



MISSOURI DEPARTMENT OF CONSERVATION

Headquarters

2901 West Truman Boulevard, P.O. Box 180, Jefferson City, Missouri 65102-0180

Telephone: 573-751-4115 ▲ www.MissouriConservation.org

ROBERT L. ZIEHMER, Director

October 16, 2014

Mark Twain Transmission Project
C/O Burns and McDonnell
Attention: Jennifer Berry
9400 Ward Parkway
Kansas City, MO 64114

RE: MARK TWAIN TRANSMISSION PROJECT - ENVIRONMENTAL COMMENTS

Ms. Berry:

The Missouri Department of Conservation (Department) is in receipt of your request for environmental concerns related to the Mark Twain Transmission Project.

The Department is the state agency responsible for forest, fish and wildlife resources in Missouri. As such, the Department participates in project review when a project might affect those resources. Department comments are for your consideration to avoid, minimize and mitigate project impacts in Missouri.

PROJECT DESCRIPTION

The proposed transmission line would total approximately 100 miles from Palmyra to Kirksville to the Iowa border. Version 10 of the route network (provided by Ameren UE staff) includes the counties of Schuyler, Adair, Knox, Lewis, Shelby and Marion. Transmission line support towers would have dimensions of up to 130 feet in height with a cleared right-of-way of approximately 150 feet.

LISTED AND PROTECTED SPECIES

Enclosed find a Natural Heritage Review Report for the proposed Mark Twain Transmission Line based on Alignment Version 10 provided by Ameren UE to the Department by email on August 15, 2014.

Multiple natural heritage records for Indiana bat (*Myotis sodalis*) exist adjacent to the proposed routes. You or your client may be required to consult with the U.S. Fish and Wildlife Service pursuant to the Endangered Species Act. The U.S. Fish and Wildlife Service may be contacted by phone at 573-234-2132 or by mail at U.S. Fish and Wildlife Service, Ecological Services, 101 Park Deville Drive, Suite A, Columbia, Missouri 65203-0007.

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Bald eagles (*Haliaeetus leucocephalus*), a federally protected species under the Bald and Golden Eagle Protection Act, are known to nest near streams and rivers within the range of this project. Work managers should be alert for nesting areas within 1500 meters of project activities and follow federal guidelines at:

<http://www.fws.gov/midwest/MidwestBird/EaglePermits/baeatakepermit.html>. In addition, you may wish to request assistance from the U.S. Fish and Wildlife Service as described above.

SPAWNING STREAM SEASONAL CONSTRUCTION RESTRICTIONS

The following waterways have seasonal restrictions that could impact construction timing, if work would occur below the ordinary high water mark: South Fabius River and Troublesome Creek (Marion County). The affected locations are described in the enclosed Natural Heritage Review Report and shown in the enclosed map. Any work conducted below the ordinary high water mark in these stream segments should be avoided between March 15 and June 15. Management recommendations for construction projects affecting Missouri streams and rivers are also enclosed for reference.

The South Fabius River watershed supports a diverse aquatic community. Surveys conducted from 1941 to 1999 in the watershed revealed the presence of 58 fish species, four crayfish species, and 19 freshwater mussel species. Three species have been collected in the watershed that are part of the Communities of Conservation Concern Checklist, namely American eel, ghost shiner, and Mississippi silvery minnow. Special designation has been given to the watershed because of these robust aquatic communities. A portion of the watershed was designated an Aquatic Conservation Opportunity Area in 2006, and a Priority Watershed in 2011. Sampling in 2008 showed robust aquatic communities in the South Fabius Aquatic Conservation Opportunity Area near the potential project sites. Many of the aquatic species found in the watershed rely on clean, cool and high-quality habitat. Forested riparian corridors are critical to maintaining these high-quality aquatic systems. Degradation of these high-quality habitats could result in losses of biological diversity.

EXISTING CONSERVATION EASEMENTS

The Department holds interest in two conservation easements that precede proposed route segments A1 and A2.

