



Thank you,  
**Ashley Pilakowski**  
NEPA Specialist  
NEPA Program



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400 West Summit Hill Drive, Knoxville, TN 37902

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# Cumberland Fossil Plant Retirement

## Stewart County, Tennessee

Following the publication of the 2019 IRP, the Tennessee Valley Authority (TVA) began conducting end-of-life evaluations of our coal fleet to inform long-term planning. The aging coal fleet is experiencing deterioration of material condition and performance challenges. The performance challenges are projected to increase because of the coal fleet's advancing age and the difficulty of adapting the fleet's generation within the changing generation profile.

Due to the reasons listed above, TVA has prepared a Draft Environmental Impact Statement (EIS) to assess the impacts associated with the proposed retirement and demolition of the two coal-fired units at the Cumberland Fossil Plant (CUF) and the construction and operation of facilities to replace part of the retired generation. To recover the generation capacity lost from retirement of one CUF unit, TVA is proposing the addition of approximately 1,450 MW of replacement generation. Replacement generation for the second retired CUF unit would likely consist of some combination of gas, solar, and storage, but the planning for that generation can be deferred to allow more time to assess the specific types and locations of that generation. Additional tiered NEPA analysis will be completed as these future generation needs are identified.

TVA conducted scoping on this project and requested public comments on the scope of the EIS, alternatives being considered, and environmental issues that should be addressed as a part of this EIS. The public scoping period ran from May 11, 2021 to June 10, 2021. Comments were received by mail, email, and electronic comment forms. A copy of the comments received can be found in the scoping report linked in the "Related Documents" section below.

TVA is considering three action alternatives in the Draft EIS: (A) Retirement of CUF and construction and operation of a Combined Cycle Combustion Turbine (CC) Gas Plant at the same site; (B) Retirement of CUF and construction and operation of Simple Cycle Combustion Turbine (CT) Gas Plants at alternate locations; (C) Retirement of CUF and construction and operation of Solar and Storage Facilities, primarily at alternate locations. Related actions, such as the natural gas pipeline and transmission upgrades associated with Alternatives A and B, will also be considered in this assessment.

In addition, the construction of a potential natural gas pipeline, would be subject to Federal Energy Regulatory Commission (FERC) jurisdiction and additional review will be undertaken by FERC in accordance with its own NEPA procedures. To find more information about the potential pipeline related to TVA's Alternative A, please click [here](#).

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## Public Involvement

**Public comment is open from April 29, 2022 – June 13, 2022.**

TVA is collecting comments from the public between April 29 and June 13, 2022 and we want your feedback and comments on issues, questions and concerns related the proposed project. You may submit comments [online](#), by [email](#), or by mail to the address below. To be considered, comments must be submitted or postmarked no later than **June 13, 2022**. Please note that any comments received, including names and addresses, will become part of the project administrative record and will be available for public inspection. **Due to COVID-19, electronic submission of comments is encouraged to ensure timely review and consideration.**

### Public Open Houses

TVA plans to host the following events:

- A virtual public open house on **May 12, 2022**, from 6:30 – 8:00 p.m. CT. [Please register to attend](#). You will receive an email with your unique link to join on May 5, 2022.
- In-person public open house on **May 17, 2022**, from 6:30 -8:00 p.m. CT., at Stewart County Visitors Center, 17 Visitor Center Lane, Dover, TN 37058

## Virtual Meeting Room

Throughout the NEPA process, TVA has a virtual meeting room available with project information. [Enter the virtual meeting room.](#)

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## Related Documents

[Scoping Report](#)

[Scoping Report Appendices](#)

[Notice of Intent](#)

[Frequently Asked Questions](#)

[Draft Environmental Impact Statement Appendices](#)

[Draft Environmental Impact Statement](#)

[Cumberland Draft EIS Overview](#)

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## Contact

More information on this environmental review can be obtained from:

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### ISSUES / SUGGESTIONS:

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[FREEDOM OF INFORMATION ACT](#)

[LEGAL NOTICES](#)





**United States Department of the Interior**  
**OFFICE OF THE SECRETARY**  
Office of Environmental Policy and Compliance

Number	ER22/0187	OEPC File Number: PEP/ER 4111	
State:	TN		
Region:	Interior Region 2		
Addresses:	FWS,NPS,OSMRE,USGS		
From:	Team Leader, Natural Resources Management, Office of Environmental Policy and Compliance /s/		
Project Title:	Draft Environmental Impact Statement by the Tennessee Valley Authority for the Cumberland Fossil Plant Retirement - Stewart County, Tennessee		
Project Action Type:	<a href="#">DEIS (Draft Environmental Impact Statement)</a>		
OEPC HQ Staff Contact:	cheryl_kelly@ios.doi.gov (202-208-7565)		
REOs Contact:			
Agency:	TVA		
Sequence:	REO Signs		
Bureau Comments Due to REO by:	05/31/22		
Send Comments to REO:	Joyce_St Stanley@ios.doi.gov		
DOI Comment Letter Due by:	06/13/22		
REO Send Letter to:	Ashley Pilakowski, NEPA Specialist, aapilakowski@tva.gov		
Federal Register URL(s):	<a href="https://www.govinfo.gov/content/pkg/FR-2022-04-29/pdf/2022-09222.pdf">https://www.govinfo.gov/content/pkg/FR-2022-04-29/pdf/2022-09222.pdf</a>		
Project URL(s):	<a href="#">Link</a>		
Other URL(s):			
Related ER Number(s):	21/0178 (NOI)	Docket ID Number:	
Other Information / Special Instructions / Comments:			
Attachment Type	Description	File Name	Date
Transmittal	Summary - 05/02/22	<a href="#">ER22-0187Summary220502052550d.pdf</a>	05/02/2022

## Distribution List

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- REO 1: Joyce\_Stanley@ios.doi.gov

## Sykes, Robbie

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**From:** ERs, FWS HQ  
**Sent:** Monday, May 2, 2022 4:42 PM  
**To:** Tennessee ES, FWS; Sykes, Robbie; Willis, Christine  
**Cc:** Thatcher, Ben  
**Subject:** Fw: ENVIRONMENTAL REVIEW (ER) NEW POSTING NOTIFICATION: ER22/0187 - Draft Environmental Impact Statement by the Tennessee Valley Authority for the Cumberland Fossil Plant Retirement - Stewart County, Tennessee  
**Attachments:** 20220502\_ER 22-0187\_summary from OEPC.pdf

**Project Title:** Draft Environmental Impact Statement by the Tennessee Valley Authority for the Cumberland Fossil Plant Retirement - Stewart County, Tennessee

### FWS Directions:

**FO** - Comments due to REO joyce\_stanley@ios.doi.gov by 5/31/22

Provide a copy of comments to HQ Branch of Environmental Review ([FWS\\_HQ\\_ERs@fws.gov](mailto:FWS_HQ_ERs@fws.gov)).

Thank you,

HQ Branch of Environmental Review\*

\*We check this inbox regularly. If you have time-sensitive questions, please contact:

Frankie Green

Fish and Wildlife Biologist

U.S. Fish and Wildlife Service

[Branch of Environmental Review](#)

5275 Leesburg Pike

Falls Church, VA 22041-3803

(703) 358-1884

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**From:** oepchq@ios.doi.gov <oepchq@ios.doi.gov>

**Sent:** Monday, May 2, 2022 7:25 AM

**To:** Alam, Shawn K <Shawn\_Alam@ios.doi.gov>; Braegelmann, Carol <carol\_braegelmann@ios.doi.gov>; Kelly, Cheryl L <cheryl\_kelly@ios.doi.gov>; Voluck, Lauren B <lauren\_voluck@ios.doi.gov>; Hathaway, Ryan S <ryan\_hathaway@ios.doi.gov>; ERs, FWS HQ <FWS\_HQ\_ERs@fws.gov>; Runkel, Roxanne <Roxanne\_Runkel@nps.gov>; Stedeford, Melissa <Melissa\_Stedeford@nps.gov>; Hamlett, Stephanie R <shamlett@osmre.gov>; Janowicz, Jon A <jjanowicz@usgs.gov>; Gordon, Alison D <agordon@usgs.gov>; oepchq@ios.doi.gov <oepchq@ios.doi.gov>; Stanley, Joyce A <Joyce\_Stanley@ios.doi.gov>; Stanley, Joyce A <Joyce\_Stanley@ios.doi.gov>

**Subject:** ENVIRONMENTAL REVIEW (ER) NEW POSTING NOTIFICATION: ER22/0187 - Draft Environmental Impact Statement by the Tennessee Valley Authority for the Cumberland Fossil Plant Retirement - Stewart County, Tennessee

This e-mail alerts you to a Environmental Review (ER) request from the Office of Environmental Policy and Compliance (OEPC). This ER can be accessed [here](#).

To access electronic ERs visit the Environmental Assignments website: <https://ecl.doi.gov/ERs.cfm>. For assistance, please contact the Environmental Review Team at 202-208-5464.

Comments due to REO by: 05/31/22





400 West Summit Hill Drive, Knoxville, Tennessee 37902

May 3, 2022

Mr. Daniel Elbert  
U.S. Fish and Wildlife Service  
Tennessee Field Office  
446 Neal Street  
Cookeville, Tennessee 38501

Dear Mr. Elbert:

TENNESSEE VALLEY AUTHORITY (TVA) – CUMBERLAND FOSSIL PLANT (CUF)  
RETIREMENT– REQUEST FOR CONCURRENCE – PROJECT CODES 2022-0036113 AND  
2022-0036130

In order to address the performance challenges that come with an aging Coal Fleet, TVA is proposing to retire and demolish CUF. To replace the lost generation capacity from one unit and to adapt to a changing generation portfolio, TVA is considering constructing and operating a Combined Cycle gas (CC) plant on the existing CUF Reservation. TVA also proposes to construct a new switchyard at the CC plant site, modify existing transmission connections on the CC plant site, and install fiber-optic ground wire along approximately six miles of existing TVA transmission line (TL). More details about the scope and potential impacts of this project and the other alternatives considered can be found in the draft Environmental Impact Statement (EIS) available online <https://www.tva.com/environment/environmental-stewardship/environmental-reviews/nepa-detail/cumberland-fossil-plant-retirement>. In the Draft EIS, TVA has identified the CC Plant alternative as its preferred alternative and is initiating the Section 7 consultation for that alternative. A more detailed and updated map of the “action area” for TVA’s preferred alternative is attached (AltA\_CC\_Impacts\_Demo.pdf).

TVA is initiating this consultation for its proposed actions at the existing CUF plant site and the proposed transmission upgrades. Comprehensive field surveys have been conducted on the CUF Site, while desktop reviews have been performed for the areas in which transmission upgrades would be conducted. Since the entire scope of work has not yet been finalized for the transmission upgrades, TVA is taking a conservative approach that assumes the maximum degree of ground disturbance for this type of work. A review of the TVA Regional Natural Heritage database and the U.S. Fish and Wildlife Service Information for Planning and Consultation (IPaC) website identified 19 species listed as federally endangered, threatened, candidate for listing under the Endangered Species Act (ESA), or delisted and monitored under the Act, that have the potential to occur within the counties in which TVA has proposed actions; Cheatham, Davidson, and Stewart Counties, Tennessee. These species include five plants (Braun’s rockcress, leafy prairie-clover, Price’s potato-bean, Pyne’s ground plum, and Short’s bladderpod), seven mussels (Cumberland combshell, orangefoot pimpleback, pink mucket, rabbitsfoot, ring pink, tan riffleshell, and yellow-blossom pearlymussel), one crayfish (Nashville crayfish), one bird (bald eagle), three mammals (gray bat, Indiana bat, and northern long-eared

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bat (NLEB)) and one insect (monarch butterfly) that have the potential to occur within Cheatham, Davidson, and Stewart Counties, based on historic range, proximity to known occurrence records, biological characteristics, and/or physiographic characteristics. Additionally, the alligator snapping turtle, a proposed threatened species, has the potential to occur in Davidson and Stewart counties. No federally designated critical habitats for these species are present within or adjacent to the action areas; therefore, no adverse modification of critical habitats would occur.

A comprehensive site survey was conducted by TVA biologists from June – August 2021 to determine whether suitable habitat for federally listed species occurs on the CUF reservation. Approximately 922 ft of perennial stream and 6,317 ft of ephemeral stream are contained within the proposed CC plant site. Potential impacts to the intermittent stream due to re-routing or piping would include loss of instream habitat, increased erosion and siltation, and alteration of stream banks and stream bottoms by heavy equipment. Six wetland complexes totaling approximately 29.4 acres fall within the boundaries of the proposed CC plant site, with an additional 49.7 acres of wetlands falling within the proposed transmission line corridor. During the design of the plant, TVA would avoid and minimize impacts to wetlands as practicable. The proposed CC Plant would have an air-cooled system and would not require water withdrawals from the Cumberland River or other surface waters for plant cooling purposes. Service water would be obtained from potable water sources and not from surface waters on site. Minor discharges from the operation of the proposed CC Plant would require updates to the existing site-specific NPDES permit and would comply with all applicable regulations and permit conditions.

Construction of new TLs on the CUF reservation have the potential to affect surface waters and wetlands. The new TLs will be sited to avoid surface waters and wetlands, to the extent practicable, and any surface water and wetland impacts would be permitted as required. Wells Creek would be spanned by the new, short transmission lines connecting the proposed CC plant to the existing transmission substation and switchyard. Where practicable, structures would not be placed within surface waters or wetlands, and impacts would be minimized by crossing surface waters at a perpendicular angle. Where necessary, wetlands may be converted from forested to scrub-shrub or herbaceous to maintain the transmission line corridor. Approximately 30.5 acres of wetlands were classified as forested during wetlands surveys in 2021, which may be permanently converted to scrub-shrub or emergent wetlands if necessary to assure the safe and reliable operation of the transmission facilities. Stumps, root wads, and root systems of trees in wetland areas cleared for the transmission line would be left in place. With the use of proper best management practices (BMPs), Clean Water Act (CWA) Sections 404 and 401 permitting, and compliance with all federal, state, and local regulations, surface water and wetland impacts are expected to be minor.

TVA's proposed action also includes improvements to the existing barge unloading facility to facilitate equipment/materials delivery. Improvements would consist of grading and creation of dirt/rock ramping to the nose of the barge as well as potential concrete resurfacing and widening. Minor, temporary impacts to the Cumberland River would occur when making upgrades to the barge facilities. Applicable U.S. Army Corps of Engineers Section 404 and

Section 10 permits and TDEC Aquatic Resource Alteration Permit (401 Water Quality Certification) would be obtained for upgrades to the barge facilities and for necessary stream alterations, and the terms and conditions of these permits could require mitigation from the proposed activities. Erosion and sediment control BMPs would be implemented as a condition of an NDPES General Construction Storm Water permit.

Botanical surveys conducted on the CUF reservation in August 2021 did not reveal the presence of any Price's potato bean or any suitable habitat that would support this species. ***TVA has determined that the proposed actions on the CUF reservation would not impact Price's potato-bean.*** The federally listed plants Braun's rockcress, leafy prairie-clover, Price's potato-bean, Pyne's ground plum, and Short's bladderpod have been previously reported from Cheatham and Davidson counties, Tennessee, where the transmission upgrades would be located. However, the TVA Regional Natural Heritage database indicates that none of these species have been previously reported from within five miles of the right-of-way (ROW) where work would occur. A desktop review of the transmission line ROW and surrounding vicinity indicates that the specialized habitat required by these plant species is unlikely to occur in the proposed work areas. In addition, topographic maps and aerial photos indicate that no river bluffs or cedar glades occur within the potential action area. For this reason, ***TVA has determined that the proposed transmission upgrades are not likely to adversely affect (NLAA) Braun's rockcress, leafy prairie-clover, Price's potato-bean, Pyne's ground plum, and Short's bladderpod.*** Given that the full scope of the transmission upgrades has not been finalized, TVA cannot perform field surveys for federally listed plants at this time. However, TVA does commit to conducting comprehensive surveys of the proposed work areas once the scope is finalized. In the unlikely event that TVA surveys do locate occupied habitat for federally listed plants, TVA would re-initiate Section 7 consultation with the Service.

The pink mucket and rabbitsfoot both occupy large rivers with sand and gravel substrate. Historical records are known from Stewart County or within a ten-digit Hydrologic Unit Code (HUC) of the proposed actions at CUF. A mussel survey in 2011 in the thermally affected area

of the Cumberland River near CUF yielded no state- or federally protected mussel species. River substrates were categorized as degraded/sub-optimal in the study area with clay as the dominant substrate overlain by silt. The protected mussel species have not been collected in the area in decades and TVA has concluded that they no longer occur in the vicinity of CUF. ***Pink mucket and rabbitsfoot would not be affected by the proposed actions.***

Extirpated or historical records of tan riffleshell, yellow-blossom pearlymussel, and Cumberland combshell are known from Cheatham and Davidson counties. The IPaC query also identified the orangefoot pimpleback, pink mucket, and ring pink mussels as potentially being impacted by the proposed transmission upgrades in Cheatham and Davidson counties. The only potential habitat for all these mussel species in the area of proposed transmission upgrades is the Harpeth River. However, no impacts to the Harpeth River are anticipated in association with the proposed transmission upgrades. In addition, the Harpeth River does not provide suitable habitat for tan riffleshell, yellow-blossom pearlymussel, Cumberland combshell, orangefoot

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pimpleback, pink mucket, and ring pink due to heavy degradation experienced by this river in this region. ***Tan riffleshell, yellow-blossom pearlymussel, Cumberland combshell, orangefoot pimpleback, pink mucket, and ring pink would not be impacted by the proposed actions.***

Nashville crayfish does not occur outside of the Mill Creek watershed. Proposed actions do not fall within this watershed. ***Nashville crayfish would not be impacted by the proposed actions.***

A bald eagle nest was active from 2005-2009 near CUF, approximately 0.26 mile west of the CUF settling ponds between two TVA TL ROWs, suggesting habitat in this area is suitable for bald eagle nesting. No bald eagles or nests were observed during the 2021 field surveys despite a thorough search of the previous nesting area. Anecdotal reports from employees at the CUF plant indicate that bald eagles have been sighted flying over and near the project area foraging over the Cumberland River. BMPs would be implemented along Wells Creek and the Cumberland River that help preserve foraging habitats. ***Bald eagle would not be impacted by the proposed actions.***

Several hibernacula for gray bat and Indiana bat are known within ten miles of CUF, the closest of which is approximately 6.7 miles away (Coleman Cave). A hibernacula for northern long-eared bat is known approximately 1.6 miles away from CUF (Richardson Cave). One individual was observed in this cave in 2013. In 2011, prior to site selection for the landfill, mist net surveys performed by Environmental Solutions and Innovations, Inc. (ESI), around the proposed landfill resulted in captures of big brown bat, eastern red bat, evening bat, southeastern bat, and tricolored bat on the CUF plant site near Old Scott Road. A male northern long-eared bat was captured during that same survey effort 0.83 miles from the CUF plant property.

Phase 1 Bat Habitat Assessments were conducted at the CUF using the 2020 Range-Wide Indiana Bat Survey Guidelines for determining presence/absence of Indiana bat and NLEB habitat. No caves or mines were observed on the CUF plant property. No evidence of roosting bats was observed on or under the bridge closest to the proposed demolition. Buildings proposed for demolition may offer suitable roosting habitat if left abandoned for several years; however, none have roosting bats at this time. Forest within the proposed CC plant site and new transmission construction areas consists primarily of fence rows largely comprised of dense, older, hackberry and cedar trees. Some trees have suitable roosting characteristics (exfoliating bark, cracks, or crevices). All of these tree lines were deemed moderately suitable summer roosting habitat for Indiana bat and northern long-eared bat. A small area of highly suitable summer roosting habitat may also be removed. Quality of habitat was determined by diversity of forest structure, size of trees, clutter in the understory, and presence of snags and other suitable roosting trees. Suitable foraging habitat for gray bat, Indiana bat, and northern long-eared bat exists over bodies of water on the industrial portion of plant property, over wetlands and streams in the undeveloped areas, and over Wells Creek and the Cumberland River. Additional foraging habitat for Indiana bat and northern long-eared bat exists over, along,

and through forested areas and fence rows. Up to 35.36 acres of moderate to high quality summer roosting habitat would be removed on the CUF reservation as a result of TVA's proposed activities. Tree removal would occur in winter (November 15 – March 31) to avoid direct impacts to federally listed tree roosting bats.

Prior to demolition, internal survey of the buildings proposed for demolition would occur to ensure no colonies of bats have been established while buildings are inactive. Should bats be observed, avoidance and minimization measures (such as seasonal restrictions) would be put in place and the appropriate state and federal agencies (USFWS, TWRA) would be contacted to ensure compliance.

Proposed transmission upgrades would occur in Cheatham and Davidson counties. Gray bats and NLEB are known from Cheatham County. The closest known gray bat record is approximately 13.0 miles away from the proposed transmission upgrades. The closest known northern long-eared bat record is a hibernacula in Davidson County, approximately 6.5 miles away from the transmission line upgrades. Indiana bats are not known from either Cheatham or Davidson counties. The closest known record of Indiana bat to the transmission upgrades is a hibernacula in Montgomery County approximately 28.0 miles away.

Nine caves are known within three miles of the transmission upgrades. The closest of these is approximately 0.31 miles away. No federally listed bat species are known from any of these caves. A desktop review of the transmission line ROW and surrounding vicinity indicates that suitable summer roosting habitat for Indiana bat and NLEB likely exists along ROW associated with the transmission upgrades. Should existing access roads need to be upgraded or new access roads constructed, a conservative, worst-case estimate indicates that up to three acres of suitable summer roosting bat habitat could be removed for this portion of project work. Foraging habitat and sources of drinking water for gray bat, Indiana bat, and northern long-eared bat likely exist in rivers, streams, and potentially wetlands along the ROW with proposed transmission upgrades. TVA will conduct comprehensive field surveys of the proposed transmission upgrades and any associated access roads once the full scope of the transmission upgrades has been finalized. Should any previously unknown caves or other documented roosting sites be identified during field surveys TVA would reinstate Section 7 consultation.

