

Appendix G – Protected Species Habitat Assessment

Threatened & Endangered Species - Habitat Assessment & Effects Determinations

**FAP NO. FLAP-FLAP (16) – SOUTHWEST TRAIL
ARDOT Job 061562**

USFWS Consultation Code: 04ER1000-2019-SLI-0651



Prepared by:



4701 Northshore Drive
North Little Rock, AR 72118
September 9, 2019

Garver Project No.: 17019260



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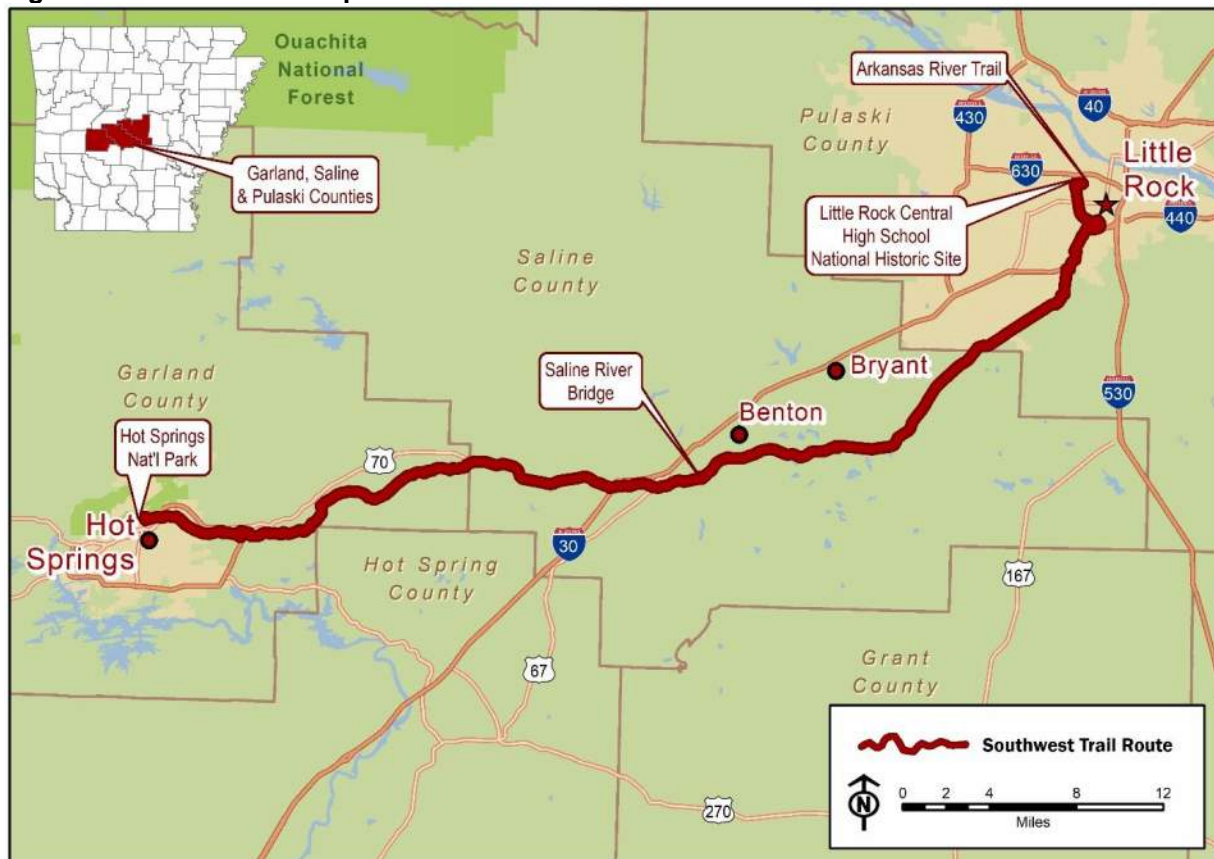