Proposed segment A2 crosses the Bringer Stream Stewardship Trust Fund Easement (Marion County, T59N, R07W, Section 15 and 16) as seen in Figure 1. This easement is part of an In-lieu-Fee Mitigation (ILF) instrument originally purchased by the Missouri Conservation Heritage Foundation in 2006. This perpetual easement compensated landowners to maintain the existing condition of a wooded riparian corridor along the

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watercourse for the purpose of sustaining fish, wildlife, forest and riparian values, as described in the enclosed Stream Stewardship Trust Fund Conservation Easement. A change of condition, such as removal of riparian vegetation, would violate the terms of the Bringer Conservation Easement and the In-lieu-Fee instrument. At a minimum, a change of condition of this parcel would require an amendment to the agreement and repayment of the purchase price plus interest to the Missouri Conservation Heritage Foundation for the affected portion of the easement parcel.

The proposed route A2 would impact two portions of the Bringer easement for an estimated total of 3.95 acres. The proposed route A2 would bisect the easement into two unconnected portions. Short term impacts of the proposed route segment A2 at the Bringer easement would likely include conversion of riparian corridor to shrubs and grasses, and possibly soil compaction. Long term impacts of this conversion would likely result in a diminished riparian function offered by existing trees along the watercourse. Shrubs and grasses provide a lesser level of stream bank protection from erosion than trees because their root networks are more shallow than those of trees. Unlike trees, shrubs and grasses provide no shade for the stream channel. Riparian trees offer stream shading which maintains lower water temperatures and increased dissolved oxygen levels during the warm seasons. Many aquatic wildlife have an upper thermal tolerance for survival, growth and reproduction that is better served by stream shading. In addition, aquatic wildlife require a minimum dissolved oxygen content in river water which cannot be sustained diurnally during the warm season without stream shading.

Pages 12 and 13 of the enclosed ILF mitigation instrument between the U.S. Army Corps of Engineers, Kansas City District and the Missouri Conservation Heritage Foundation Stream Stewardship Trust Fund describe allowed and restricted activities on the parcels for which the perpetual easement applies.

Proposed segment A1 crosses the Bevill Stream Stewardship Agreement Easement (Marion County, T59N, R08W, Section 25), as seen in Figure 2. This perpetual easement was purchased by the Department in 1996 as part of a Stream Stewardship Agreement. The agreement compensated landowners to maintain the existing condition of a wooded riparian corridor along the watercourse for the purpose of sustaining fish, wildlife, forest and riparian values, as described in the enclosed Stream Stewardship Agreement Easement. A change of condition, such as removal of riparian vegetation, would violate the restrictions contained in the easement. At a minimum, a change of condition of this parcel would require repayment of the purchase price plus interest for the affected portion of the easement parcel.

An estimated 0.80 acres of the Bevill easement would be impacted by proposed route segment A1. The proposed route A1 would bisect the easement into two unconnected

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portions. Short term impacts could include vegetation conversion from riparian corridor to shrubs and grasses, as well as soil compaction. Similar to the impacts on the Bringer Easement, long term impacts of this conversion on the Bevill easement would likely result in a diminished riparian function.

CONCLUSION

In consideration of the Department's responsibility to manage fish, wildlife, and forest resources held in the public trust, the least environmentally damaging route segment would be a modified form of route A2 that would completely avoid the Bringer Stream Stewardship Trust Fund Conservation Easement.

Thank you for the opportunity to provide comments. Note that this response does not preclude other comments the Department may provide under the Clean Water Act permitting process or the National Environmental Policy Act, if applicable. If you have any questions about these comments, please contact me at (573) 522-4115, Extension 3159 or by email at jennifer.campbell-allison@mdc.mo.gov.