The following avoidance and minimization measures would be implemented during transmission upgrades to minimize affects to federally listed bat species:

- Best management practices would be put in place around all water bodies to minimize impacts to hydrology and water quality.
- Suitable summer roosting habitat for Indiana bat and northern long-eared bat would be removed between October 15 and March 15 when bats are not likely to be roosting out on the landscape.

- Drilling or blasting within a 0.5-mile radius of documented cave would be conducted in a manner that would not compromise the structural integrity or alter the karst hydrology of the cave.

Several activities associated with this project (including tree removal, building demolition, and drilling) were addressed in TVA's programmatic consultation with the U.S. Fish and Wildlife Service on routine actions and federally listed bats in accordance with Endangered Species Act Section 7(a)(2), completed in April 2018. For those activities with potential to affect bats, TVA committed to implement specific conservation measures when impacts to federally listed bat species are expected. Relevant conservation measures to this project are listed in the bat strategy form and would be implemented as part of the project. ***Proposed actions may affect and are likely to adversely affect (LAA) Indiana bat and northern long-eared bat. Approximately 38.36 acres of "Take" for suitable bat habitat tree removal during the winter season will be used from TVA's programmatic consultation with USFWS in association with this project. (See attached Notification\_CUF\_EIS\_PwrPlants\_TVA-Bat-Strategy\_04.04.2022) Proposed action may affect but are not likely to adversely affect (NLAA) gray bat.***

While there are no Section 7 requirements for monarch butterfly as a candidate species, it is identified in IPaC as a species that could occur within the Project Site. Monarch butterflies were not noted during field surveys. The majority of the proposed CC plant site is comprised of disturbed fields with common species including Johnson grass, sericea lespedeza, and other common native and non-native herbaceous species. Areas with proposed transmission construction and upgrades contain existing TVA ROWs which provide a wider variety of herbaceous species, several of which provide suitable foraging habitat for monarchs. Milkweed were not a dominant species observed or recorded on the CUF. Existing ROWs would not be impacted by proposed actions except at discrete locations where new structures may be placed. Forest conversion to herbaceous habitats for new transmission ROWs would be seeded with native grasses and/or noninvasive vegetation which would provide more flowering plants than previously occurred in these areas. ***Proposed actions would not jeopardize the continued existence of the monarch butterfly.***

There is potential for foraging habitat for the alligator snapping turtle to be present in the Cumberland River within the demolition boundary; however, no nesting habitat is likely to fall within this disturbance area. Potentially suitable foraging and nesting habitat in and around Wells Creek also exists. Impacts to surface waters and associated shorelines at the CUF would be minimized by avoidance measures and BMPs described above. No suitable habitat for alligator snapping turtle exists near the proposed transmission upgrades. ***Proposed actions would not jeopardize the continued existence of the alligator snapping turtle.***

In addition to TVA's proposed work on the CUF reservation, the new CC plant would be associated with the construction of approximately 32 miles of a new single, 30-inch diameter natural gas pipeline lateral and associated gas system infrastructure. The pipeline would be designed and developed by Tennessee Gas Pipeline Company, LLC (TGP) and is currently proposed to primarily follow an existing TVA transmission line ROW in Dickson, Houston, and

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May 3, 2022

Stewart counties, Tennessee. TGP has submitted a request to use the pre-filing procedures to the Federal Energy Regulatory Commission (FERC) under Docket No. PF22-2-000. On February 17, 2022, TGP, the designated federal representative for FERC, consulted with the US Fish and Wildlife Service under Section 7 of the ESA on actions related to the proposed pipeline and infrastructure. The Service responded to FERC's notice of scoping on March 22, 2022 (FWS #2022-0011291) with concurrence on TGP's ESA Section 7 determinations for the pipeline project. Detailed analysis of the proposed pipeline has been provided by TGP as part of the FERC pre-filing process. TGP's Environmental Report can be found under FERC's Docket No. PF22-2-000. Subject to the completion of FERC's environmental reviews for the pipeline and its issuance of a certificate for the pipeline project, construction of the pipeline is anticipated to begin in August 2024, and the pipeline is anticipated to be operational by September 2025. TVA has proposed to begin removing trees in winter of 2022/2023 and to commence construction of the new CC plant in summer 2023, pending the completion of its NEPA, ESA Section 7, and other environmental reviews for this proposal.

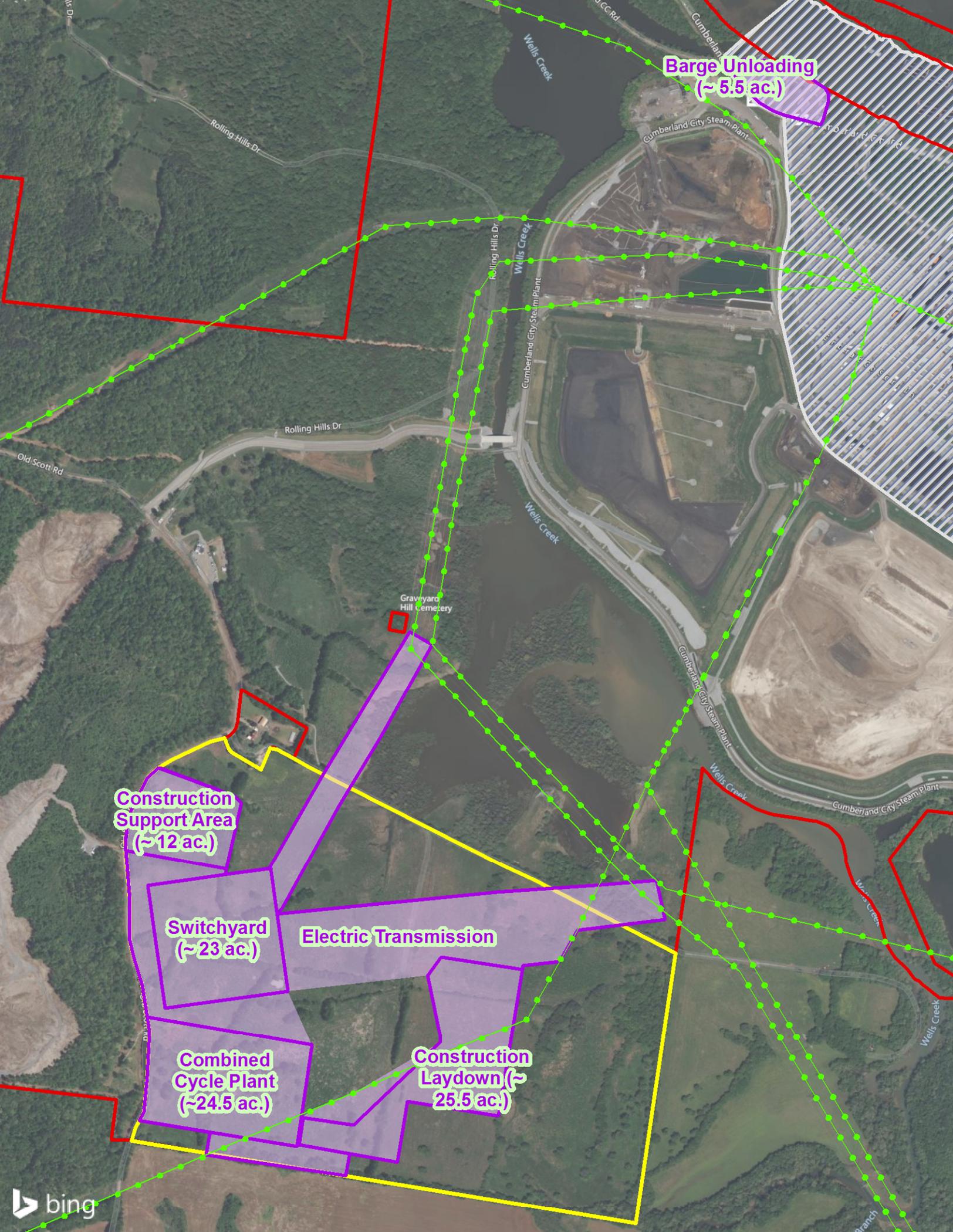
We respectfully request concurrence with TVA's "not likely to adversely affect" determinations for federally listed plants. We also respectfully request acknowledgement of our "no effect" findings and use of "Take" from our 2018 programmatic consultation with the Service regarding impacts of routine actions on federally listed bats. Should you have any questions or wish to discuss the proposed project in more detail, please contact Elizabeth Hamrick by email, [ecburton@tva.gov](mailto:ecburton@tva.gov).

Sincerely,



W. Douglas White  
Manager  
Biological Compliance

EBH:ABM  
Enclosures



**Barge Unloading**  
**(~ 5.5 ac.)**

**Construction Support Area**  
**(~12 ac.)**

**Switchyard**  
**(~23 ac.)**

**Electric Transmission**

**Combined Cycle Plant**  
**(~24.5 ac.)**

**Construction Laydown**  
**(~25.5 ac.)**

Cumberland City Steam Plant

Cumberland City Steam Plant

Cumberland City Steam Plant

Cumberland City Steam Plant

Rolling Hills Dr

Rolling Hills Dr

Old Scott Rd

Graveyard Hill Cemetery

Wells Creek

Wells Creek

Wells Creek

Wells Creek

Wells Creek

**Project Review Form - TVA Bat Strategy (06/2019)**

This form should **only** be completed if project includes activities in Tables 2 or 3 (STEP 2 below). This form is not required if project activities are limited to Table 1 (STEP 2) or otherwise determined to have no effect on federally listed bats. If so, include the following statement in your environmental compliance document (e.g., add as a comment in the project CEC): "Project activities limited to Bat Strategy Table 1 or otherwise determined to have no effect on federally listed bats. Bat Strategy Project Review Form NOT required." This form is to assist in determining required conservation measures per TVA's ESA Section 7 programmatic consultation for routine actions and federally listed bats.<sup>1</sup>

**Project Name:** Cumberland Retirement Environmental Impact Statement (EIS) **Date:** Apr 14, 2022  
**Contact(s):** Ashley Pilakowski/Emily Willard **CEC#:** 202113 **Project ID:** ESCS38806  
**Project Location (City, County, State):** Cumberland City, Stewart County, Tennessee

**Project Description:**

Retirement and Decommissioning, Deconstruction and Demolition of CUF, and proposed replacement generation of a CC gas plant at the CUF location.

**SECTION 1: PROJECT INFORMATION - ACTION AND ACTIVITIES**

**STEP 1) Select TVA Action. If none are applicable, contact environmental support staff, Environmental Project Lead, or Terrestrial Zoologist to discuss whether form (i.e., application of Bat Programmatic Consultation) is appropriate for project:**

- |   |   |
|---|---|
| <input type="checkbox"/> 1 Manage Biological Resources for Biodiversity and Public Use on TVA Reservoir Lands<br><input type="checkbox"/> 2 Protect Cultural Resources on TVA-Retained Land<br><input type="checkbox"/> 3 Manage Land Use and Disposal of TVA-Retained Land<br><input type="checkbox"/> 4 Manage Permitting under Section 26a of the TVA Act<br><input checked="" type="checkbox"/> 5 Operate, Maintain, Retire, Expand, Construct Power Plants | <input type="checkbox"/> 6 Maintain Existing Electric Transmission Assets<br><input type="checkbox"/> 7 Convey Property associated with Electric Transmission<br><input type="checkbox"/> 8 Expand or Construct New Electric Transmission Assets<br><input type="checkbox"/> 9 Promote Economic Development<br><input type="checkbox"/> 10 Promote Mid-Scale Solar Generation |
|---|---|

**STEP 2) Select all activities from Tables 1, 2, and 3 below that are included in the proposed project.**

TABLE 1. Activities with no effect to bats. Conservation measures & completion of bat strategy project review form NOT required.		
<input type="checkbox"/> 1. Loans and/or grant awards	<input type="checkbox"/> 8. Sale of TVA property	<input type="checkbox"/> 19. Site-specific enhancements in streams and reservoirs for aquatic animals
<input type="checkbox"/> 2. Purchase of property	<input type="checkbox"/> 9. Lease of TVA property	<input type="checkbox"/> 20. Nesting platforms
<input type="checkbox"/> 3. Purchase of equipment for industrial facilities	<input type="checkbox"/> 10. Deed modification associated with TVA rights or TVA property	<input type="checkbox"/> 41. Minor water-based structures (this does not include boat docks, boat slips or piers)
<input type="checkbox"/> 4. Environmental education	<input type="checkbox"/> 11. Abandonment of TVA retained rights	<input type="checkbox"/> 42. Internal renovation or internal expansion of an existing facility
<input type="checkbox"/> 5. Transfer of ROW easement and/or ROW equipment	<input type="checkbox"/> 12. Sufferance agreement	<input checked="" type="checkbox"/> 43. Replacement or removal of TL poles
<input type="checkbox"/> 6. Property and/or equipment transfer	<input type="checkbox"/> 13. Engineering or environmental planning or studies	<input type="checkbox"/> 44. Conductor and overhead ground wire installation and replacement
<input type="checkbox"/> 7. Easement on TVA property	<input type="checkbox"/> 14. Harbor limits delineation	<input type="checkbox"/> 49. Non-navigable houseboats

**TABLE 2. Activities not likely to adversely affect bats with implementation of conservation measures. Conservation measures and completion of bat strategy project review form REQUIRED; review of bat records in proximity to project NOT required.**

<input checked="" type="checkbox"/> 18. Erosion control, minor	<input type="checkbox"/> 57. Water intake - non-industrial	<input type="checkbox"/> 79. Swimming pools/associated equipment
<input type="checkbox"/> 24. Tree planting	<input type="checkbox"/> 58. Wastewater outfalls	<input type="checkbox"/> 81. Water intakes – industrial
<input type="checkbox"/> 30. Dredging and excavation; recessed harbor areas	<input type="checkbox"/> 59. Marine fueling facilities	<input checked="" type="checkbox"/> 84. On-site/off-site public utility relocation or construction or extension
<input type="checkbox"/> 39. Berm development	<input type="checkbox"/> 60. Commercial water-use facilities (e.g., marinas)	<input type="checkbox"/> 85. Playground equipment - land-based
<input type="checkbox"/> 40. Closed loop heat exchangers (heat pumps)	<input type="checkbox"/> 61. Septic fields	<input type="checkbox"/> 87. Aboveground storage tanks
<input type="checkbox"/> 45. Stream monitoring equipment - placement and use	<input type="checkbox"/> 66. Private, residential docks, piers, boathouses	<input type="checkbox"/> 88. Underground storage tanks
<input type="checkbox"/> 46. Floating boat slips within approved harbor limits	<input checked="" type="checkbox"/> 67. Siting of temporary office trailers	<input type="checkbox"/> 90. Pond closure
<input checked="" type="checkbox"/> 48. Laydown areas	<input type="checkbox"/> 68. Financing for speculative building construction	<input type="checkbox"/> 93. Standard License
<input type="checkbox"/> 50. Minor land based structures	<input type="checkbox"/> 72. Ferry landings/service operations	<input type="checkbox"/> 94. Special Use License
<input type="checkbox"/> 51. Signage installation	<input type="checkbox"/> 74. Recreational vehicle campsites	<input type="checkbox"/> 95. Recreation License
<input type="checkbox"/> 53. Mooring buoys or posts	<input checked="" type="checkbox"/> 75. Utility lines/light poles	<input type="checkbox"/> 96. Land Use Permit
<input type="checkbox"/> 56. Culverts	<input type="checkbox"/> 76. Concrete sidewalks	

**Table 3: Activities that may adversely affect federally listed bats. Conservation measures AND completion of bat strategy project review form REQUIRED; review of bat records in proximity of project REQUIRED by OSAR/Heritage eMap reviewer or Terrestrial Zoologist.**

<input type="checkbox"/> 15. Windshield and ground surveys for archaeological resources	<input checked="" type="checkbox"/> 34. Mechanical vegetation removal, includes trees or tree branches > 3 inches in diameter	<input type="checkbox"/> 69. Renovation of existing structures
<input checked="" type="checkbox"/> 16. Drilling	<input type="checkbox"/> 35. Stabilization (major erosion control)	<input type="checkbox"/> 70. Lock maintenance/ construction
<input checked="" type="checkbox"/> 17. Mechanical vegetation removal, does not include trees or branches > 3" in diameter (in Table 3 due to potential for woody burn piles)	<input checked="" type="checkbox"/> 36. Grading	<input type="checkbox"/> 71. Concrete dam modification
<input checked="" type="checkbox"/> 21. Herbicide use	<input type="checkbox"/> 37. Installation of soil improvements	<input type="checkbox"/> 73. Boat launching ramps
<input type="checkbox"/> 22. Grubbing	<input type="checkbox"/> 38. Drain installations for ponds	<input checked="" type="checkbox"/> 77. Construction or expansion of land-based buildings
<input type="checkbox"/> 23. Prescribed burns	<input type="checkbox"/> 47. Conduit installation	<input type="checkbox"/> 78. Wastewater treatment plants
<input type="checkbox"/> 25. Maintenance, improvement or construction of pedestrian or vehicular access corridors	<input type="checkbox"/> 52. Floating buildings	<input type="checkbox"/> 80. Barge fleeting areas
<input type="checkbox"/> 26. Maintenance/construction of access control measures	<input type="checkbox"/> 54. Maintenance of water control structures (dewatering units, spillways, levees)	<input type="checkbox"/> 82. Construction of dam/weirs/ levees
<input checked="" type="checkbox"/> 27. Restoration of sites following human use and abuse	<input type="checkbox"/> 55. Solar panels	<input type="checkbox"/> 83. Submarine pipeline, directional boring operations
<input checked="" type="checkbox"/> 28. Removal of debris (e.g., dump sites, hazardous material, unauthorized structures)	<input checked="" type="checkbox"/> 62. Blasting	<input type="checkbox"/> 86. Landfill construction
<input type="checkbox"/> 29. Acquisition and use of fill/borrow material	<input checked="" type="checkbox"/> 63. Foundation installation for transmission support	<input checked="" type="checkbox"/> 89. Structure demolition
<input checked="" type="checkbox"/> 31. Stream/wetland crossings	<input checked="" type="checkbox"/> 64. Installation of steel structure, overhead bus, equipment, etc.	<input type="checkbox"/> 91. Bridge replacement
<input type="checkbox"/> 32. Clean-up following storm damage	<input checked="" type="checkbox"/> 65. Pole and/or tower installation and/or extension	<input type="checkbox"/> 92. Return of archaeological remains to former burial sites
<input type="checkbox"/> 33. Removal of hazardous trees/tree branches		

**STEP 3) Project includes one or more activities in Table 3?**

**YES (Go to Step 4)**

**NO (Go to Step 13)**

**STEP 4) Answer questions a through e below (applies to projects with activities from Table 3 ONLY)**

- a) Will project involve continuous noise (i.e., ≥ 24 hrs) that is greater than 75 decibels measured on the A scale (e.g., loud machinery)?  **NO** (NV2 does not apply)  **YES** (NV2 applies, subject to records review)
- b) Will project involve entry into/survey of cave?  **NO** (HP1/HP2 do not apply)  **YES** (HP1/HP2 applies, subject to review of bat records)
- c) If conducting **prescribed burning (activity 23)**, estimated acreage:  and timeframe(s) below;  **N/A**

STATE	SWARMING	WINTER	NON-WINTER	PUP
GA, KY, TN	<input type="checkbox"/> Oct 15 - Nov 14	<input type="checkbox"/> Nov 15 - Mar 31	<input type="checkbox"/> Apr 1 - May 31, Aug 1 - Oct 14	<input type="checkbox"/> Jun 1 - Jul 31
VA	<input type="checkbox"/> Sep 16 - Nov 15	<input type="checkbox"/> Nov 16 - Apr 14	<input type="checkbox"/> Apr 15 - May 31, Aug 1 - Sept 15	<input type="checkbox"/> Jun 1 - Jul 31
AL	<input type="checkbox"/> Oct 15 - Nov 14	<input type="checkbox"/> Nov 15 - Mar 15	<input type="checkbox"/> Mar 16 - May 31, Aug 1 - Oct 14	<input type="checkbox"/> Jun 1 - Jul 31
NC	<input type="checkbox"/> Oct 15 - Nov 14	<input type="checkbox"/> Nov 15 - Apr 15	<input type="checkbox"/> Apr 16 - May 31, Aug 1 - Oct 14	<input type="checkbox"/> Jun 1 - Jul 31
MS	<input type="checkbox"/> Oct 1 - Nov 14	<input type="checkbox"/> Nov 15 - Apr 14	<input type="checkbox"/> Apr 15 - May 31, Aug 1 - Sept 30	<input type="checkbox"/> Jun 1 - Jul 31

- d) Will the project involve vegetation piling/burning?  **NO** (SSPC4/SHF7/SHF8 do not apply)  **YES** (SSPC4/SHF7/SHF8 applies, subject to review of bat records)

- e) If **tree removal (activity 33 or 34)**, estimated amount:   **ac**  **trees**  **N/A**