1.0 Introduction

The purpose of the project is to provide a 10-foot to 14-foot wide multi-use trail connecting Hot Springs National Park in Hot Spring, Arkansas to the Arkansas River Trail System in Little Rock, Arkansas (**Figure 1** and **Attachment A**). The overall project is approximately 60+ miles in length, along which the trail will connect to several other parks/trails including the Old River Bridge on the Saline River and the Little Rock Central High School Historic Site. The project includes evaluating several alternative alignments in an Environmental Assessment (EA) as part of complying with the National Environmental Policy Act (NEPA). The project is receiving federal funding and federal permits, and the Federal Highway Administration (FHWA) is acting as the lead Federal agency. Detailed evaluations of the alternative alignments carried forward for review are provided in the EA, which will be available upon request after the Draft EA has been approved by FHWA. Additionally, shapefiles or a KMZ of the study area can be provided upon request.

This document serves to provide information on the presence of suitable habitat for the federally-protected threatened and endangered species listed by the U.S. Fish and Wildlife Service (USFWS) Official Species list for the Southwest Trail project extending through Garland, Saline and Pulaski Counties in Arkansas.

Figure 1: Site Location Map





2.0 Methodology

Prior to the site visit, the Official Species List was obtained from USFWS. A list of species of concern was also obtained from the Arkansas Natural Heritage Commission (ANHC). However, at present, Arkansas does not have a law providing special state protection to species considered endangered or threatened in Arkansas, thus, these species were not considered in the analysis of this document. Information on known habitat types were reviewed and additional information required was researched. The USFWS 2016 Northern Long-eared Bat (NLEB) Consultation Area Map and Key to the NLEB 4(d) Rule were also utilized. These documents are provided in **Attachment B**.

Field investigations of the project area were performed by Colby Marshall and Cassie Schmidt of Garver between May 13 and June 13, 2019, during which the study area was walked and the habitat was visually inspected. No official surveys for the federally-listed species were conducted. Abnormal weather conditions (higher precipitation than typical) preceded and occurred during the course of the site visits. Much of the area was experiencing flooding associated with the Arkansas River during the May site visits. Hydrology during the June 11-13 site visit was beginning to return to normal conditions with much of the flood waters receding.

The study area (approximately 450 acres in total), which consists of a 50-foot-wide corridor centered on each of the proposed alignments, was visually inspected for suitable habitat for those federal and state-protected species. Habitat details and assessments are provided below in **Table 1**. Photographs and site notes were recorded. Representative photographs of the various communities and habitat types encountered are provided in **Attachment C**.

3.0 Results

A total of 11 threatened, endangered, or candidate species are on the USFWS Official Species List for the proposed project. These species included 1 bat, 2 birds, 4 mussels, 1 insect, and 3 flowering plants. No critical habitat occurs in the study area. Based on habitat observed in the study area, suitable habitat is present for 7 of the 11 species listed by USFWS.

For the northern long-eared bat, any incidental take from tree removal activities would be not be prohibited by the final 4(d) Rule as the project does not occur near a known maternity roost tree or within ¼ mile of a known hibernaculum and will follow seasonal tree clearing (i.e., done in the winter months) restrictions. Impacts to listed mussel species are expected to be minimal due to small impact zones, the use of best management practices (BMPs) and potentially other mitigation methods such as avoiding spawning season. However, exact impacts and the construction schedule are not yet known but will be coordinated with USFWS and ARDOT prior to construction.



