order for Ameren's actions to be lawful, Forest officials and other land owners must expressly grant Ameren permission to take any state-listed plants, and the owners have complete discretion to specify the terms and conditions under which any taking is authorized.

Illinois Natural Area Inventory (INAI) Sites. The proposed action traverses the extensive and exceptionally-high quality **Little Grand Canyon-Cedar Creek INAI Site**, which encompasses a number of different natural communities with an amazing diversity of plant and animal life. Designation on the Natural Areas Inventory confers no legal protection but identifies areas worthy of exceptional conservation efforts to preserve their biological and geological integrity. *The Department recommends Ameren plan strict controls on project activities to assure the minimum disturbance necessary to accomplish the project, with prompt restoration of disturbed areas.* The Department also notes that the Little Grand Canyon is a high-visitation area for members of the public, many of whom have limited experience of the outdoors. Ameren may wish to give some consideration to public safety measures in this area.

Dedicated State Nature Preserves and Land & Water Reserves. There are currently no Nature Preserves or Land & Water Reserves within view of the power line route.

State Parks. There are no State Parks in the vicinity of the proposed action.

Forest or Grassland Blocks. Numerous forest blocks occur along and in the vicinity of the approved power line route. However, in most cases, the project will merely widen an existing right-of-way, and this will not increase forest fragmentation.

Wetland Resources. Numerous wetlands occur along the route, many of which may support endangered or threatened species and other wildlife. These resources may be easily damaged unless the use of heavy equipment is carefully managed.

The Department of Natural Resources appreciates this opportunity to comment on the potential wildlife issues facing this project. Should there be any questions, please do not hesitate to contact me.

Sincerely,



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