STATE	SWARMING	WINTER	NON-WINTER	PUP
GA, KY, TN	<input type="checkbox"/> Oct 15 - Nov 14	<input checked="" type="checkbox"/> Nov 15 - Mar 31	<input type="checkbox"/> Apr 1 - May 31, Aug 1 - Oct 14	<input type="checkbox"/> Jun 1 - Jul 31
VA	<input type="checkbox"/> Sep 16 - Nov 15	<input type="checkbox"/> Nov 16 - Apr 14	<input type="checkbox"/> Apr 15 - May 31, Aug 1 - Sept 15	<input type="checkbox"/> Jun 1 - Jul 31
AL	<input type="checkbox"/> Oct 15 - Nov 14	<input type="checkbox"/> Nov 15 - Mar 15	<input type="checkbox"/> Mar 16 - May 31, Aug 1 - Oct 14	<input type="checkbox"/> Jun 1 - Jul 31
NC	<input type="checkbox"/> Oct 15 - Nov 14	<input type="checkbox"/> Nov 15 - Apr 15	<input type="checkbox"/> Apr 16 - May 31, Aug 1 - Oct 14	<input type="checkbox"/> Jun 1 - Jul 31
MS	<input type="checkbox"/> Oct 1 - Nov 14	<input type="checkbox"/> Nov 15 - Apr 14	<input type="checkbox"/> Apr 15 - May 31, Aug 1 - Sept 30	<input type="checkbox"/> Jun 1 - Jul 31

- If warranted, does project have flexibility for bat surveys (May 15-Aug 15):  **MAYBE**  **YES**  **NO**

\*\*\* For **PROJECT LEADS** whose projects will be reviewed by a Heritage Reviewer (Natural Resources Organization only), **STOP HERE**. Click File/Save As, name form as "ProjectLead\_BatForm\_CEC-or-ProjectIDNo\_Date", and submit with project information. Otherwise continue to Step 5. \*\*\*

**SECTION 2: REVIEW OF BAT RECORDS (applies to projects with activities from Table 3 ONLY)**

**STEP 5) Review of bat/cave records conducted by Heritage/OSAR reviewer?**

- YES**  **NO** (Go to Step 13)

Info below completed by:  **Heritage Reviewer** (name)  Date

**OSAR Reviewer** (name)  Date

**Terrestrial Zoologist** (name) Elizabeth Hamrick Date Apr 14, 2022

- Gray bat records:  None  Within 3 miles\*  Within a cave\*  Within the County
- Indiana bat records:  None  Within 10 miles\*  Within a cave\*  Capture/roost tree\*  Within the County
- Northern long-eared bat records:  None  Within 5 miles\*  Within a cave\*  Capture/roost tree\*  Within the County
- Virginia big-eared bat records:  None  Within 6 miles\*  Within the County
- Caves:  None within 3 mi  Within 3 miles but > 0.5 mi  Within 0.5 mi but > 0.25 mi\*  Within 0.25 mi but > 200 feet\*  Within 200 feet\*

- Bat Habitat Inspection Sheet completed?  **NO**  **YES**

Amount of **SUITABLE** habitat to be removed/burned (may differ from STEP 4e):  ( **ac**  **trees**)\*  **N/A**

**STEP 6) Provide any additional notes resulting from Heritage Reviewer records review in Notes box below then . . . . .**  
 . . . . . **Go to Step 13**

**Notes from Bat Records Review** (e.g., historic record; bats not on landscape during action; DOT bridge survey with negative results):

**STEPS 7-12 To be Completed by Terrestrial Zoologist (if warranted):**

**STEP 7) Project will involve:**

- Removal of suitable trees within 0.5 mile of P1-P2 Indiana bat hibernacula or 0.25 mile of P3-P4 Indiana bat hibernacula or any NLEB hibernacula.
- Removal of suitable trees within 10 miles of documented Indiana bat (or within 5 miles of NLEB) hibernacula.
- Removal of suitable trees > 10 miles from documented Indiana bat (> 5 miles from NLEB) hibernacula.
- Removal of trees within 150 feet of a documented Indiana bat or northern long-eared bat maternity roost tree.
- Removal of suitable trees within 2.5 miles of Indiana bat roost trees or within 5 miles of Indiana bat capture sites.
- Removal of suitable trees > 2.5 miles from Indiana bat roost trees or > 5 miles from Indiana bat capture sites.
- Removal of documented Indiana bat or NLEB roost tree, if still suitable.
- N/A

**STEP 8) Presence/absence surveys were/will be conducted:**  YES  NO  TBD

**STEP 9) Presence/absence survey results, on**   NEGATIVE  POSITIVE  N/A

**STEP 10) Project**  WILL  WILL NOT require use of Incidental Take in the amount of   acres or  trees proposed to be used during the  WINTER  VOLANT SEASON  NON-VOLANT SEASON  N/A

**STEP 11) Available Incidental Take (prior to accounting for this project) as of**

TVA Action	Total 20-year	Winter	Volant Season	Non-Volant Season
5 Operate, Maintain, Retire, Expand, Construct Power Plants	1,661.29	1,248.09	308.74	104.46

**STEP 12) Amount contributed to TVA's Bat Conservation Fund upon activity completion:** \$  OR  N/A

**TERRESTRIAL ZOOLOGISTS, after completing SECTION 2, review Table 4, modify as needed, and then complete section for Terrestrial Zoologists at end of form.**

**SECTION 3: REQUIRED CONSERVATION MEASURES**

**STEP 13) Review Conservation Measures in Table 4 and ensure those selected are relevant to the project. If not, manually override and uncheck irrelevant measures, and explain why in ADDITIONAL NOTES below Table 4.**

Did review of Table 4 result in ANY remaining Conservation Measures in **RED**?

- NO** (Go to Step 14)
- YES** (STOP HERE; Submit for Terrestrial Zoology Review. Click File/Save As, name form as "ProjectLead\_BatForm\_CEC-or-ProjectIDNo\_Date", and submit with project information).

**Table 4. TVA's ESA Section 7 Programmatic Bat Consultation Required Conservation Measures**

The Conservation Measures in Table 4 are automatically selected based on your choices in Tables 2 and 3 but can be manually overridden, if necessary. To Manually override, press the button and enter your name.

Manual Override

**Name:** Elizabeth Hamrick

Check if Applies to Project	Activities Subject To Conservation Measure	Conservation Measure Description
		<p><b>NV1</b> - Noise will be short-term, transient, and not significantly different from urban interface or natural events (i.e., thunderstorms) that bats are frequently exposed to when present on the landscape.</p>
		<p><b>TR3*</b> - Removal of suitable summer roosting habitat within documented bat habitat (i.e., within 10 miles of documented Indiana bat hibernacula, within 5 miles of documented northern long-eared bat hibernacula, within 2.5 miles of documented Indiana bat summer roost trees, within 5 miles of Indiana bat capture sites, within 1 mile of documented northern long-eared bat summer roost trees, within 3 miles of northern long-eared bat capture sites) will be tracked, documented, and included in annual reporting. Project will therefore communicate completion of tree removal to appropriate TVA staff.</p>

**Project Review Form - TVA Bat Strategy (06/2019)**

<p><b>AR1</b> - Projects that involve structural modification or demolition of buildings, bridges, and potentially suitable box culverts, will require assessment to determine if structure has characteristics that make it a potentially suitable unconventional bat roost. If so a survey to determine if bats may be present will be conducted. Structural assessment will include:</p> <ul style="list-style-type: none"><li>○ Visual check that includes an exhaustive internal/external inspection of building to look for evidence of bats (e.g., bat droppings, roost entrance/exit holes); this can be done at any time of year, preferably when bats are active.</li><li>○ Where accessible and health and safety considerations allow, a survey of roof space for evidence of bats (e.g., droppings, scratch marks, staining, sightings), noting relevant characteristics of internal features that provide potential access points and roosting opportunities. Suitable characteristic may include: gaps between tiles and roof lining, access points via eaves, gaps between timbers or around mortise joints, gaps around top and gable end walls, gaps within roof walling or around tops of chimney breasts, and clean ridge beams.</li><li>○ Features with high-medium likelihood of harboring bats but cannot be checked visually include soffits, cavity walls, space between roof covering and roof lining.</li><li>○ Applies to box culverts that are at least 5 feet (1.5 meters) tall and with one or more of the following characteristics. Suitable culverts for bat day roosts have the following characteristics:<ul style="list-style-type: none"><li>● Location in relatively warm areas</li><li>● Between 5-10 feet (1.5-3 meters) tall and 300 ft (100 m) or more long</li><li>● Openings protected from high winds</li><li>● Not susceptible to flooding</li><li>● Inner areas relatively dark with roughened walls or ceilings</li><li>● Crevices, imperfections, or swallow nests</li></ul></li><li>○ Bridge survey protocols will be adapted from the Programmatic Biological Opinion for the Federal Highway Administration (Appendix D of USFWS 2016c, which includes a Bridge Structure Assessment Guidance and a Bridge Structure Assessment Form).</li><li>○ Bat surveys usually are NOT needed in the following circumstances:<ul style="list-style-type: none"><li>● Domestic garages /sheds with no enclosed roof space (with no ceiling)</li><li>● Modern flat-roofed buildings</li><li>● Metal framed and roofed buildings</li><li>● Buildings where roof space is regularly used (e.g., attic space converted to living space, living space open to rafters) or where all roof space is lit from skylights or windows. Large/tall roof spaces may be dark enough at apex to provide roost space</li></ul></li></ul>
<p><b>AR2</b> - Additional bat P/A surveys (e.g., emergence counts) conducted if warranted (i.e., when AR1 indicates that bats may be present).</p>

**SSPC1 (Transmission only)** - Transmission actions and activities will continue to Implement A Guide for Environmental Protection and Best Management Practices for Tennessee Valley Authority Construction and Maintenance Activities. This focuses on control of sediment and pollutants, including herbicides. Following are key measures:

- BMPs minimize erosion and prevent/control water pollution in accordance with state-specific construction storm water permits. BMPs are designed to keep soil in place and aid in reducing risk of other pollutants reaching surface waters, wetlands and ground water. BMPs will undertake the following principles:
  - Plan clearing, grading, and construction to minimize area and duration of soil exposure.
  - Maintain existing vegetation wherever and whenever possible.
  - Minimize disturbance of natural contours and drains.
  - As much as practicable, operate on dry soils when they are least susceptible to structural damage and erosion.
  - Limit vehicular and equipment traffic in disturbed areas. Keep equipment paths dispersed or designate single traffic flow paths with appropriate road BMPs to manage runoff.
  - Divert runoff away from disturbed areas.
  - Provide for dispersal of surface flow that carries sediment into undisturbed surface zones with high infiltration capacity and ground cover conditions.
  - Prepare drainage ways and outlets to handle concentrated/increased runoff.
  - Minimize length and steepness of slopes. Interrupt long slopes frequently.
  - Keep runoff velocities low and/or check flows.
  - Trap sediment on-site.
  - Inspect/maintain control measures regularly & after significant rain.
  - Re-vegetate and mulch disturbed areas as soon as practical.
- Specific guidelines regarding sensitive resources and buffer zones:
  - Extra precaution (wider buffers) within SMZs is taken to protect stream banks and water quality for streams, springs, sinkholes, and surrounding habitat.
  - BMPs are implemented to protect and enhance wetlands. Select use of equipment and seasonal clearing is conducted when needed for rare plants; construction activities are restricted in areas with identified rare plants.
  - Standard requirements exist to avoid adverse impacts to caves, protected animals, unique/important habitat (e.g., cave buffers, restricted herbicide use, seasonal clearing of suitable habitat).

**SSPC2** - Operations involving chemical/fuel storage or resupply and vehicle servicing will be handled outside of riparian zones (streamside management zones) in a manner to prevent these items from reaching a watercourse. Earthen berms or other effective means are installed to protect stream channel from direct surface runoff. Servicing will be done with care to avoid leakage, spillage, and subsequent stream, wetland, or ground water contamination. Oil waste, filters, other litter will be collected and disposed of properly. Equipment servicing and chemical/fuel storage will be limited to locations greater than 300-ft from sinkholes, fissures, or areas draining into known sinkholes, fissures, or other karst features.

**SSPC3 (Power Plants only)** - Power Plant actions and activities will continue to implement standard environmental practices. These include:

- Best Management Practices (BMPs) in accordance with regulations:
  - Ensure proper disposal of waste, ex: used rags, used oil, empty containers, general trash, dependent on plant policy
  - Maintain every site with well-equipped spill response kits, included in some heavy equipment
  - Conduct Quarterly Internal Environmental Field Assessments at each sight
  - Every project must have an approved work package that contains an environmental checklist that is approved by sight Environmental Health & Safety consultant.
  - When refueling, vehicle is positioned as close to pump as possible to prevent drips, and overfilling of tank. Hose and nozzle are held in a vertical position to prevent spillage
- Construction Site Protection Methods
  - Sediment basin for runoff - used to trap sediments and temporarily detain runoff on larger construction sites
  - Storm drain protection device
  - Check dam to help slow down silt flow
  - Silt fencing to reduce sediment movement
- Storm Water Pollution Prevention (SWPP) Pollution Control Strategies
  - Minimize storm water contact with disturbed soils at construction site
  - Protect disturbed soil areas from erosion
  - Minimize sediment in storm water before discharge
  - Prevent storm water contact with other pollutants
  - Construction sites also may be required to have a storm water permit, depending on size of land disturbance (>1ac)
- Every site has a Spill Prevention and Control Countermeasures (SPCC) Plan and requires training. Several hundred pieces of equipment often managed at the same time on power generation properties. Goal is to
  - Minimize fuel and chemical use Ensure proper disposal of waste, ex: used rags, used oil, empty containers, general trash, dependent on plant policy
  - Maintain every site with well-equipped spill response kits, included in some heavy equipment
  - Conduct Quarterly Internal Environmental Field Assessments at each sight
  - Every project must have an approved work package that contains an environmental checklist that is approved by sight Environmental Health & Safety consultant.
  - When refueling, vehicle is positioned as close to pump as possible to prevent drips, and overfilling of tank. Hose and nozzle are held in a vertical position to prevent spillage
- Construction Site Protection Methods
  - Sediment basin for runoff - used to trap sediments and temporarily detain runoff on larger construction sites
  - Storm drain protection device
  - Check dam to help slow down silt flow
  - Silt fencing to reduce sediment movement
- Storm Water Pollution Prevention (SWPP) Pollution Control Strategies
  - Minimize storm water contact with disturbed soils at construction site
  - Protect disturbed soil areas from erosion
  - Minimize sediment in storm water before discharge
  - Prevent storm water contact with other pollutants
  - Construction sites also may be required to have a storm water permit, depending on size of land disturbance (>1ac)
- Every site has a Spill Prevention and Control Countermeasures (SPCC) Plan and requires training. Several hundred pieces of equipment often managed at the same time on power generation properties. Goal is to minimize fuel and chemical use

**L1** - Direct temporary lighting away from suitable habitat during the active season.

**L2** - Evaluate the use of outdoor lighting during the active season and seek to minimize light pollution when installing new or replacing existing permanent lights by angling lights downward or via other light minimization measures (e.g., dimming, directed lighting, motion-sensitive lighting).

<sup>1</sup>Bats addressed in consultation (02/2018), which includes gray bat (listed in 1976), Indiana bat (listed in 1967), northern long-eared bat (listed in 2015), and Virginia big-eared bat (listed in 1979).

**Hide All Unchecked Conservation Measures**

- HIDE
- UNHIDE

**Hide Table 4 Columns 1 and 2 to Facilitate Clean Copy and Paste**

- HIDE
- UNHIDE

**NOTES** (additional info from field review, explanation of no impact or removal of conservation measures).

No caves within 3 miles. None observed on site during field reviews. Suitable summer roosting habitat was observed on site during field reviews by TVA biologists.

**STEP 14) Save completed form (Click File/Save As, name form as "ProjectLead\_BatForm\_CEC-or-ProjectIDNo\_Date") in project environmental documentation (e.g. CEC, Appendix to EA) AND send a copy of form to [batstrategy@tva.gov](mailto:batstrategy@tva.gov)**  
**Submission of this form indicates that Project Lead/Applicant:**

(name) is (or will be made) aware of the requirements below.

- Implementation of conservation measures identified in Table 4 is required to comply with TVA's Endangered Species Act programmatic bat consultation.
- TVA may conduct post-project monitoring to determine if conservation measures were effective in minimizing or avoiding impacts to federally listed bats.

***For Use by Terrestrial Zoologist Only***

Terrestrial Zoologist acknowledges that Project Lead/Contact (name)  has been informed of any relevant conservation measures and/or provided a copy of this form.

For projects that require use of Take and/or contribution to TVA's Bat Conservation Fund, Terrestrial Zoologist acknowledges that Project Lead/Contact has been informed that project will result in use of Incidental Take   ac  trees and that use of Take will require \$  contribution to TVA's Conservation Fund upon completion of activity (amount entered should be \$0 if cleared in winter).

For Terrestrial Zoology Use Only. Finalize and Print to Noneditable PDF.



## United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Tennessee Ecological Services Field Office  
446 Neal Street  
Cookeville, TN 38501-4027  
Phone: (931) 528-6481 Fax: (931) 528-7075

In Reply Refer To:  
Project Code: 2022-0036113  
Project Name: Cumberland Fossil Plant EIS - CUF site only

April 26, 2022

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

### To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

**Migratory Birds:** In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <https://www.fws.gov/birds/policies-and-regulations.php>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

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Attachment(s):

- Official Species List
  - USFWS National Wildlife Refuges and Fish Hatcheries
  - Migratory Birds
  - Wetlands
-

## **Official Species List**

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Tennessee Ecological Services Field Office**

446 Neal Street

Cookeville, TN 38501-4027

(931) 528-6481

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## Project Summary

Project Code: 2022-0036113

Event Code: None

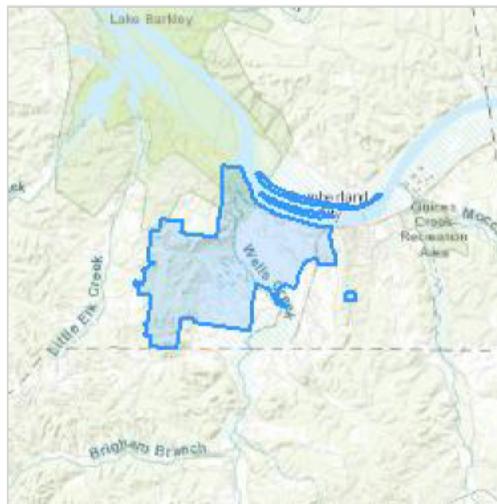
Project Name: Cumberland Fossil Plant EIS - CUF site only

Project Type: Power Gen - Natural Gas

Project Description: In order to address the performance challenges that come with an aging Coal Fleet, the Tennessee Valley Authority (TVA) is proposing to retire and demolish the Cumberland Fossil Plant (CUF). To replace the lost generation capacity from one unit and to adapt to a changing generation portfolio, TVA is considering constructing and operating a Combined Cycle gas (CC) plant on the existing CUF Reservation. TVA also proposes to construct a new switchyard at the CC plant site, modify existing transmission connections on the CC plant site, and install fiber-optic ground wire along approximately 6 miles of existing TVA transmission line. Several activities associated with this project (including tree removal and building demolition) were addressed in TVA's programmatic consultation with the U.S. Fish and Wildlife Service on routine actions and federally listed bats in accordance with Endangered Species Act Section 7(a)(2), completed in April 2018.

### Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@36.387018,-87.66544254408522,14z>



Counties: Houston and Stewart counties, Tennessee

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## Endangered Species Act Species

There is a total of 6 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

### Mammals

NAME	STATUS
Gray Bat <i>Myotis grisescens</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/6329">https://ecos.fws.gov/ecp/species/6329</a>	Endangered
Indiana Bat <i>Myotis sodalis</i> There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/5949">https://ecos.fws.gov/ecp/species/5949</a>	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9045">https://ecos.fws.gov/ecp/species/9045</a>	Threatened

### Clams

NAME	STATUS
Rabbitsfoot <i>Quadrula cylindrica cylindrica</i> There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/5165">https://ecos.fws.gov/ecp/species/5165</a>	Threatened

### Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>	Candidate

## Flowering Plants

NAME	STATUS
Prices Potato-bean <i>Apios priceana</i>	Threatened
Population:	
No critical habitat has been designated for this species.	
Species profile: <a href="https://ecos.fws.gov/ecp/species/7422">https://ecos.fws.gov/ecp/species/7422</a>	

## Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

# USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

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## Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

- 
1. The [Migratory Birds Treaty Act](#) of 1918.
  2. The [Bald and Golden Eagle Protection Act](#) of 1940.
  3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Sep 1 to Jul 31
Kentucky Warbler <i>Oporornis formosus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 20 to Aug 20
Prairie Warbler <i>Dendroica discolor</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31

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NAME	BREEDING SEASON
Prothonotary Warbler <i>Protonotaria citrea</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 1 to Jul 31
Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
Wood Thrush <i>Hylocichla mustelina</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

## Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

### Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is  $0.25/0.25 = 1$ ; at week 20 it is  $0.05/0.25 = 0.2$ .
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

### Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

### Survey Effort (|)

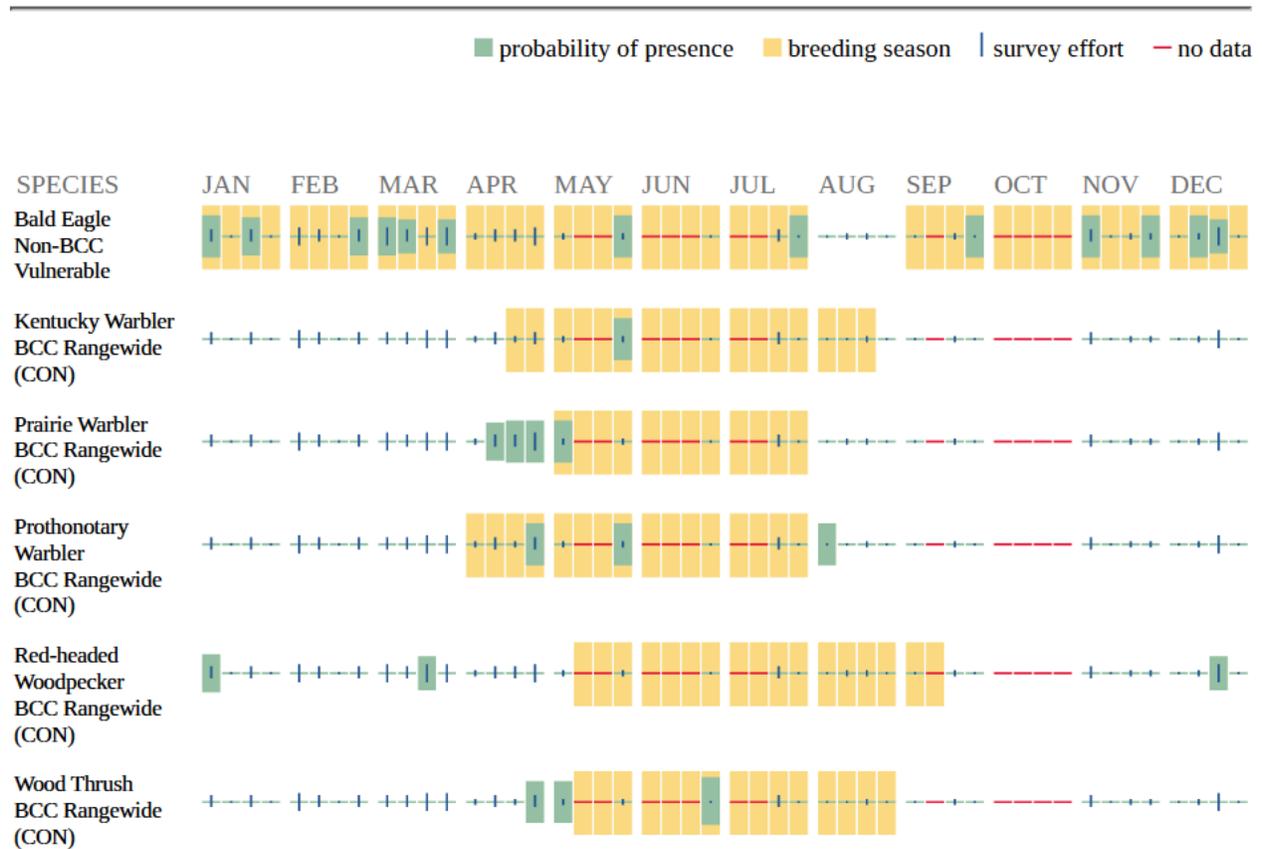
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

### No Data (—)

A week is marked as having no data if there were no survey events for that week.

### Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Additional information can be found using the following links:

- Birds of Conservation Concern <https://www.fws.gov/program/migratory-birds/species>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>

- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>

## **Migratory Birds FAQ**

**Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.**

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

**What does IPaC use to generate the migratory birds potentially occurring in my specified location?**

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

**What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?**

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

**How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?**

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab](#)

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[of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

### **What are the levels of concern for migratory birds?**

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

### **Details about birds that are potentially affected by offshore projects**

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

### **What if I have eagles on my list?**

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

### **Proper Interpretation and Use of Your Migratory Bird Report**

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be

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aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

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## Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

WETLAND INFORMATION WAS NOT AVAILABLE WHEN THIS SPECIES LIST WAS GENERATED. PLEASE VISIT [HTTPS://WWW.FWS.GOV/WETLANDS/DATA/MAPPER.HTML](https://www.fws.gov/wetlands/data/mapper.html) OR CONTACT THE FIELD OFFICE FOR FURTHER INFORMATION.

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## **IPaC User Contact Information**

Agency: Tennessee Valley Authority

Name: Elizabeth Hamrick

Address: 400 W Summit Hill Dr

City: Knoxville

State: TN

Zip: 37902

Email [ecburton@tva.gov](mailto:ecburton@tva.gov)

Phone: 5034492373

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## United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Tennessee Ecological Services Field Office  
446 Neal Street  
Cookeville, TN 38501-4027  
Phone: (931) 528-6481 Fax: (931) 528-7075

In Reply Refer To:

April 26, 2022

Project Code: 2022-0036130

Project Name: Cumberland Fossil Plant EIS - Transmission upgrades only

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

**Migratory Birds:** In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <https://www.fws.gov/birds/policies-and-regulations.php>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

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Attachment(s):

- Official Species List
  - USFWS National Wildlife Refuges and Fish Hatcheries
  - Migratory Birds
  - Wetlands
-

## **Official Species List**

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Tennessee Ecological Services Field Office**

446 Neal Street

Cookeville, TN 38501-4027

(931) 528-6481

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## Project Summary

Project Code: 2022-0036130

Event Code: None

Project Name: Cumberland Fossil Plant EIS - Transmission upgrades only

Project Type: Power Gen - Natural Gas

Project Description: In order to address the performance challenges that come with an aging Coal Fleet, the Tennessee Valley Authority (TVA) is proposing to retire and demolish the Cumberland Fossil Plant (CUF). To replace the lost generation capacity from one unit and to adapt to a changing generation portfolio, TVA is considering constructing and operating a Combined Cycle gas (CC) plant on the existing CUF Reservation. TVA also proposes to construct a new switchyard at the CC plant site, modify existing transmission connections on the CC plant site, and install fiber-optic ground wire along approximately 6 miles of existing TVA transmission line. The entire scope of work for the transmission upgrades, including access road creation or improvements, has not yet been defined, but TVA is taking a conservative approach and assuming the maximum amount of disturbance for this type of work in the associated Section 7 consultation package to be submitted via email.

### Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@36.13000785,-87.01548245000001,14z>



Counties: Cheatham and Davidson counties, Tennessee

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## Endangered Species Act Species

There is a total of 13 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## Mammals

NAME	STATUS
Gray Bat <i>Myotis grisescens</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/6329">https://ecos.fws.gov/ecp/species/6329</a>	Endangered
Indiana Bat <i>Myotis sodalis</i> There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/5949">https://ecos.fws.gov/ecp/species/5949</a>	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9045">https://ecos.fws.gov/ecp/species/9045</a>	Threatened

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## Clams

NAME	STATUS
Cumberlandian Combshell <i>Epioblasma brevidens</i> Population: Wherever found; Except where listed as Experimental Populations There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/3119">https://ecos.fws.gov/ecp/species/3119</a>	Endangered
Orangefoot Pimpleback (pearlymussel) <i>Plethobasus cooperianus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/1132">https://ecos.fws.gov/ecp/species/1132</a>	Endangered
Pink Mucket (pearlymussel) <i>Lampsilis abrupta</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/7829">https://ecos.fws.gov/ecp/species/7829</a>	Endangered
Ring Pink (mussel) <i>Obovaria retusa</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/4128">https://ecos.fws.gov/ecp/species/4128</a>	Endangered

## Insects

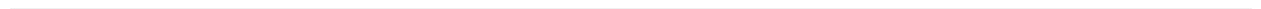
NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>	Candidate

## Flowering Plants

NAME	STATUS
Braun's Rock-cress <i>Arabis perstellata</i> There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/4704">https://ecos.fws.gov/ecp/species/4704</a>	Endangered
Guthrie's (=pyne's) Ground-plum <i>Astragalus bibullatus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/1739">https://ecos.fws.gov/ecp/species/1739</a>	Endangered
Leafy Prairie-clover <i>Dalea foliosa</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/5498">https://ecos.fws.gov/ecp/species/5498</a>	Endangered
Prices Potato-bean <i>Apios priceana</i> Population: No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/7422">https://ecos.fws.gov/ecp/species/7422</a>	Threatened
Short's Bladderpod <i>Physaria globosa</i> There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/7206">https://ecos.fws.gov/ecp/species/7206</a>	Endangered

**Critical habitats**

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.



# **USFWS National Wildlife Refuge Lands And Fish Hatcheries**

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

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## Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

- 
1. The [Migratory Birds Treaty Act](#) of 1918.
  2. The [Bald and Golden Eagle Protection Act](#) of 1940.
  3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Sep 1 to Jul 31
Kentucky Warbler <i>Oporornis formosus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 20 to Aug 20

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NAME	BREEDING SEASON
<b>Lesser Yellowlegs <i>Tringa flavipes</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9679">https://ecos.fws.gov/ecp/species/9679</a>	Breeds elsewhere
<b>Prairie Warbler <i>Dendroica discolor</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31
<b>Prothonotary Warbler <i>Protonotaria citrea</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 1 to Jul 31
<b>Red-headed Woodpecker <i>Melanerpes erythrocephalus</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
<b>Rusty Blackbird <i>Euphagus carolinus</i></b> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds elsewhere
<b>Wood Thrush <i>Hylocichla mustelina</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

## Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

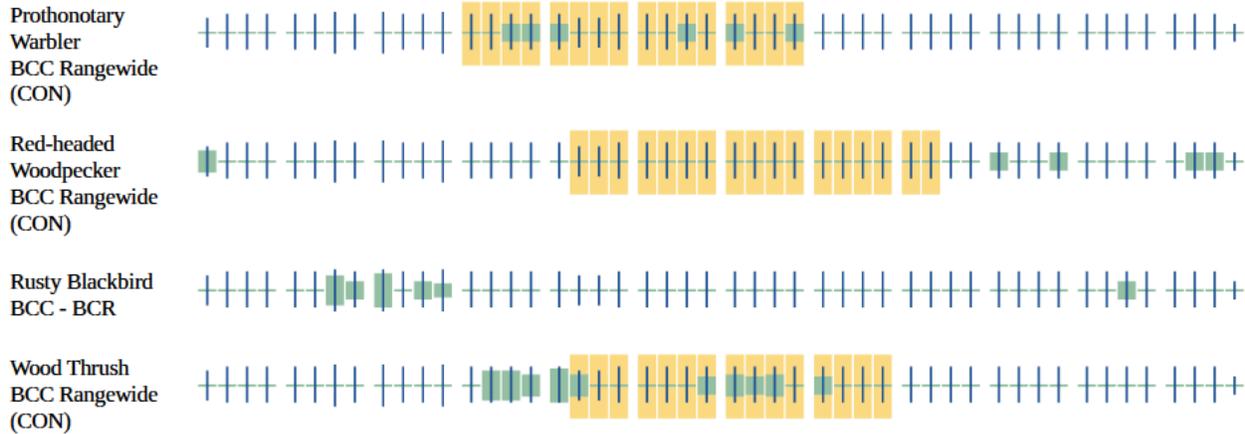
### Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.





Additional information can be found using the following links:

- Birds of Conservation Concern <https://www.fws.gov/program/migratory-birds/species>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>

## Migratory Birds FAQ

**Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.**

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

**What does IPaC use to generate the migratory birds potentially occurring in my specified location?**

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#)

requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

### **What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?**

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

### **How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?**

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

### **What are the levels of concern for migratory birds?**

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

### **Details about birds that are potentially affected by offshore projects**

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For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

### **What if I have eagles on my list?**

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

### **Proper Interpretation and Use of Your Migratory Bird Report**

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

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## Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

WETLAND INFORMATION WAS NOT AVAILABLE WHEN THIS SPECIES LIST WAS GENERATED.  
PLEASE VISIT [HTTPS://WWW.FWS.GOV/WETLANDS/DATA/MAPPER.HTML](https://www.fws.gov/wetlands/data/mapper.html) OR CONTACT THE FIELD OFFICE FOR FURTHER INFORMATION.

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## **IPaC User Contact Information**

Agency: Tennessee Valley Authority

Name: Elizabeth Hamrick

Address: 400 W Summit Hill Dr

City: Knoxville

State: TN

Zip: 37902

Email [ecburton@tva.gov](mailto:ecburton@tva.gov)

Phone: 5034492373

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**[EXTERNAL] Request for Concurrence - TVA Cumberland Fossil Plant Retirement Project, Cheatham, Davidson, and Stewart Counties**

Hamrick, Elizabeth Burton &lt;ecburton@tva.gov&gt;

Wed 5/4/2022 8:16 AM

To: Tennessee ES, FWS &lt;tennesseeES@fws.gov&gt;

Cc: Pelren, David &lt;david\_pelren@fws.gov&gt;; White, William Douglas &lt;wdwhite0@tva.gov&gt;; McCampbell, Amy Boardman &lt;aboardma@tva.gov&gt;; Pilakowski, Ashley Anne &lt;aapilakowski@tva.gov&gt;

**This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.**

Dear Mr. Elbert:

We respectfully request the review of and concurrence with our determinations regarding impacts to federally listed plants for the proposed Cumberland Fossil Plant Retirement project in Cheatham, Davidson, and Stewart counties, Tennessee. The Project Codes generated through IPaC are 2022-0036113 and 2022-0036130. Please see the attachments in this email for complete informal consultation package. Please don't hesitate to reach out for additional information.

Thank you!

**Liz Hamrick**Terrestrial Zoologist  
Biological Compliance

**W.** 865-632-4011 **M.** 503-449-2373 **E.** [ecburton@tva.gov](mailto:ecburton@tva.gov)  
400 West Summit Hill Drive, Knoxville, TN 37902

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## United States Department of the Interior



### FISH AND WILDLIFE SERVICE

Tennessee Ecological Services Field Office

446 Neal Street

Cookeville, Tennessee 38501

(931) 528-6481

March 10, 2022

Mr. Mike Letson  
Permitting Compliance Lead  
Tennessee Gas Pipeline Company, LLC  
1001 Louisiana Street, Suite 1000  
Houston, Texas 77002

Subject: FWS #2022-0011291, previously 2022-CPA-0484/TA-1019. Species determination for Cumberland gasline project, Dickson, Houston, and Stewart Counties, Tennessee.

Dear Mr. Letson,

U.S. Fish and Wildlife Service (Service) personnel have reviewed your report of threatened and endangered species survey findings and request for concurrence with species determinations for the subject project. This action would involve installation of approximately 32 miles of natural gas pipeline to facilitate the proposed replacement of coal-fired units at the Cumberland Fossil Plant with a gas-based system. The pipeline would generally follow an existing TVA electric transmission line right-of-way, and approximately 1,189 acres were evaluated for the gasline project relative to potential impacts to federally listed species.

Information about federally listed species that could potentially be affected by the project was generated during a search of the Service's Information for Planning and Consultation (IPaC) system. Those species are: the gray bat (*Myotis grisescens*), Indiana bat (*Myotis sodalis*), northern long-eared bat (*Myotis septentrionalis*), rabbitsfoot (*Quadrula cylindrica cylindrica*), tan riffleshell (*Epioblasma florentina walkeri*), Price's potato-bean (*Apios priceana*), and Short's bladderpod (*Physaria globosa*). Surveys for the bats, mussels, and plants specified in the IPaC list (with exception of the gray bat) all resulted in negative findings, and we understand that you have not documented caves in the vicinity of the project area. Based on the survey findings, habitat conditions, and the obligation to implement conservation measures (including standard water quality control measures), you have determined that the project is not likely to adversely affect (NLAA) any of these seven species. As the designated non-federal representative for the Federal Energy Regulatory Commission, you have requested our concurrence with that determination. Also - in order to minimize effects to nesting birds, you have proposed clearing

of trees outside of the period of April 15 to August 1 and maintenance mowing outside of the period of April 15 to July 1.

Pedestrian field surveys of the study area were conducted between June and September 2021 to assess potential habitats for bats, mussels, and plants; and all suitable habitats were searched for Price's Potato-bean and Short's bladderpod during that timeframe. That effort did not result in findings of either of the plants.

Bat netting surveys were conducted between June 21 and August 13, 2021. Forty-seven sample sites were located at forested sites along the entire length of the project route in accordance with the 2020 Range-Wide Indiana Bat Summer Survey Guidelines. The survey resulted in captures of 120 individuals of four common species (big brown bat, evening bat, eastern red bat, and tricolored bat) and nine gray bats. Gray bat roost sites are not known to occur within 0.5 mile of the project route, and you have determined that standard sediment control measures will sufficiently address the potential for impacts to the aquatic invertebrate forage base upon which the gray bat relies.

Mussels were surveyed at each stream crossing that exhibits potential for the presence of mussels. Eight sites were surveyed on September 8 and 9, 2021. All suitable substrate along each crossing site was disturbed in order to accomplish thorough sampling, and visual searches were conducted upstream and downstream of the proposed cross-sectional footprint in order to document the presence of mussel shells. Neither the rabbitsfoot nor tan riffleshell was found during the survey; only the painted creekshell, a common species, was documented.

Based on location of the project site, survey findings, and implementation of conservation measures as discussed, the Service concurs with your NLAA determinations for each of the seven species. Note, negative bat survey results are valid for a period of five years unless new information suggests otherwise; i.e., the data supporting our concurrence on the Indiana bat and northern long-eared bat expires in April 2027. The Service considers this correspondence to conclude the coordination requirements of the Endangered Species Act (ESA) of 1973, as amended. Please re-coordinate with us if (1) new information reveals impacts of the proposed action that may affect listed species or critical habitat in a manner not previously considered, (2) the proposed action is subsequently modified to include activities which were not considered during this consultation, or (3) new species are listed or critical habitat designated that might be affected by the proposed action.

Finally, although not required in accordance with requirements under the ESA, we recommend that clearing of trees and maintenance mowing be conducted during the period of October 15 – March 31 to the greatest extent practicable (while adhering to standard sediment control measures during the rainy season) or, at a minimum, to conduct these activities as late in summer as practicable. This would benefit bats and migratory birds that would potentially be roosting / nesting within the project area. Also, we recommend that revegetation of the project area be conducted in a manner that maximizes benefits to pollinators. For example, the use of milkweed would enhance habitat for the monarch butterfly.

We appreciate your cooperation in addressing potential impacts to sensitive species. If you have questions, please contact David Pelren at 931-261-5844 or by email at david\_pelren@fws.gov.

Sincerely,

Field Supervisor

David Pelren  
*Fish and Wildlife Biologist*  
**U.S. Fish & Wildlife Service**  
Tennessee Ecological Services Office  
446 Neal Street  
Cookeville, TN 38506

06/03/2021

**Subject: Cumberland Project**  
**Dickson, Houston, and Stewart Counties, Tennessee**

Dear Mr. Pelren:

Tennessee Gas Pipeline Company, L.L.C., (“TGP”) is evaluating the potential for a new approximately 32-mile interstate natural gas pipeline. The proposed pipeline would provide natural gas as one of several options being evaluated by the Tennessee Valley Authority (“TVA”) as they consider retirement of the existing coal-fired units at the Cumberland Fossil Plant and the construction and operation of facilities to replace part of the retired generation. Jackson Group is requesting concurrence relating to a threatened and endangered bat species presence/probable absence survey for the Cumberland Project in Dickson, Houston, and Stewart Counties, Tennessee.

Cardno has contracted Jackson Group to conduct a presence/probable absence survey for the Cumberland Project. The proposed project includes forested habitat that provides potential suitable summer habitat for threatened and endangered bat species (see attached Map).

The following proposed survey methods are based on the technical criteria outlined in USFWS’s *2020 Range-Wide Indiana Bat Summer Survey Guidelines*, dated March 2020. Based on forested habitat delineated into 1 km segments, surveys will be conducted at forty-eight sampling sites.

### **Mist-Net Survey**

Jackson Group will survey 48 sites for 2 nights for a total of 96 net nights (48 sites/1 Net/2 Nights = 96 net nights). The locations of the net sites will be determined by selecting the best possible net placement (e.g., streams, trails) that are typically the most effective places to survey. Specific sites for net placement will be determined by permitted bat biologists in the field and will follow USFWS (2020) guidelines for mist net surveys. Netting will begin at sunset and last for a minimum of five hours. If severe weather occurs for more than 30 minutes during the first 5 hours of the survey night that night will not count towards the required 2 nights at the site (see Severe Weather section below). Standard two-ply, 50 or 75 denier, nylon mist-nets with a mesh size of 38 millimeters (1.50 inches) will be used at all mist-net sites. Mist-nets will typically be placed in suitable bat habitat and positioned perpendicularly across flight corridors, filling the corridor from side to side and extending from ground-level up to overhanging canopy. Nets will be checked approximately every 10 minutes. Net set locations at the site will be distributed as evenly as possible throughout suitable habitat. Disturbance in the form of noise, light, and/or movement will be minimized at net locations. Additionally, surveyors will decontaminate and/or dispose of field gear according to the most current USFWS white-nose syndrome decontamination protocol. We will also follow the recent COVID-19 guidelines released in a memo by the USFWS in June 2020 suggesting we follow the guidance (<https://www.cdc.gov/coronavirus/2019-ncov/index.html>) of the Centers for Disease Control (CDC) and be in accordance with state, local, and other Federal requirements when handling wild bats. The mist-net location will

be recorded using a handheld GPS unit in decimal degrees.

### Radio Telemetry

Radio transmitters will be affixed to a maximum of two captured bats per site of the following species: Indiana bats (*Myotis sodalis*) and northern long-eared bats (*Myotis septentrionalis*). Preference will be given to reproductive females and juveniles, however, the first individual of the target species captured will be affixed with a radio transmitter (172 MHz range) regardless of sex if it meets the minimum weight requirements. Bats fitted with a transmitter will be tracked to their diurnal roost. No foraging tracking is proposed. Bats will be tracked during the day within a search radius of 2.5 miles from the point of capture to locate roost trees, up to a maximum of seven days. Daily telemetry searches will be conducted until the bat is located, or for a maximum of 8 hours per day. Telemetry crews, using a vehicle equipped with a five-element Yagi antenna (Wildlife Materials, Carbondale, Illinois), will attempt to track bats from parks, roads, and other public lands within this radius; however, crews will not enter any property without the express consent of the landowner. If access to roost trees is not possible (e.g., located on private property), roost locations will be estimated using triangulation. Where landowner permission is granted to access the roost tree, crews will gather the following information regarding roost trees: tree species, tree condition (living or dead), percent exfoliating bark, diameter at breast-height, estimated percent overstory within stand, and estimated percent understory/midstory within stand. If accessible, a photograph will be taken and the tree's location recorded using a handheld GPS.