Table 1: Habitat and Effects Determinations

Species and/or Critical Habitat	Habitat Requirements	Habitat Present within Study Area	Effects Determinations
<p>Northern Long-eared Bat</p> <p>(<i>Myotis septentrionalis</i>)</p>	<p>Northern long-eared bats spend winter hibernating in caves and mines. During the summer they roost singly or in colonies underneath bark, in cavities, or in crevices of both live and dead trees. Northern Long-eared Bats have also been observed roosting in man-made structures such as buildings, barns, sheds, etc.</p>	<p>No caves were observed within or near the project site. However, potentially suitable habitats (e.g., man-made structures and live and dead trees with crevices, cavities, and/or exfoliating bark) are present within the study area. Bat chirping was heard within one bridge structure in North Little Rock (see photograph 6) located at lat./long.: 34.732016, -92.302881. The trail would pass below this bridge and no physical disturbance to the bridge would occur. Approximately 60% of the 60-mile long trail occurs within wooded areas that may contain suitable summer roosting habitat for the NLEB. Although, any incidental take from tree removal activities would be not be prohibited by the final 4(d) Rule as the project does not occur near a known maternity roost tree or within ¼ mile of a known hibernaculum and will follow seasonal tree clearing restrictions (i.e., winter tree clearing only). A May Affect verification letter attached.</p>	<p>May affect, not likely to adversely affect.</p>
<p>Least Tern</p> <p>(<i>Sterna antillarum</i>)</p>	<p>Least terns nest on barren to sparsely vegetated sandbars along rivers, sand and gravel pits, lake and reservoir shorelines, and occasionally gravel rooftops. They hover over and dive into standing or flowing water to catch small fish.</p>	<p>The Saline River is the only major river in the study area and no barren to sparsely vegetated sandbars are present at the area where the SWT will cross this river. Additionally, no sand or gravel pits, lake or reservoir shorelines, or gravel rooftops occur within or adjacent to the project site.</p>	<p>No effect.</p>
<p>Piping Plover</p> <p>(<i>Charadrius melodus</i>)</p>	<p>Piping plovers are usually found along sandbars of major rivers, salt flats, and mudflats of reservoirs.</p>	<p>The Saline River is the only major river in the study area and no sandbars are present at the area where the SWT will cross this river. No salt flats or mudflats of reservoirs occur within or adjacent to the project site.</p>	<p>No effect.</p>
<p>Arkansas Fatmucket</p> <p>(<i>Lampsilis powellii</i>)</p>	<p>The Arkansas fatmucket prefers deep pools that possess sand, sand-gravel, sand-cobble, or sand-rock with sufficient flow to periodically remove organic detritus, leaves, and other debris, and is often found adjacent to islands of water willow (<i>Justicia Americana</i>). It is not generally found in riffles nor does it occur in impoundments.</p>	<p>According to USFWS, the Arkansas Fatmucket is known to occur in the mainstream of the Saline River. Potential habitat within the Study Area may be present within the Saline River.</p>	<p>May affect, not likely to adversely affect.</p>