Sincerely,



JENNIFER CAMPBELL-ALLISON
POLICY COORDINATOR

JCA/ak

Enclosures

c: Chris Wood, Burns & McDonnell
Peggy Ladd, Ameren UE
Kenny Lynn, Ameren UE
Brian Holderness, Ameren UE
Shauna Marquart, U.S. Fish and Wildlife Service
Marvin and Loretta Bringer, Bringer Stream Stewardship Trust Fund landowner
Edward and Betty Bevill, Bevill Stream Stewardship Agreement landowner
Chris Vitello, Missouri Conservation Heritage Foundation



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Attention: Jennifer Berry
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Kansas City, MO 64114

RE: MARK TWAIN TRANSMISSION PROJECT - ENVIRONMENTAL COMMENTS

Ms. Berry:

This letter provides a supplemental response to Ameren's request for environmental concerns related to the Mark Twain Transmission Project and is a part of the Department of Conservation (Department) response provided in a letter to you dated October 16, 2014.

As indicated previously, the Department is the state agency responsible for forest, fish and wildlife resources in Missouri. As such, the Department participates in project review when a project might affect those resources. Department comments are for your consideration to avoid, minimize and mitigate project impacts in Missouri.

PROJECT DESCRIPTION

The proposed transmission line would total approximately 100 miles from Palmyra to Kirksville to the Iowa border. Version 10 of the route network (provided by Ameren UE staff) includes the counties of Schuyler, Adair, Knox, Lewis, Shelby and Marion. Transmission line support towers would have dimensions of up to 130 feet in height with a cleared right-of-way of approximately 150 feet.

CONTIGUOUS FOREST BLOCKS

A number of the alignments proposed as of the October 2014 Open House will result in fragmentation of woodland habitat, including forest blocks greater than 150 acres. The northerly route from Maywood to Zachary (comprised of segments A2, A6, A9, A14) fragments the fewest forest blocks.

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Large forest blocks provide important habitat for wildlife. These habitat types are rare in present day northern Missouri and are utilized by neotropical migrant birds, currently in decline, as well as both game and non-game wildlife. Some neotropical migrant bird species are forest interior species and fragmentation of timber blocks leaves them vulnerable to brood parasitism from the brown-headed cowbird and predation. While edge habitat benefits habitat generalist species of birds, specialized species that require forest/woodland interiors are vulnerable to fragmentation caused by forest/woodland disturbances and would likely decline from a transmission line transecting the forest/woodland block.

Large forest blocks are associated with diverse wildlife species. For example, Henry Sever Lake Conservation Area is approximately 300 acres of forest and woodland habitat that supports 29 neotropical migrant bird species. Large timber blocks on the proposed routes range from 173 to 1,222 acres and likely include the same bird species, as well as additional species.

Forest blocks that would be impacted by the remaining proposed route segments on the Maywood to Zachary route are as follows:

- A2 would fragment a forest block approximately 300 acres in size at T60N, R8W Section 36 and T60N, R7W, Sections 31 and 32.
 - Two *Myotis sodalis* (Indiana bat) records are located within six (6) miles of where the A2 route segment and the subject forest block intersect.
- A3 would fragment the following forest blocks:
 - Approximately 1,222 acres: T59N, R9W, Sections 9, 10, 11, 14, 15, 22, and 23;
 - One (1) *Myotis sodalis* record within five (5) miles.
 - Approximately 181 acres: T60N, R12W, Sections 23-24;
 - Approximately 206 acres: T59N, R11W, Section 13 and T59N, R10W, Section 18;
 - Approximately 440 acres: T60N, R13W, Sections 1 and 2; and T61N, R13W, Section 36; and T61N, R12W, Section 31.
- The eastern portion of A7 includes a large forest block. According to Department records, this area includes a known Blue Heron rookery. The landowner reports that this rookery is still active.
- A13 would fragment the following forest blocks:
 - Approximately 293 acres: T61N, R14W, Sections 22 and 23;
 - Approximately 223 acres: T61N, R14W, Section 24.