A minimum of two emergence surveys will be conducted at each accessible roost tree identified during the tracking period to enumerate bats using the roost. Surveys will begin 30 minutes before dusk and continue until at least one hour after sunset or until the roost tree is not visible without additional illumination.

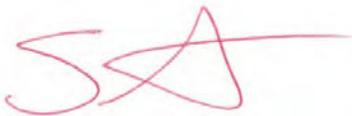
### Severe Weather Definitions (related to mist-net surveys)

Severe weather is defined as including: temperatures below 10°C (50°F), precipitation (rain or heavy fog), and sustained winds exceeding 4-mps (9-mph). Light rain not lasting more than 30-minutes is not considered severe weather and surveyors may choose to continue netting during these conditions.

### Closing

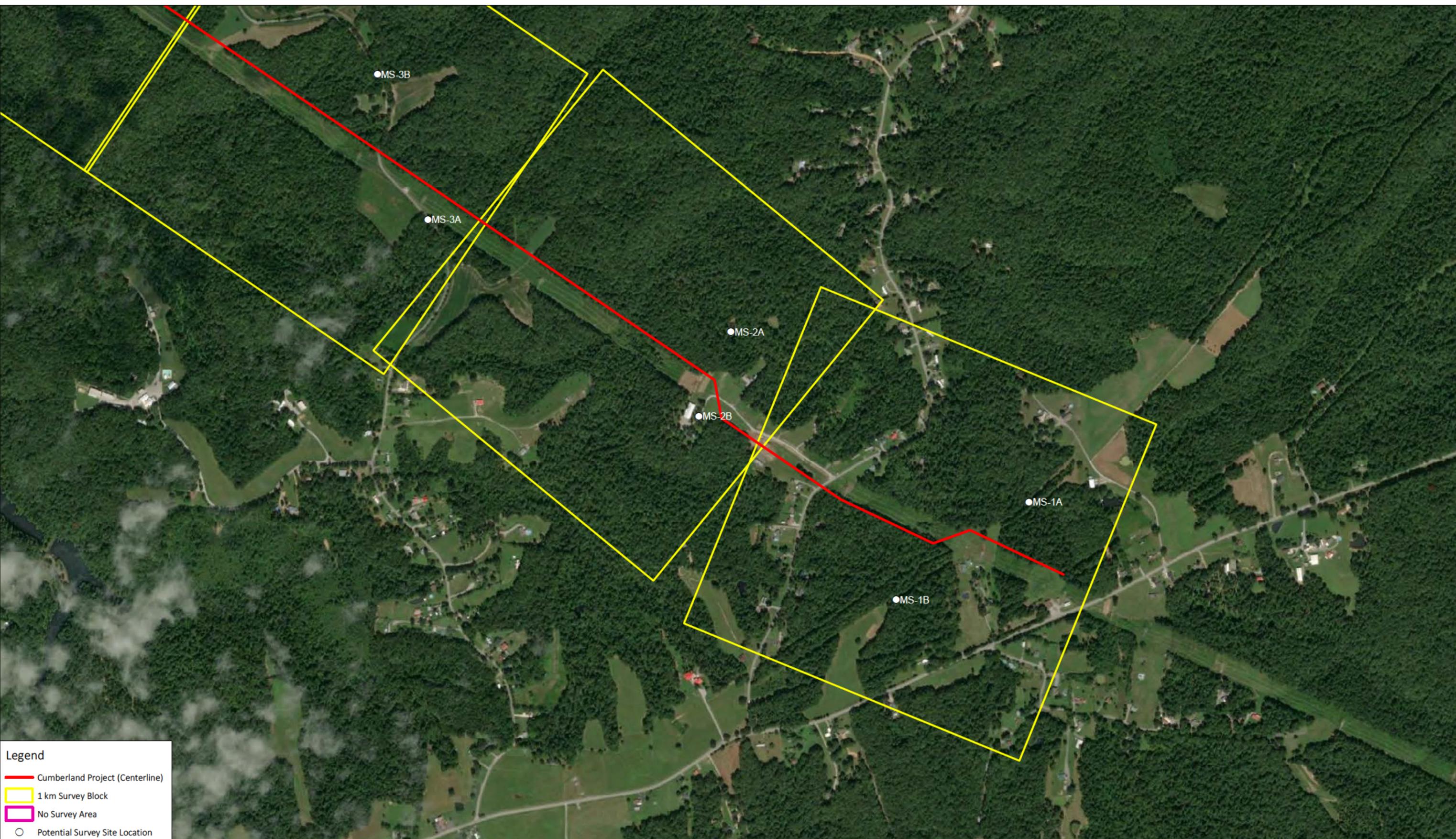
This presence/probable absence survey will strictly follow the technical criteria outlined in the 2020 Range-Wide Indiana Bat Summer Survey Guidelines, as well as any additional recommendations provided by your office. At this time, we respectfully request concurrence with our methodology and level of effort.

Please reply via email to [sroberts@jacksongroupco.com](mailto:sroberts@jacksongroupco.com) with your concurrence, or with any additional requests or guidelines needed for concurrence. If you have any questions or require additional information, please contact me at (859) 200-6242.



Shane Roberts  
Vice President

Enclosures: Survey Overview Map



**Legend**

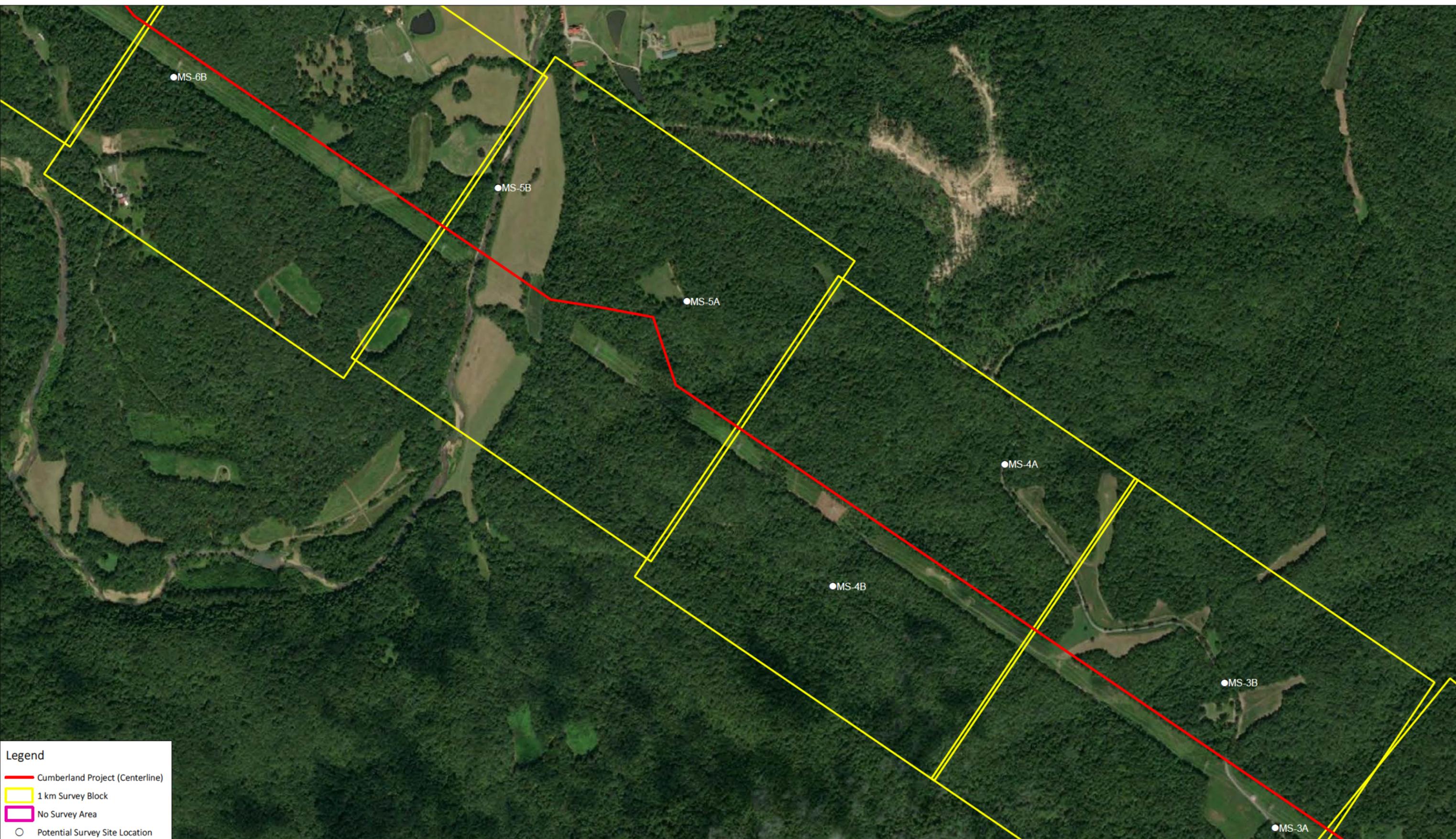
- Cumberland Project (Centerline)
- 1 km Survey Block
- No Survey Area
- Potential Survey Site Location

0 80 160 320 Meters

CLIENT	Tennessee Gas Pipeline Company, L.L.C.
PROJECT	CUMBERLAND PROJECT
SCALE	1:9,500
DATE	06-03-2021

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TITLE  
Bat Survey



**Legend**

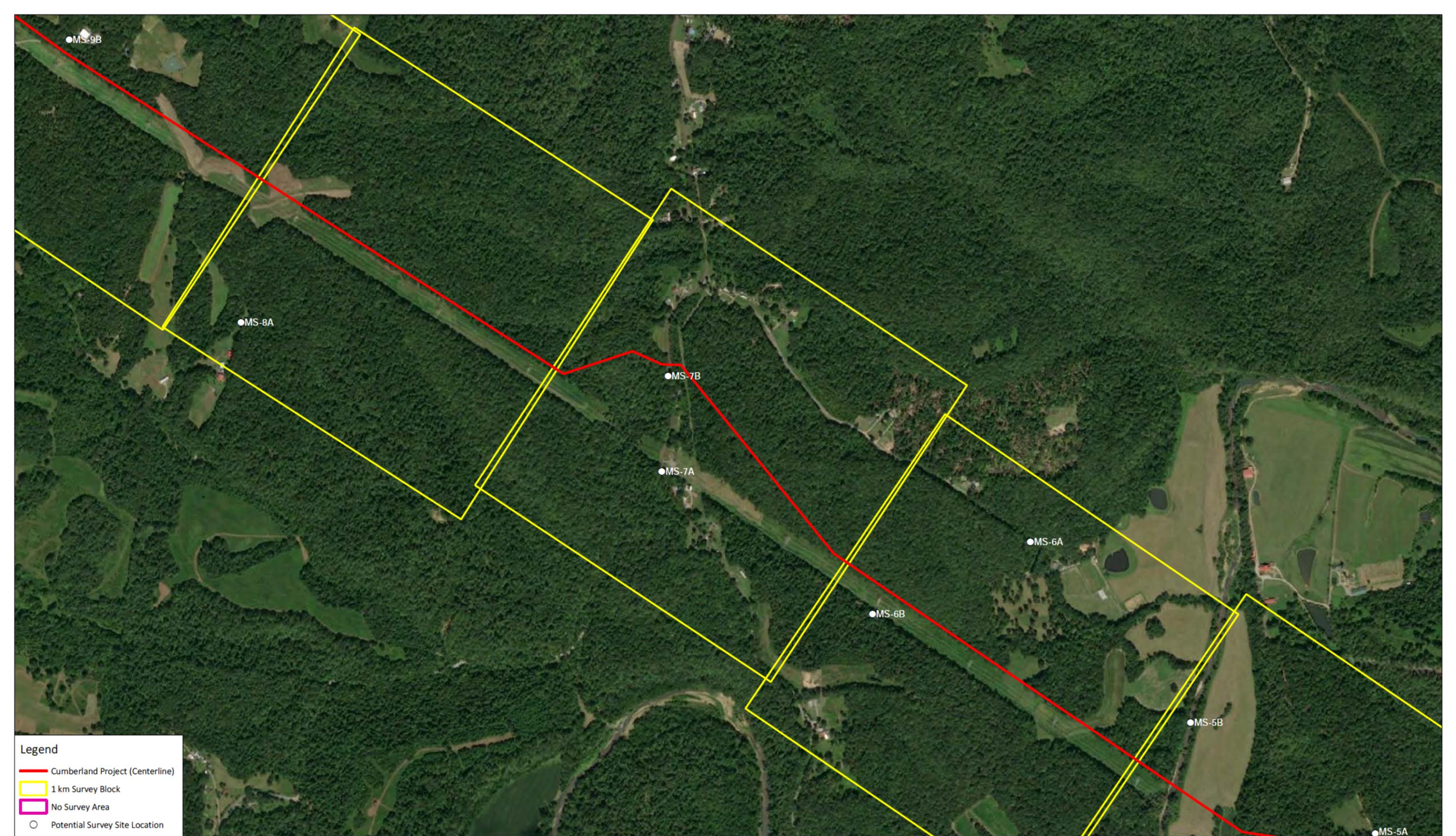
- Cumberland Project (Centerline)
- 1 km Survey Block
- No Survey Area
- Potential Survey Site Location

0 80 160 320 Meters

CLIENT	Tennessee Gas Pipeline Company, L.L.C.
PROJECT	CUMBERLAND PROJECT
SCALE	1:9,500
DATE	06-03-2021

--

TITLE  
Bat Survey



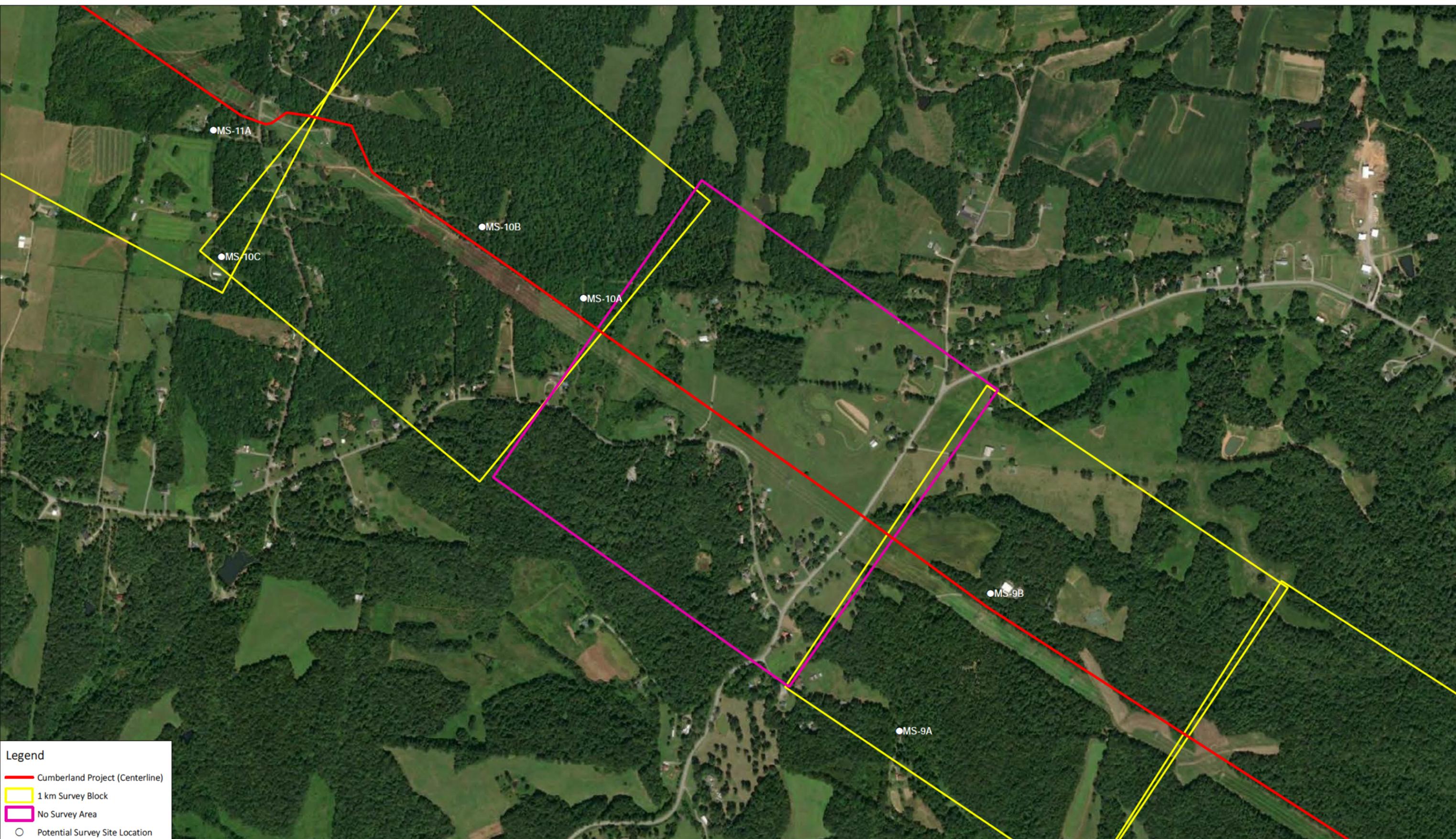
**Legend**

- Cumberland Project (Centerline)
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- Potential Survey Site Location

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DATE	06-03-2021

TITLE	Bat Survey
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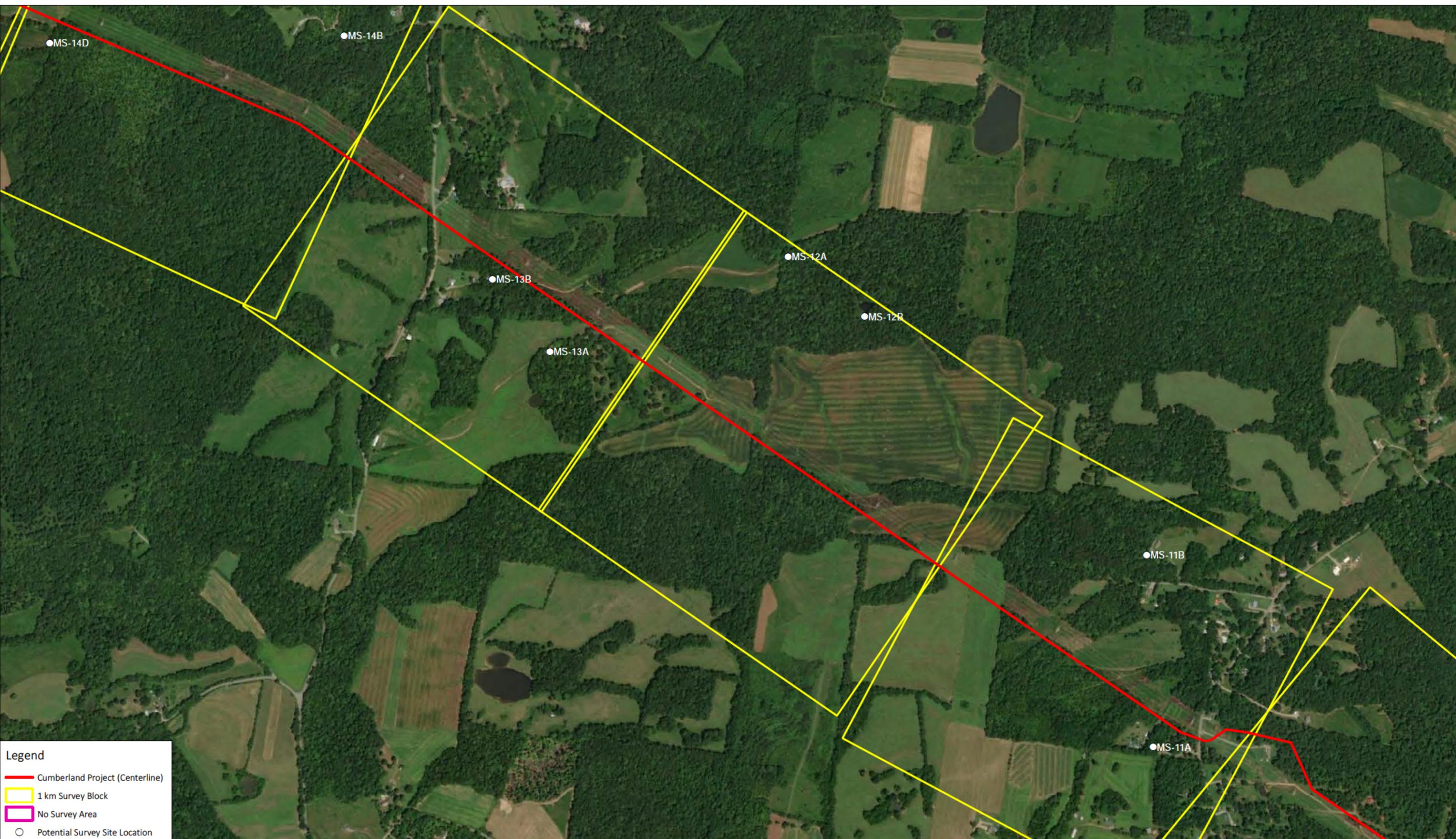
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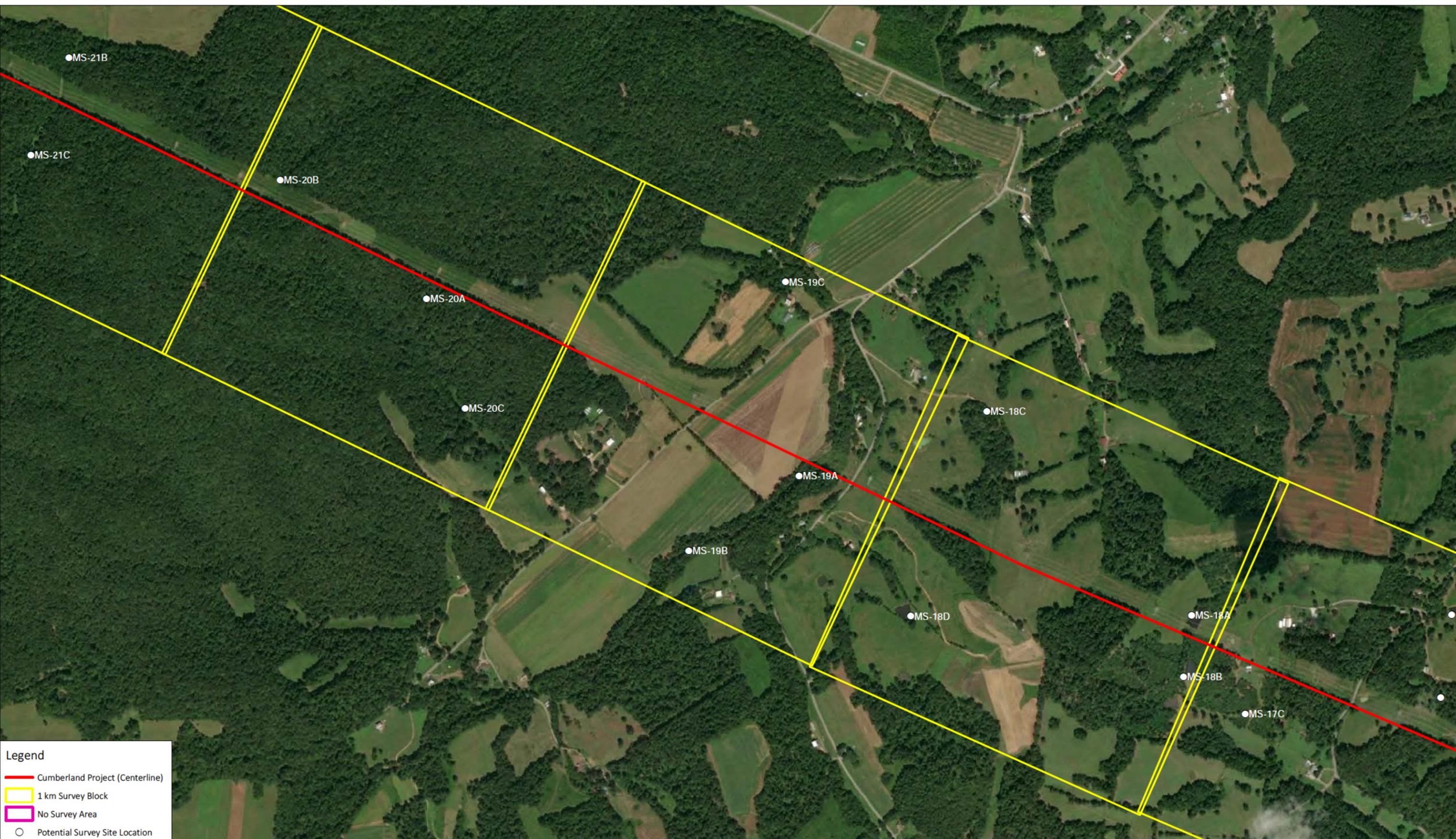
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DATE	06-03-2021

TITLE	Bat Survey
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**Legend**

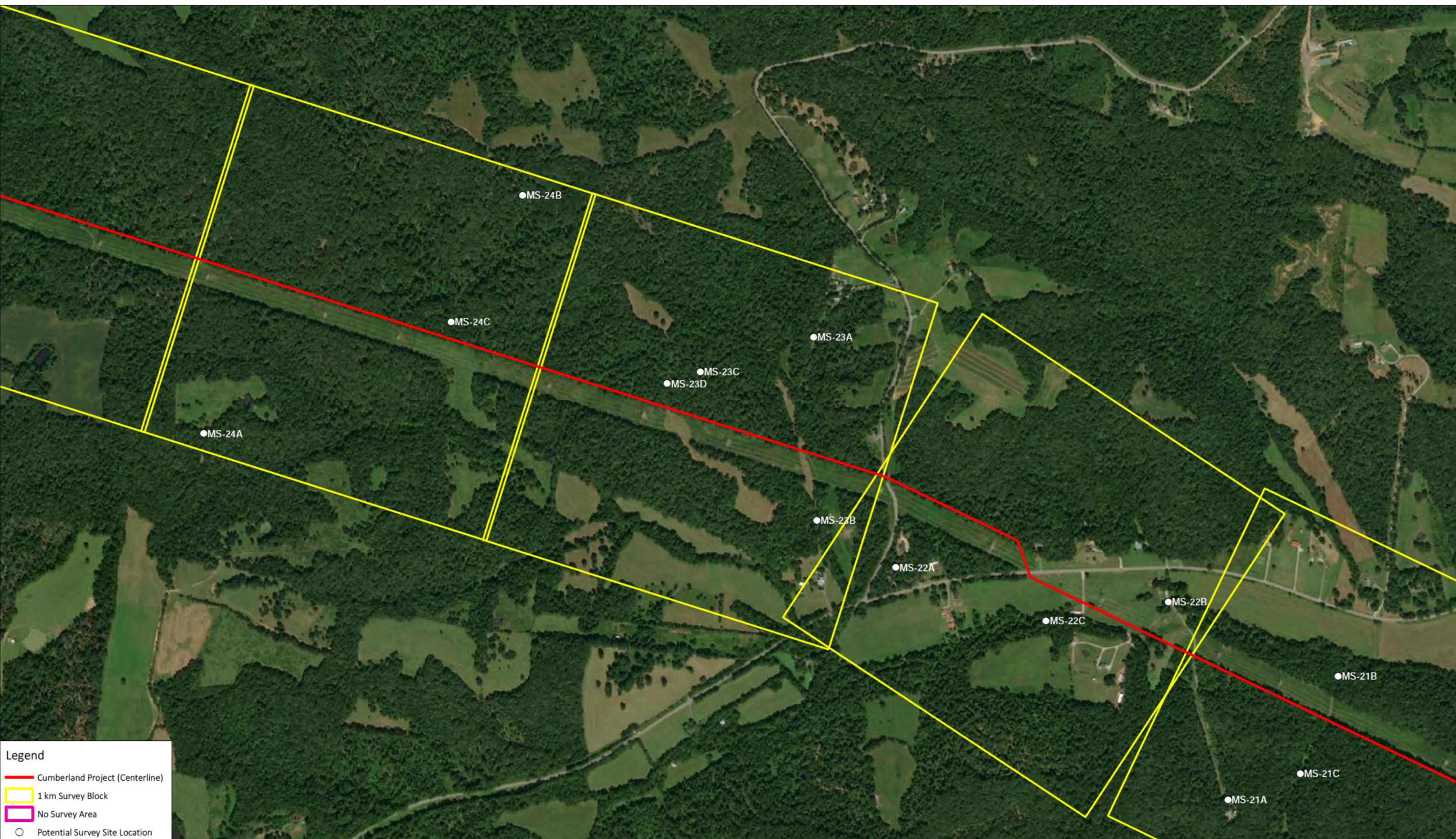
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TITLE  
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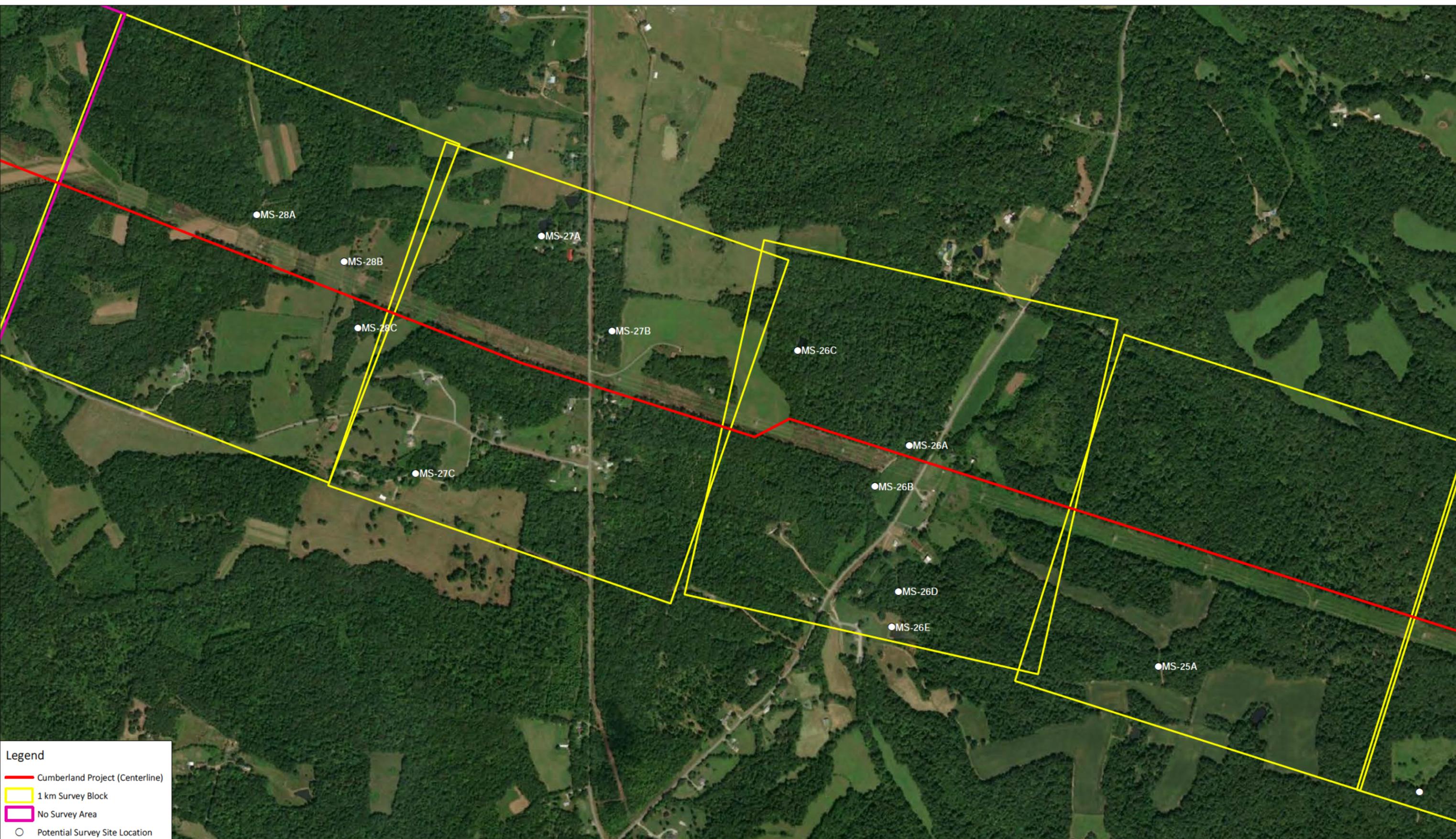
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TITLE  
Bat Survey



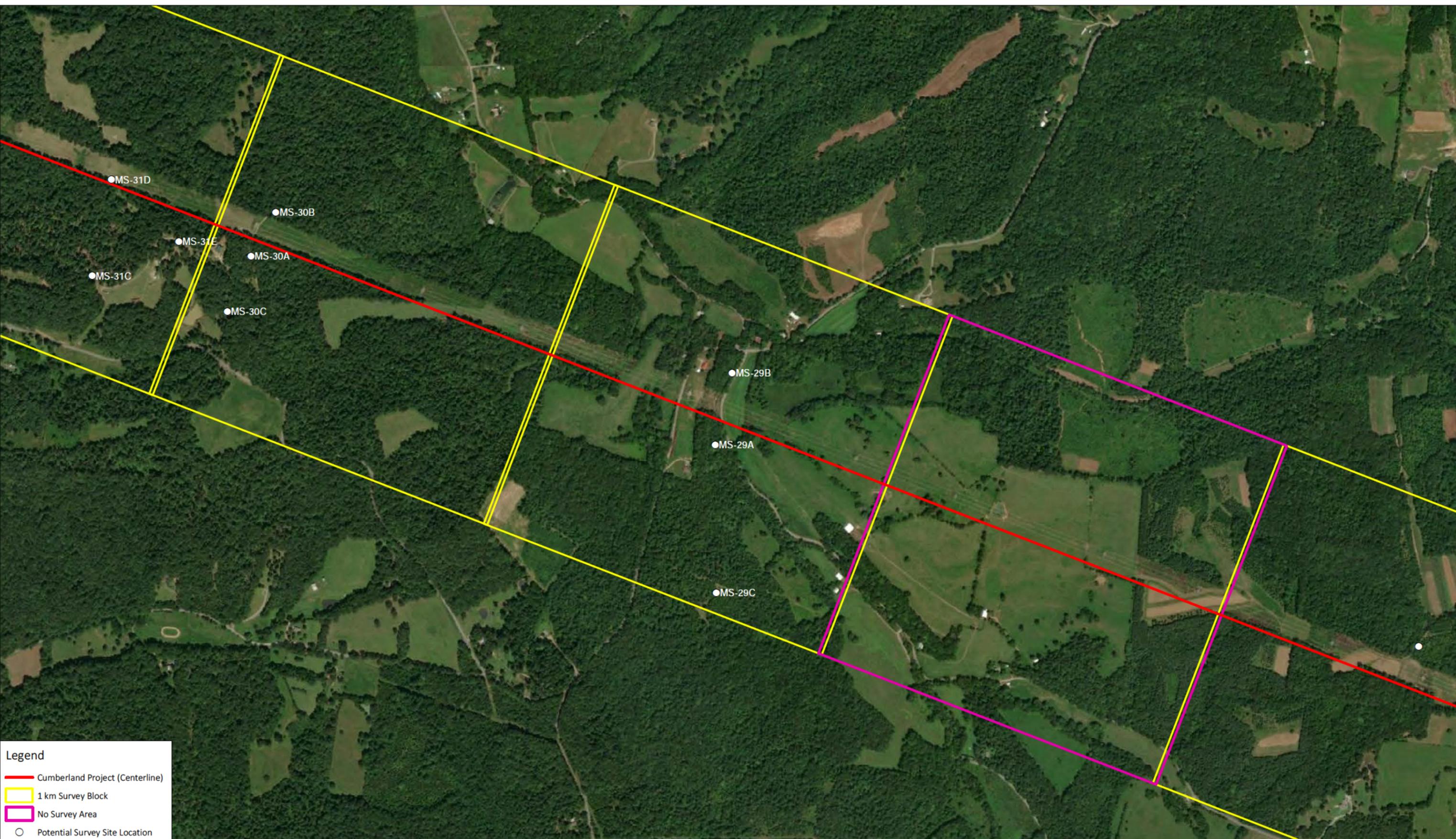
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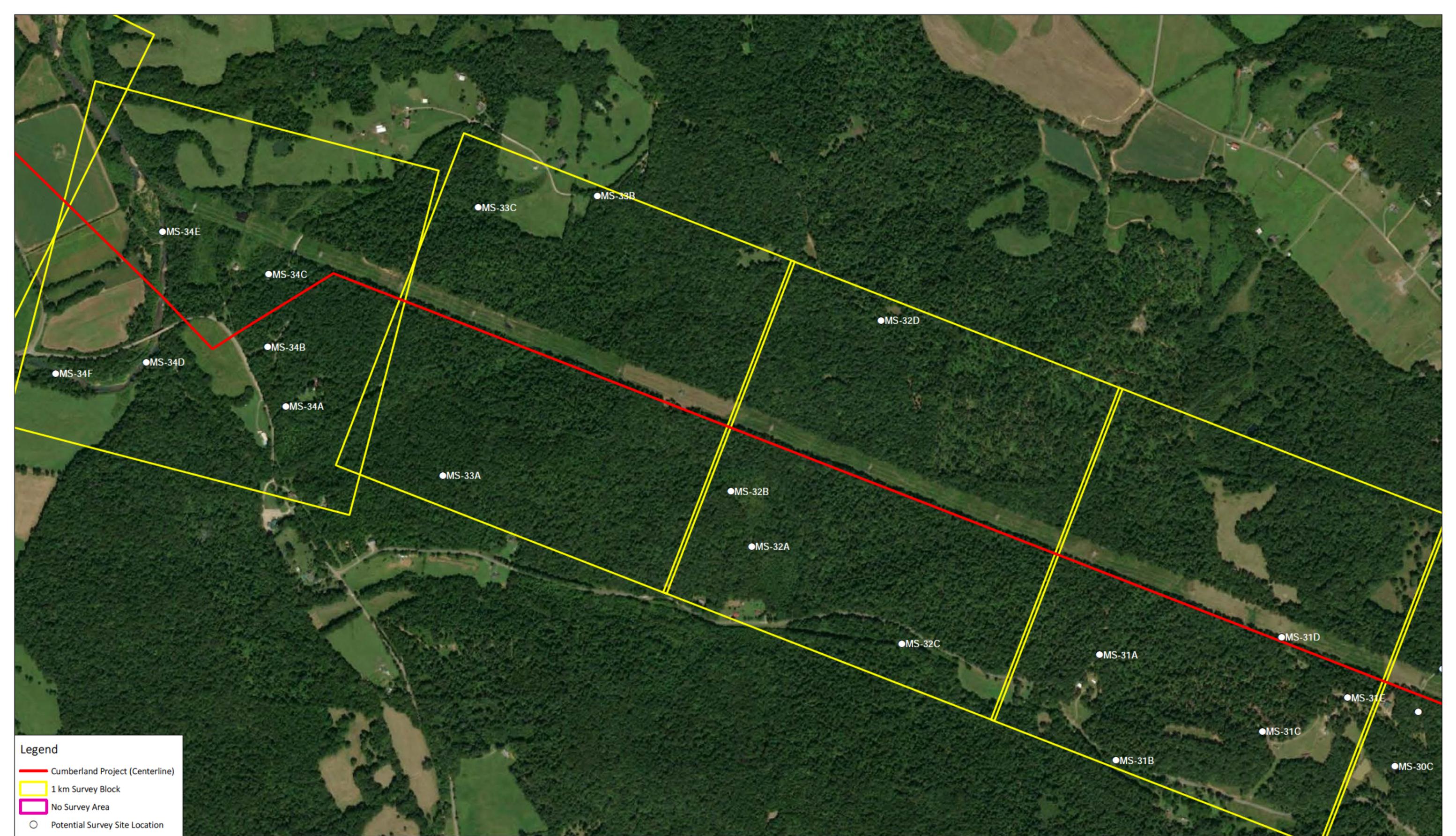
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TITLE  
Bat Survey



**Legend**

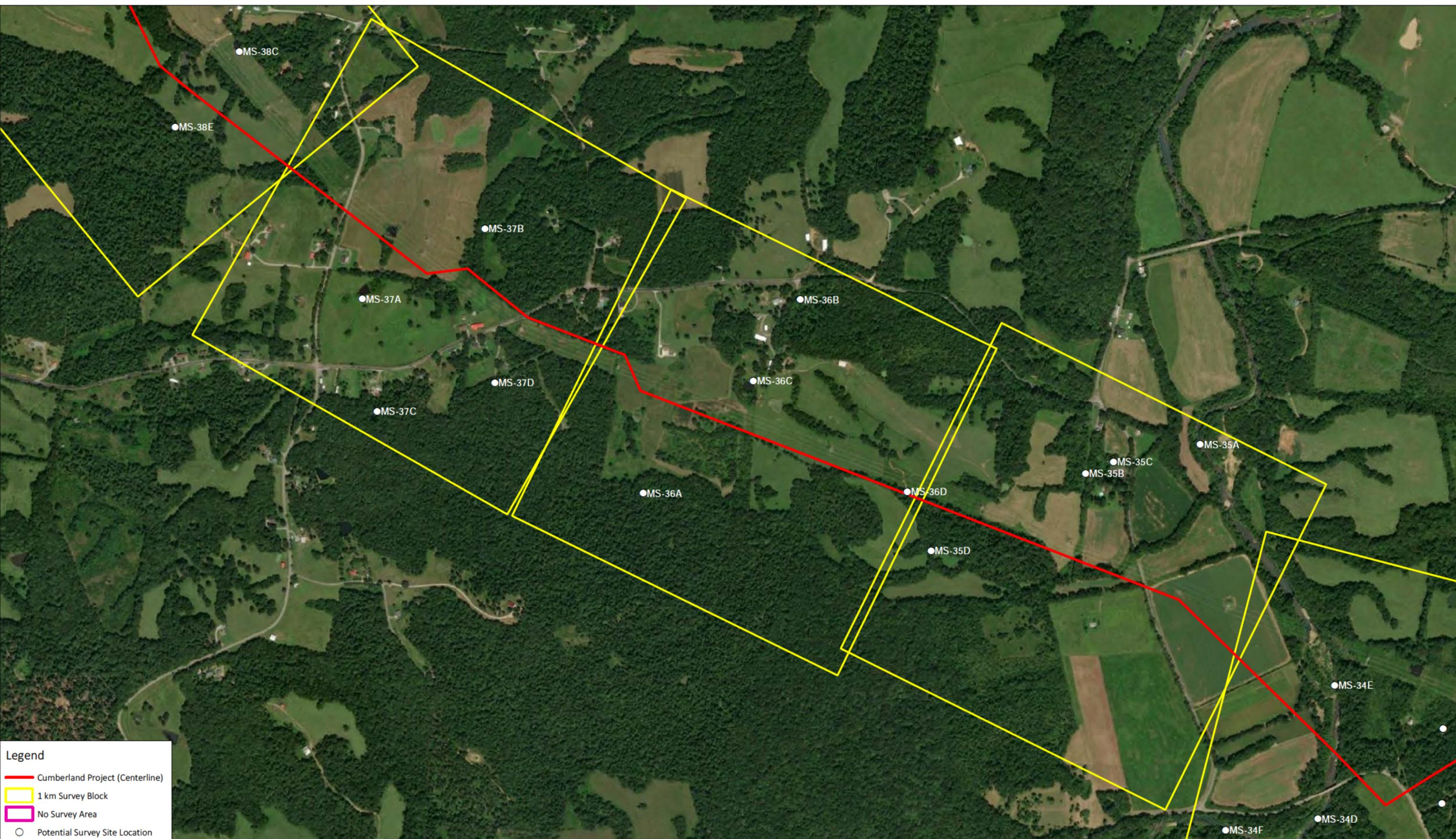
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TITLE  
Bat Survey