Forest blocks that would be impacted by the remaining proposed route segments on the Zachary to State Line route are as follows:

- B9 would fragment a forest block (approximately 652 acres) at T65N, 15W, Section 12 and T65N, 14W, Sections 7,8 and 18.
 - Eight (8) *Myotis sodalis* and one (1) *Lasiorycteris noctivagans* (silver-haired bat) records are known within four (4) miles of this forest block.

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- B13 would fragment a forest block (approximately 270 acres) at T66N, R15W, Sections 31 and 32.
 - Five (5) *Myotis sodalis* and one (1) *Lasionycteris noctivagans* (silver-haired bat) records are known within 3 miles of this forest block.
 - Two known roosting sites are located 1.4 miles from this forest block, and are located within 0.17 miles of the proposed B13 route segment.
 - This block is adjacent to another 204 acre block at T66N, 15W, Section 31, separated by a farm road. These two blocks effectively form a 474 acre block, and it is located within four (4) miles of several other large timber blocks.

You or your client may need to consult with the U.S. Fish and Wildlife Service (573-234-2132) regarding Endangered Species Act and Migratory Bird Treaty Act compliance.

EXISTING EASEMENTS

Please refer to the earlier letter to you, dated October 16, 2014, regarding impacts to the Bringer and Bevill easements that would be impacted by route segments A2 and A1, respectively.

The South Fabius River is an important river in the northeastern portion of Missouri. Its ecological integrity and diverse aquatic community are reflective of the relatively wide and contiguous riparian woodlands and stable stream channels found in the watershed. As currently proposed, segment A2 would impact 3.95 acres of the Bringer easement, or segment A1 would impact 0.8 acres of the Bevill easement. Impacts of the proposed transmission line route segments on these easements will include riparian woodland fragmentation and an increased risk of stream channel instability.

An alternative to crossing one of these easements should include avoidance of the easement by routing around the parcel. Shapefiles of these easements were provided to Chris Wood by email on October 22, 2014.

If it is not possible to avoid the subject easement, impacts should be minimized by crossing perpendicular to the stream to reduce the area of land disturbed by right-of-way clearing.

As previously stated, a modified form of route segment A2 would appear to be the least environmentally damaging to forest, fish and wildlife resources and the Department's interest in these existing stream easements.

CONCLUSION

As presented in October 2014, the routes from Maywood to Zachary and the routes from Zachary to State Line appear to create potential impacts to forest, fish and wildlife resources in Missouri. The northerly route from Maywood to Zachary comprised of segments A2, A6, A9, A14 appears to create the fewest impacts to these resources. Alternatives and modifications to the remaining proposed route segments could focus on

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first avoiding, then minimizing, and finally mitigating impacts to forest, fish and wildlife resources.

Avoidance measures could include upgrade of existing transmission lines rather than clearing a new right of way.

Minimization measures could include paralleling the new line to existing transmission lines to avoid new fragmentation events and minimize the total number of cleared acres for the project. Another minimization measure could consider routing around forest and woodland blocks of greater than 150 acres, rather than bisecting these forest blocks.

Avoidance and minimization of impacts to the Bringer or Bevill easements are strongly encouraged. Avoidance could include routing around the easement. If avoidance were not possible, minimization could include crossing at a different location within the easement or crossing perpendicular to the waterway.

If it would be helpful, the Department would be willing to meet with Ameren, its consultant, and the U.S. Fish and Wildlife Service to discuss Department comments provided for this project.

Thank you for the opportunity to provide comments. Note that this response does not preclude other comments the Department may provide under the Clean Water Act permitting process or the National Environmental Policy Act, if applicable. If you have any questions about these comments, please contact me at (573) 522-4115, Extension 3159 or by email at jennifer.campbell-allison@mdc.mo.gov.

Sincerely,



JENNIFER CAMPBELL-ALLISON
POLICY COORDINATOR

JCA/pb

Enclosures

c: Chris Wood, Burns & McDonnell
Peggy Ladd, Ameren UE
Kenny Lynn, Ameren UE
Brian Holderness, Ameren UE
Shauna Marquart, U.S. Fish and Wildlife Service