**Legend**

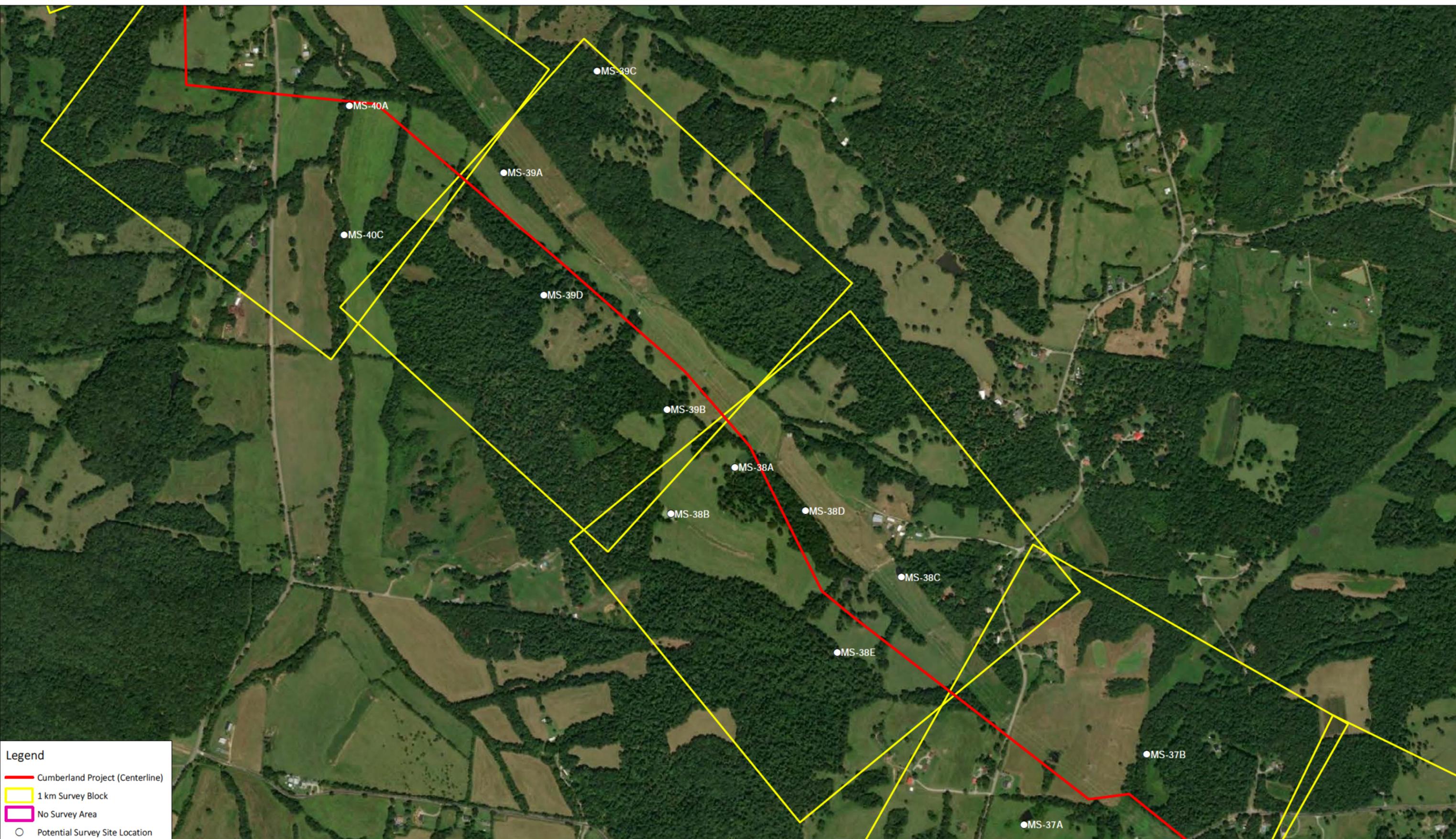
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TITLE  
Bat Survey



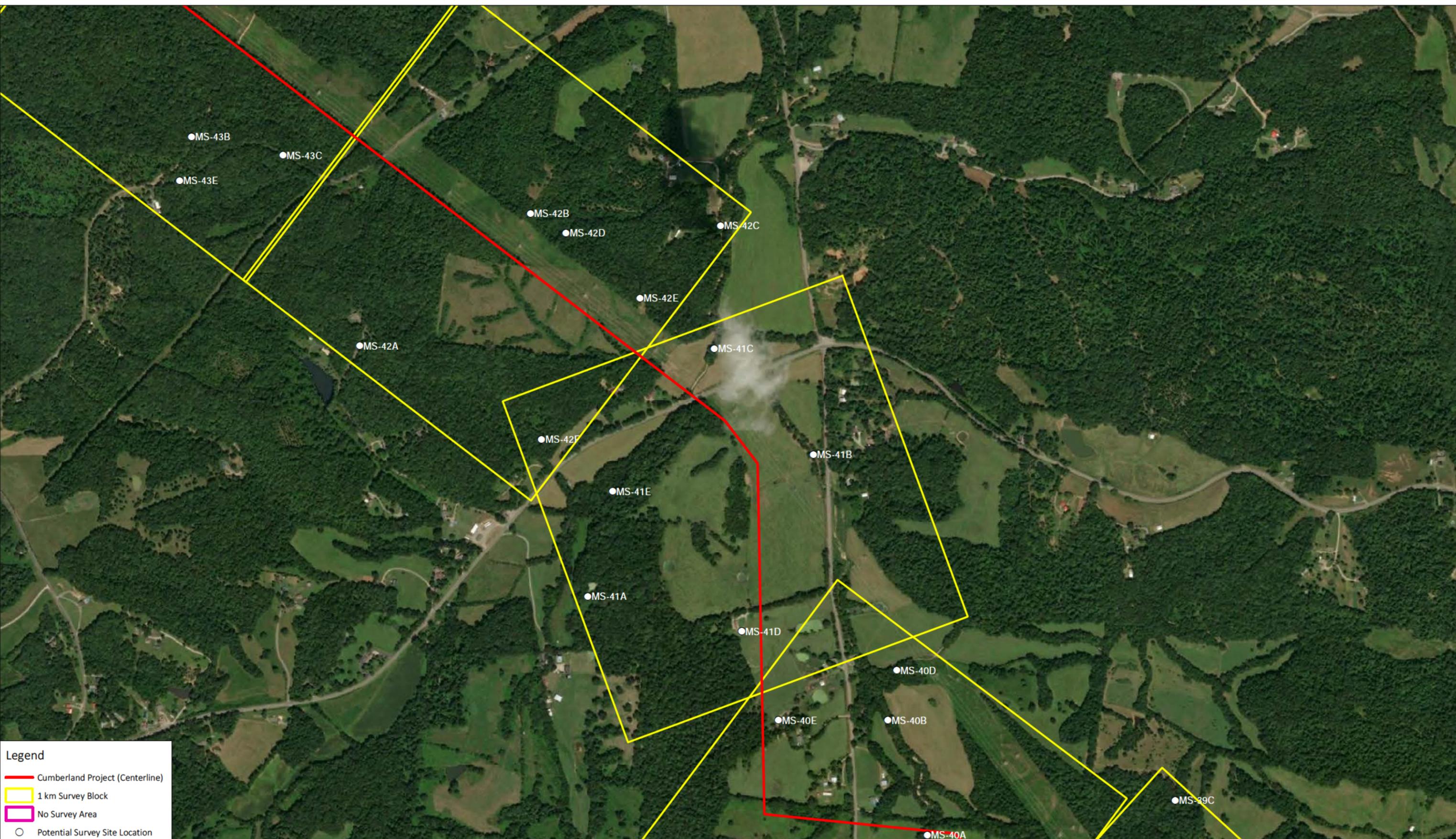
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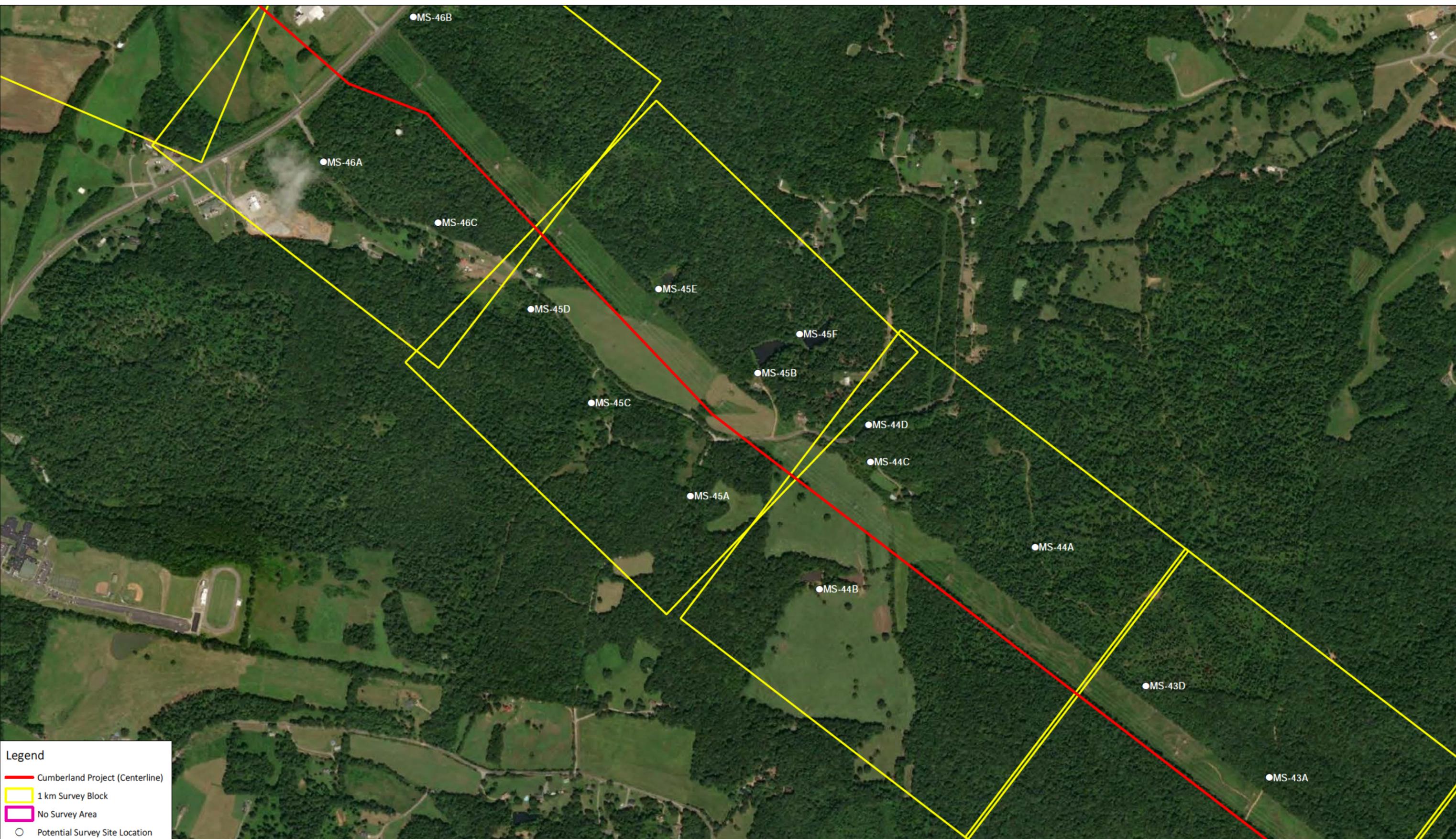
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SCALE	1:9,500
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TITLE	Bat Survey
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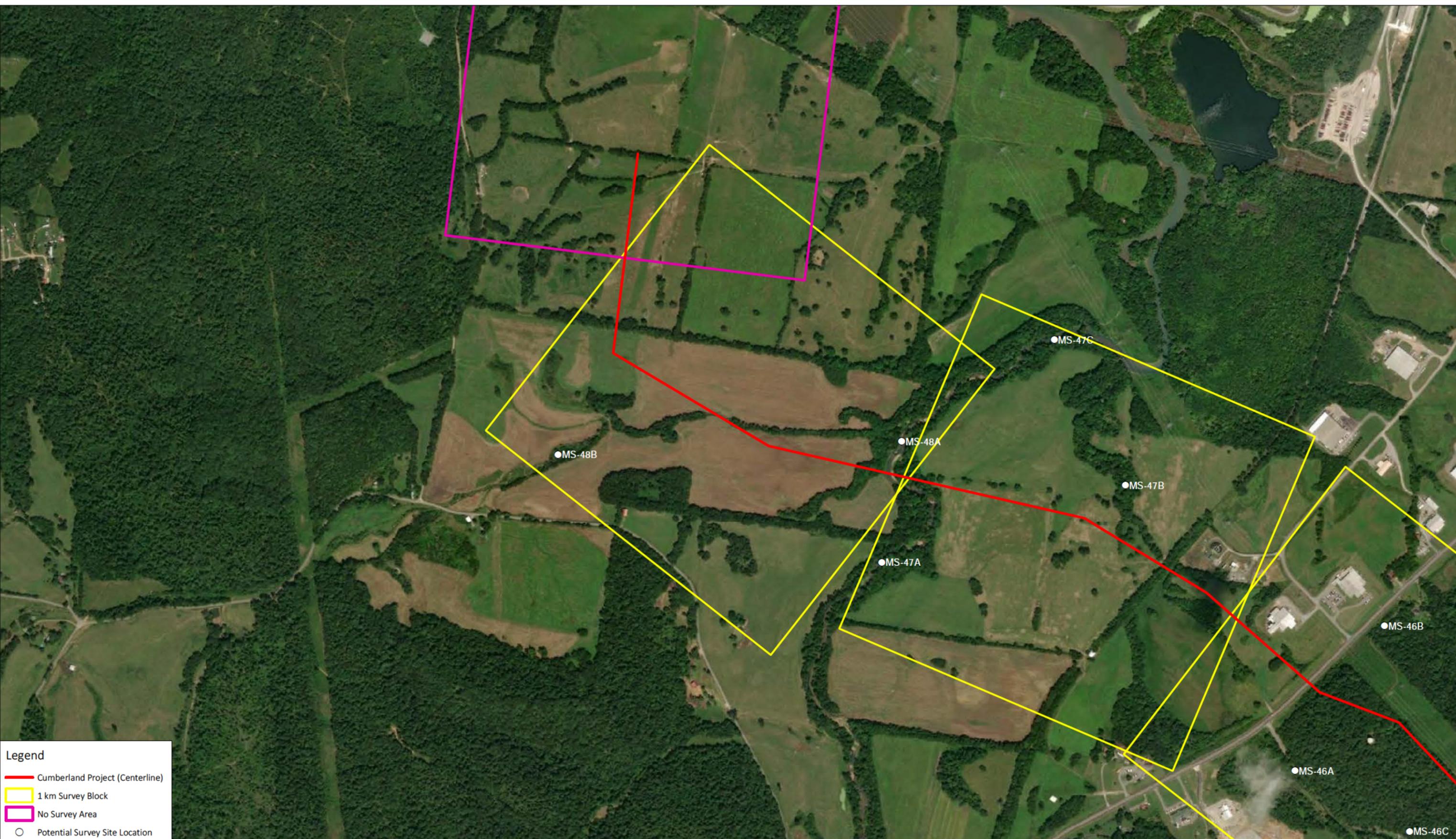
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Bat Survey



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CLIENT	Tennessee Gas Pipeline Company, L.L.C.
PROJECT	CUMBERLAND PROJECT
SCALE	1:9,500
DATE	06-03-2021

--

TITLE  
Bat Survey

**From:** [Pelren, David](#)  
**To:** [Shane Roberts](#)  
**Subject:** RE: [EXTERNAL] Cumberland Project  
**Date:** Thursday, June 17, 2021 3:51:00 PM

---

Shane, I was able to review both the study plan and the set of maps that you provided in the two, separate emails. The plan looks good for the purpose of this bat presence/absence study. Thanks for running it by us, and good luck with the survey!

Feel free to email or call if further discussion would be helpful.

David Pelren  
Fish and Wildlife Biologist  
Ecological Services  
U.S. Fish and Wildlife Service  
446 Neal St.  
Cookeville, TN 38501  
office phone: 931-525-4974  
mobile phone: 931-261-5844

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---

**From:** Shane Roberts <[sroberts@jacksongroupco.com](mailto:sroberts@jacksongroupco.com)>  
**Sent:** Thursday, June 17, 2021 3:03 PM  
**To:** Pelren, David <[david\\_pelren@fws.gov](mailto:david_pelren@fws.gov)>  
**Subject:** RE: [EXTERNAL] Cumberland Project

Please see attached.

Shane

Shane Roberts | Vice President | T +1 859.200.6242 | [sroberts@jacksongroupco.com](mailto:sroberts@jacksongroupco.com)

---

**From:** Pelren, David <[david\\_pelren@fws.gov](mailto:david_pelren@fws.gov)>  
**Sent:** Thursday, June 17, 2021 4:01 PM  
**To:** Shane Roberts <[sroberts@jacksongroupco.com](mailto:sroberts@jacksongroupco.com)>  
**Subject:** Re: [EXTERNAL] Cumberland Project

Shane, my access to the dropbox is being blocked, and I'm having trouble downloading the attachment. Is there a way that you could quickly remove maps and re-send it?

-Dave Pelren

---

**From:** Shane Roberts <[sroberts@jacksongroupco.com](mailto:sroberts@jacksongroupco.com)>

**Sent:** Thursday, June 17, 2021 1:42 PM

**To:** Pelren, David <[david\\_pelren@fws.gov](mailto:david_pelren@fws.gov)>

**Subject:** RE: [EXTERNAL] Cumberland Project

David-

I have attached study plan and provided link below. I really appreciate your help with this.

[https://www.dropbox.com/s/9e7v1px7822f2lc/2021\\_06\\_02\\_Cumberland\\_Pipeline\\_Project\\_Bat\\_Mist\\_Net\\_Survey\\_Study\\_Plan\\_USFWS.pdf?dl=0](https://www.dropbox.com/s/9e7v1px7822f2lc/2021_06_02_Cumberland_Pipeline_Project_Bat_Mist_Net_Survey_Study_Plan_USFWS.pdf?dl=0)

Thanks,

Shane

Shane Roberts | Vice President | T +1 859.200.6242 | [sroberts@jacksongroupco.com](mailto:sroberts@jacksongroupco.com)

---

**From:** Pelren, David <[david\\_pelren@fws.gov](mailto:david_pelren@fws.gov)>

**Sent:** Thursday, June 17, 2021 3:39 PM

**To:** Shane Roberts <[sroberts@jacksongroupco.com](mailto:sroberts@jacksongroupco.com)>

**Subject:** RE: [EXTERNAL] Cumberland Project

Sure, you might give a dropbox link a try too, along with an email.

-Dave

---

**From:** Shane Roberts <[sroberts@jacksongroupco.com](mailto:sroberts@jacksongroupco.com)>

**Sent:** Thursday, June 17, 2021 2:35 PM

**To:** Pelren, David <[david\\_pelren@fws.gov](mailto:david_pelren@fws.gov)>

**Subject:** RE: [EXTERNAL] Cumberland Project

David-

The study plan may be too large to email because of maps but I will try and send it to you. Can I send you a dropbox link?

Thanks,

Shane

Shane Roberts | Vice President | T +1 859.200.6242 | [sroberts@jacksongroupco.com](mailto:sroberts@jacksongroupco.com)

---

**From:** Pelren, David <[david\\_pelren@fws.gov](mailto:david_pelren@fws.gov)>  
**Sent:** Thursday, June 17, 2021 3:33 PM  
**To:** Shane Roberts <[sroberts@jacksongroupco.com](mailto:sroberts@jacksongroupco.com)>  
**Subject:** RE: [EXTERNAL] Cumberland Project

Shane, I'll be wrapping up my work day in just a bit and will be off tomorrow. If you'll send that study plan to me at this email box, I'll see what I can do this afternoon.

David Pelren  
Fish and Wildlife Biologist  
Ecological Services  
U.S. Fish and Wildlife Service  
446 Neal St.  
Cookeville, TN 38501  
office phone: 931-525-4974  
mobile phone: 931-261-5844

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---

**From:** Shane Roberts <[sroberts@jacksongroupco.com](mailto:sroberts@jacksongroupco.com)>  
**Sent:** Thursday, June 17, 2021 2:29 PM  
**To:** Pelren, David <[david\\_pelren@fws.gov](mailto:david_pelren@fws.gov)>  
**Subject:** [EXTERNAL] Cumberland Project

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Hey David-

I hope all is well. I believe you have been speaking with Rachel Bell in regards to the bat survey study plan that was submitted for the Cumberland Project. The Jackson Group prepared the study plan and will also be conducting the surveys. As you know to complete a project of this size we need as much time as we can get due to weather and other unforeseen issues. We were hoping to start the surveys on Monday but after talking to Rachel today that doesn't seem like that is going to happen.

Our TWRA approval is pending signature, so I would really appreciate any assistance you could give us in getting out as soon as possible. If you have any questions or need anything please let me know.

Thank you and have a great evening!

Shane

Shane Roberts | Vice President | T +1 859.200.6242 | [sroberts@jacksongroupco.com](mailto:sroberts@jacksongroupco.com)

**From:** [Shane Roberts](#)  
**To:** [Pelren, David](#)  
**Subject:** RE: [EXTERNAL] Cumberland Project  
**Date:** Thursday, June 17, 2021 2:45:58 PM  
**Attachments:** [2021\\_06\\_02\\_Cumberland\\_Pipeline\\_Project\\_Bat\\_Mist\\_Net\\_Survey\\_Study\\_Plan\\_USFWS.pdf](#)

---

David-

I have attached study plan and provided link below. I really appreciate your help with this.

[https://www.dropbox.com/s/9e7v1px7822f2lc/2021\\_06\\_02\\_Cumberland\\_Pipeline\\_Project\\_Bat\\_Mist\\_Net\\_Survey\\_Study\\_Plan\\_USFWS.pdf?dl=0](https://www.dropbox.com/s/9e7v1px7822f2lc/2021_06_02_Cumberland_Pipeline_Project_Bat_Mist_Net_Survey_Study_Plan_USFWS.pdf?dl=0)

Thanks,

Shane

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**From:** Pelren, David <david\_pelren@fws.gov>  
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**To:** Shane Roberts <sroberts@jacksongroupco.com>  
**Subject:** RE: [EXTERNAL] Cumberland Project

Sure, you might give a dropbox link a try too, along with an email.

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**To:** Pelren, David <[david\\_pelren@fws.gov](mailto:david_pelren@fws.gov)>  
**Subject:** RE: [EXTERNAL] Cumberland Project

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**Sent:** Thursday, June 17, 2021 3:33 PM  
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**Subject:** RE: [EXTERNAL] Cumberland Project

Shane, I'll be wrapping up my work day in just a bit and will be off tomorrow. If you'll send that study plan to me at this email box, I'll see what I can do this afternoon.

David Pelren  
Fish and Wildlife Biologist  
Ecological Services  
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446 Neal St.  
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Hey David-

I hope all is well. I believe you have been speaking with Rachel Bell in regards to the bat survey study plan that was submitted for the Cumberland Project. The Jackson Group prepared the study plan and will also be conducting the surveys. As you know to complete a project of this size we need as much time as we can get due to weather and other unforeseen issues. We were hoping to start the surveys on Monday but after talking to Rachel today that doesn't seem like that is going to happen. Our TWRA approval is pending signature, so I would really appreciate any assistance you could give

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Thank you and have a great evening!

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**From:** [Pelren, David](#)  
**To:** [Michael.Letson@kindermorgan.com](mailto:Michael.Letson@kindermorgan.com)  
**Cc:** [Rachel.bell@cardno.com](mailto:Rachel.bell@cardno.com); [ecburton@tva.gov](mailto:ecburton@tva.gov); [Tennessee ES, FWS](#); [Sikula, Nicole R](#)  
**Subject:** FWS #2021-CPA-0484 / TA-1019 TN Gas Pipeline Company Cumberland project  
**Date:** Wednesday, July 21, 2021 11:15:00 AM

---

Mr. Mike Letson  
Permitting Compliance Lead Specialist  
Kinder Morgan  
1001 Louisiana Street  
Houston, Texas 77002

Mr. Letson -

Thank you for coordinating with us to address the potential for environmental impacts relative to a potential natural gas pipeline project. We have reviewed the email that you sent on June 7, 2021, with a letter of the same date and supporting materials. This project would involve installation of a gas pipeline in Dickson, Houston, and Stewart Counties, Tennessee, (FWS #2021-CPA-0484 / TA-1019). We understand that the 32-mile pipeline would facilitate retirement of Tennessee Valley Authority's existing coal-fired power production units at the Cumberland Fossil Plant in Stewart County. You included the following list of species (generated during a search of the Fish and Wildlife Service's Information for Planning and Consultation system) that could potentially be affected by the proposed project: gray bat (*Myotis grisescens*), Indiana bat (*Myotis sodalis*), northern long-eared bat (*Myotis septentrionalis*), rabbitsfoot (*Quadrula cylindrica*), tan riffleshell (*Epioblasma walkeri*), Price's potato-bean (*Apios priceana*), and Short's bladderpod (*Physaria globosa*). You are partnering with Cardno, Inc. to evaluate effects upon threatened and endangered species, and you requested preliminary input from us about potential impacts to federally listed species.

We provided recent input regarding a bat survey plan from Mr. Shane Roberts, with the Jackson Group, in order to facilitate netting during the summer of 2021. We look forward to review of the results of that survey effort. Based on distance of the project area from records of sites known to be occupied by federally listed species, we are not aware of other species of concern (including the mussels and plants specified above) that would reasonably be expected to occupy the anticipated area of impact. We recognize that standard conservation measures such as erosion control practices will be incorporated into the project plan. Because of the magnitude of this project and its potential to aquatic resources along multiple waterways, we emphasize the need for proper implementation of those measures.

We look forward to further coordination with you regarding this project proposal. Feel free to contact me for discussion as the project plan develops.

David Pelren  
Fish and Wildlife Biologist  
Ecological Services  
U.S. Fish and Wildlife Service  
446 Neal St.

Cookeville, TN 38501

office phone: 931-525-4974

mobile phone: 931-261-5844

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**From:** [Pelren, David](#)  
**To:** [bdink@frontiernet.net](mailto:bdink@frontiernet.net)  
**Cc:** [Jason Wisniewski](#)  
**Subject:** RE: [EXTERNAL] Study plan for TN Gas pipeline mussel survey  
**Date:** Friday, September 3, 2021 9:03:00 AM

---

Barb –

I have reviewed the proposed mussel survey plan that you provided this morning (September 3, 2021) for the TN Gas Pipeline project in Dickson and Houston Counties, Tennessee (FWS #2021-CPA-0484 / TA-1019). The description of proposed methodology for mussel searches is rather brief - "At each stream location, a survey team of three will start the survey at the downstream end of the reach and work upstream bank to bank." Considering the needs for the survey (including the streams to be surveyed), however, we have confidence in the ability of Mr. Hubbs' and his team to exhibit due diligence in the effort to document presence/likely absence and abundance of the tan riffleshell and rabbitsfoot at each of the nine survey sites. The Fish and Wildlife Service supports the survey plan as proposed.

Thank you for this opportunity to review the survey plan, and feel free to contact me with any questions. Good luck on the survey!

David Pelren  
Fish and Wildlife Biologist  
Ecological Services  
U.S. Fish and Wildlife Service  
446 Neal St.  
Cookeville, TN 38501  
office phone: 931-525-4974  
mobile phone: 931-261-5844

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**From:** [bdink@frontiernet.net](mailto:bdink@frontiernet.net) <[bdink@frontiernet.net](mailto:bdink@frontiernet.net)>  
**Sent:** Friday, September 3, 2021 4:34 AM  
**To:** Pelren, David <[david\\_pelren@fws.gov](mailto:david_pelren@fws.gov)>; Jason Wisniewski <[jason.wisniewski@tn.gov](mailto:jason.wisniewski@tn.gov)>  
**Subject:** [EXTERNAL] Study plan for TN Gas pipeline mussel survey

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Hi David and Jason,

Dinkins Biological Consulting has contracted with TN Gas Pipeline to conduct a series of mussel surveys in Dickson and Houston counties in association with a proposed gas pipeline. We will be using Dan Hubbs as the permitted biologist. I have attached a cover letter and the study plan for your comments and guidance.

Thanks

Barb Dinkins

Dinkins Biological Consulting, LLC

(865) 755-7110 cell

[bdink@frontiernet.net](mailto:bdink@frontiernet.net)

**From:** [Pelren, David](#)  
**To:** [bdink@frontiernet.net](mailto:bdink@frontiernet.net); [Jason Wisniewski](#)  
**Subject:** RE: [EXTERNAL] permits  
**Date:** Tuesday, September 7, 2021 7:02:00 AM

---

Thanks for this information, Barb. Yes, Don's authorization for collection as a part of the Cumberland River Aquatic Center permit fulfills his federal permitting needs.

David Pelren  
Fish and Wildlife Biologist  
Ecological Services  
U.S. Fish and Wildlife Service  
446 Neal St.  
Cookeville, TN 38501  
office phone: 931-525-4974  
mobile phone: 931-261-5844

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**From:** [bdink@frontiernet.net](mailto:bdink@frontiernet.net) <[bdink@frontiernet.net](mailto:bdink@frontiernet.net)>  
**Sent:** Monday, September 6, 2021 5:06 AM  
**To:** [Jason Wisniewski <jason.wisniewski@tn.gov>](mailto:jason.wisniewski@tn.gov); [Pelren, David <david\\_pelren@fws.gov>](mailto:david_pelren@fws.gov)  
**Subject:** [EXTERNAL] permits

**This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.**

Jason and Dave  
Here are the permits Don sent me. Please let me know if we can use him for the project.  
Thanks  
Barb

Dinkins Biological Consulting, LLC

(865) 755-7110 cell  
[bdink@frontiernet.net](mailto:bdink@frontiernet.net)

**From:** [Pelren, David](#)  
**To:** [bdink@frontiernet.net](mailto:bdink@frontiernet.net)  
**Cc:** [Jason Wisniewski](#)  
**Subject:** RE: [EXTERNAL] Study Plan  
**Date:** Tuesday, September 7, 2021 12:06:00 PM

---

Yes, the Fish and Wildlife Service approves the study plan. As indicated in my recent message regarding the plan: *"I have reviewed the proposed mussel survey plan that you provided this morning (September 3, 2021) for the TN Gas Pipeline project in Dickson and Houston Counties, Tennessee (FWS #2021-CPA-0484 / TA-1019). The description of proposed methodology for mussel searches is rather brief - "At each stream location, a survey team of three will start the survey at the downstream end of the reach and work upstream bank to bank." Considering the needs for the survey (including the streams to be surveyed), however, we have confidence in the ability of Mr. Hubbs' and his team to exhibit due diligence in the effort to document presence/likely absence and abundance of the tan riffleshell and rabbitsfoot at each of the nine survey sites. The Fish and Wildlife Service supports the survey plan as proposed."*

Again, feel free to contact me with any questions.

David Pelren  
Fish and Wildlife Biologist  
Ecological Services  
U.S. Fish and Wildlife Service  
446 Neal St.  
Cookeville, TN 38501  
office phone: 931-525-4974  
mobile phone: 931-261-5844

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**From:** [bdink@frontiernet.net](mailto:bdink@frontiernet.net) <[bdink@frontiernet.net](mailto:bdink@frontiernet.net)>  
**Sent:** Tuesday, September 7, 2021 11:33 AM  
**To:** Pelren, David <[david\\_pelren@fws.gov](mailto:david_pelren@fws.gov)>; Jason Wisniewski <[jason.wisniewski@tn.gov](mailto:jason.wisniewski@tn.gov)>  
**Subject:** [EXTERNAL] Study Plan

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Jason and David,  
Mike Letson at Kinder Morgan, has requested written approval from USFWS and TWRA for the study plan. Can you confirm by a response to this email that it is approved?

Thanks

Barb Dinkins

Dinkins Biological Consulting, LLC

(865) 755-7110 cell

[bdink@frontiernet.net](mailto:bdink@frontiernet.net)

**From:** [Pelren, David](#)  
**To:** [Letson, Michael A \(Mike\)](#); [Miller, Mary](#)  
**Cc:** [Amos, Blake](#); [Tennessee ES, FWS](#); [Sikula, Nicole R](#)  
**Subject:** FWS #2022-0011291 Cumberland gasline consultation response  
**Date:** Friday, March 11, 2022 10:09:00 AM  
**Attachments:** [2022-0011291\\_TGP Cumberland gasline NLAA reply Dickson Houston Stewart Cos signed dwp.pdf](#)  
[image001.png](#)

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Our response to your request for concurrence with species determinations is attached. Feel free to contact me with any questions.

David Pelren  
Fish and Wildlife Biologist  
Ecological Services  
U.S. Fish and Wildlife Service  
446 Neal St.  
Cookeville, TN 38501  
office phone: 931-525-4974  
mobile phone: 931-261-5844

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**From:** Miller, Mary <Mary.Miller@stantec.com>  
**Sent:** Tuesday, February 22, 2022 8:05 AM  
**To:** Pelren, David <david\_pelren@fws.gov>  
**Cc:** Amos, Blake <Blake\_Amos@kindermorgan.com>  
**Subject:** RE: [EXTERNAL] RE: David Pelren has shared an upload link with you

David,

We appreciate the confirmation and look forward to your comments.

Regards,

**Mary L Miller** CHMM  
Senior Principal, Sector Leader, Oil & Gas Central US

Direct: 713-587-5799  
Mobile: 281-740-0538  
[mary.miller@stantec.com](mailto:mary.miller@stantec.com)

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Houston TX 77002-4916

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**From:** Pelren, David <[david\\_pelren@fws.gov](mailto:david_pelren@fws.gov)>  
**Sent:** Tuesday, February 22, 2022 7:59 AM  
**To:** Miller, Mary <[Mary.Miller@stantec.com](mailto:Mary.Miller@stantec.com)>  
**Subject:** RE: [EXTERNAL] RE: David Pelren has shared an upload link with you

Yes, Mary – I received both files. Thanks. We should be able to provide comments within the next 30 days, and hopefully sooner. Feel free to contact me for any discussion.

David Pelren  
Fish and Wildlife Biologist  
Ecological Services  
U.S. Fish and Wildlife Service  
446 Neal St.  
Cookeville, TN 38501  
office phone: 931-525-4974  
mobile phone: 931-261-5844

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**From:** Miller, Mary <[Mary.Miller@stantec.com](mailto:Mary.Miller@stantec.com)>  
**Sent:** Friday, February 18, 2022 3:51 PM  
**To:** Pelren, David <[david\\_pelren@fws.gov](mailto:david_pelren@fws.gov)>  
**Subject:** [EXTERNAL] RE: David Pelren has shared an upload link with you  
**Importance:** High

**This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.**

Good afternoon Dave. Can you confirm that you have received the two files that I just uploaded?

Thanks,

**Mary L Miller** CHMM  
Senior Principal, Sector Leader, Oil & Gas Central US  
Direct: 713-587-5799  
Mobile: 281-740-0538  
[mary.miller@stantec.com](mailto:mary.miller@stantec.com)

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**From:** David Pelren <[David\\_Pelren@fws.gov](mailto:David_Pelren@fws.gov)>  
**Sent:** Friday, February 18, 2022 3:32 PM  
**To:** Miller, Mary <[Mary.Miller@stantec.com](mailto:Mary.Miller@stantec.com)>  
**Subject:** David Pelren has shared an upload link with you



David Pelren has shared files with you

via DatAnywhere

Fileshare will guide you through uploading files for me to retrieve

Each time you click on the link, a PIN code for accessing the files will be sent to your email address.

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**Message ID:** 7OPg

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## United States Department of the Interior

### FISH AND WILDLIFE SERVICE

Tennessee Ecological Services Field Office  
446 Neal Street  
Cookeville, Tennessee 38501  
(931) 528-6481



March 25, 2022

Ms. Kimberly D. Bose, Secretary  
Federal Energy Regulatory Commission  
888 First Street NE, Room 1A  
Washington DC 20426

Attn: OEP – Gas 4, PJ – 11.4

Subject: FWS #2022-0011291. Environmental Review New Posting Notification:  
Department of Interior ER22/0092 Notice of Scoping Comments for the  
Cumberland Project, Tennessee Gas Pipeline Company, LLC. FERC Docket No.  
PF22-2-000, Dickson, Houston, and Stewart Counties, Tennessee.

Dear Ms. Bose,

U.S. Fish and Wildlife Service (Service) personnel have reviewed your “Notice of Scoping Period Requesting Comments on Environmental Issues for the Planned Cumberland Project”. This project would involve installation of approximately 32 miles of 30-inch diameter natural gas pipeline to facilitate the proposed replacement of coal-fired units at the Cumberland Fossil Plant with a gas-based system. The pipeline would generally follow an existing Tennessee Valley Authority electric transmission line right-of-way, and the project would also include installation of a new pressure regulation station on the southeast end of the pipeline, a meter station at the northwest end of the line, new in-line inspection traps at each end of the line, and a new mainline valve at an intermediate location along the line.

As a designated non-federal representative for the Federal Energy Regulatory Commission, Tennessee Gas Pipeline Company, LLC (TGP) has consulted with the Service, evaluating approximately 1,189 acres relative to potential impacts to federally listed species. Information about species that could potentially be affected by the project was generated during a search of the Service’s Information for Planning and Consultation (IPaC) system. Those species are: the gray bat (*Myotis grisescens*), Indiana bat (*Myotis sodalis*), northern long-eared bat (*Myotis septentrionalis*), rabbitsfoot (*Quadrula cylindrica cylindrica*), tan riffleshell (*Epioblasma florentina walkeri*), Price’s potato-bean (*Apios priceana*), and Short’s bladderpod (*Physaria globosa*). Surveys for the bats, mussels, and plants specified in the IPaC list all resulted in negative findings (with exception of the gray bat), and we understand that caves have not been

documented in the vicinity of the project area. Based on the survey findings, habitat conditions, and the obligation to implement conservation measures (including standard water quality control measures), TGP has determined that the project is not likely to adversely affect (NLAA) any of these seven species. TGP requested our concurrence with that determination. Also - in order to minimize effects to nesting birds, TGP proposed clearing of trees outside of the period of April 15 to August 1 and maintenance mowing outside of the period of April 15 to July 1.

Pedestrian field surveys of the study area were conducted between June and September 2021 to assess potential habitats for bats, mussels, and plants; and all suitable habitats were searched for Price's Potato-bean and Short's bladderpod during that timeframe. That effort did not result in the finding of either species.

Bat netting surveys were conducted between June 21 and August 13, 2021. Forty-seven sample sites were located at forested sites along the entire length of the project route in accordance with the 2020 Range-Wide Indiana Bat Summer Survey Guidelines. The survey resulted in captures of 120 individuals of four common species (big brown bat, evening bat, eastern red bat, and tricolored bat) and nine gray bats. Gray bat roost sites are not known to occur within 0.5 mile of the project route, and TGP has determined that standard sediment control measures will sufficiently address the potential for impacts to the aquatic invertebrate forage base upon which the gray bat relies. Note, in regard to "lifespan" of the bat survey data, the results are valid for a period of five years after completion of the survey (i.e., through March 2027).

Mussels were surveyed at each stream crossing that exhibits potential for the presence of mussels. Eight sites were surveyed on September 8 and 9, 2021. All suitable substrate along each crossing site was disturbed in order to document, thorough sampling and visual searches, the presence of mussel shells. Neither the rabbitsfoot nor tan riffleshell was found during the survey; only the painted creekshell, a common species, was documented.

Based on location of the project site, survey findings, and implementation of conservation measures as discussed, the Service provided a statement of concurrence on the NLAA determinations for each of the seven species. The Service considers that concurrence statement to conclude the coordination requirements of the Endangered Species Act (ESA) of 1973, as amended. Further coordination will be necessary if (1) new information reveals impacts of the proposed action that may affect listed species or critical habitat in a manner not previously considered, (2) the proposed action is subsequently modified to include activities which were not considered during this consultation, or (3) new species are listed or critical habitat designated that might be affected by the proposed action.

Finally, although not required in accordance with requirements under the ESA, we have recommended that clearing of trees and maintenance mowing be conducted during the period of October 15 – March 31 to the greatest extent feasible (while adhering to standard sediment control measures during the rainy season) or, at a minimum, to conduct these activities as late in summer as feasible. This would benefit bats and migratory birds that would potentially be roosting / nesting within the project area. Also, we recommend that revegetation of the project area be conducted in a manner that maximizes benefits to pollinators (e.g., use of milkweed to

enhance habitat for the monarch butterfly). Otherwise, we have no comments regarding environmental issues.

We appreciate the opportunity to address potential environmental impacts through your scoping process. If you have questions, please contact David Pelren at 931-261-5844 or by email at [david\\_pelren@fws.gov](mailto:david_pelren@fws.gov).

Sincerely,

Field Supervisor

**From:** [Pelren, David](#)  
**To:** [ERs, FWS HQ](#)  
**Cc:** [Tennessee ES, FWS](#); [Sikula, Nicole R](#)  
**Subject:** FWS #2022-0011291 Cumberland gasline FWS comments to FERC scoping  
**Date:** Tuesday, March 29, 2022 10:57:00 AM  
**Attachments:** [2022-0011291 FERC Cumberland gasline FWS reply.pdf](#)

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The attached comments have been provided to FERC through its online e-filing system regarding ER New Posting Notification ER22/0092 – Notice of SCOPING Comments for the Cumberland Project by Tennessee Gas Pipeline Company, LLC (TGP), FERC No. PF22-2-000, Dickson, Houston, and Steward [Stewart] counties, Tennessee. Feel free to contact me with any questions.

David Pelren  
Fish and Wildlife Biologist  
Ecological Services  
U.S. Fish and Wildlife Service  
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