Species and/or Critical Habitat	Habitat Requirements	Habitat Present within Study Area	Effects Determinations
Pink Mucket (<i>Lampsilis abrupta</i>)	Pink muckets are found in mud and sand and in shallow riffles and shoals swept free of silt in major rivers and tributaries. This mussel buries itself in sand or gravel, with only the edge of its shell and its feeding siphons exposed.	According to USFWS, the pink mucket is known to occur in the Saline River. Potential habitat within the Study Area may be present within the Saline River.	May affect, not likely to adversely affect.
Rabbitsfoot (<i>Quadrula cylindrica cylindrica</i>)	Rabbitsfoot generally inhabits small- to medium-sized stream and some larger rivers. It occurs shallow water areas along the bank and in shoals with reduced water velocity. Individuals have also been found in deep water runs (9-12 ft.). Primary substrate includes gravel and sand.	Potential habitat within the Study Area may be present within the Saline River, Gulpha Creek, Middle Branch Gulpha Creek, Tenmile Creek, Hurricane Creek, and/or Fourche Creek.	May affect, not likely to adversely affect.
Winged Mapleleaf (<i>Quadrula fragosa</i>)	Winged mapleleaf are found in riffles with clean gravel, sand, or rubble bottoms and in clear, high quality water. In the past, it may also have been found in large rivers and streams on mud, mud-covered gravel, and gravel bottoms.	According to USFWS, the pink mucket is known to occur in the Saline River. Potential habitat within the Study Area may be present within the Saline River.	May affect, not likely to adversely affect.
Rattlesnake-master Borer Moth (<i>Papaipema eryngii</i>)	This species is restricted to mesic prairies and associated wetlands with a large amount of the Rattlesnake Master plant and no fire during the dormant season.	Mesic prairies and associated wetlands occur within or adjacent to the project site. No rattlesnake master plants were observed* within the study area.	May affect, not likely to adversely affect.
Harperella (<i>Ptilimnium nodosum</i>)	Harperella is found only on sunny, rocky or gravel shoals and margins of clear, swift-flowing stream sections in the Ouachita Mountains. It requires very specific conditions; shade, dry spells, too much heat, soft soil, extended periods of deep water, heavy flooding, grazing, and trampling can all quickly destroy a population.	Sunny, rocky or gravel shoals and margins of clear, swift-flowing stream sections in the Ouachita Mountains occur at several stream crossings within the study area.	May affect, not likely to adversely affect.
Missouri Bladderpod (<i>Physaria filiformis</i>)	The natural habitat of the Missouri bladderpod is primarily open limestone, dolomite, and shale glades (naturally dry, treeless areas with shallow, loose soil and large stretches of exposed rock).	No limestone or dolomitic glades were observed within or adjacent to the project site. Additionally, based on information provided by the ANHC and published by the Gulf Coastal Plains and Ozarks Landscape Conservation Cooperative, no known glades occur within the study area.	No effect.



Species and/or Critical Habitat	Habitat Requirements	Habitat Present within Study Area	Effects Determinations
Running Buffalo Clover (<i>Trifolium stoloniferum</i>)	Running buffalo clover is usually found in somewhat moist habitats with filtered sunlight and a pattern of moderate or periodic disturbance (grazing, mowing, trampling, flood scouring, etc.). It cannot tolerate full sun, full shade, or severe or prolonged disturbance.	The Running Buffalo Clover is considered by the USFWS to be extirpated in Arkansas.	No effect.

*The site investigation was intended only as a habitat assessment; no official surveys for federally-listed species were conducted.

4.0 References

Gulf Coastal Plains and Ozarks Landscape Conservation Cooperative (administrator), Jane Fitzgerald (Principal Investigator), 2014-10-30 (creation), 2017-11-13 (last Update), 2014-10-30 (creation), 2017-11-07 (last Update), 2014 (Publication), 2016 (Publication), Natural Glades in Missouri and Arkansas (2016). Available Online at: <https://gcpolcc.databasin.org/datasets/a817fa247dd3440e814282f3063c51d0>.

U.S. Fish and Wildlife Service (USFWS) Arkansas Ecological Services Field Office. 2015. Arkansas Fatmucket (*Lampsilis powellii*). Available Online at: <https://www.fws.gov/arkansas-es/Species/Mussels/arfatmucket.html>.

U.S. Fish and Wildlife Service (USFWS) Arkansas Ecological Services Field Office. 2015. Harperella (*Ptilimnium nodosum*). Available Online at: <https://www.fws.gov/arkansas-es/Species/Plants/harperella.html>.

U.S. Fish and Wildlife Service (USFWS) Arkansas Ecological Services Field Office. 2015. Pink Mucket (*Lampsilis abrupta*). Available Online at: <https://www.fws.gov/arkansas-es/Species/Mussels/pinkmucket.html>.

U.S. Fish and Wildlife Service (USFWS) Arkansas Ecological Services Field Office. 2015. Rabbitsfoot (*Theliderma cylindrica*; listed originally as *Quadrula cylindrica cylindrica*). Available Online at: <https://www.fws.gov/arkansas-es/Species/Mussels/rabbitsfoot.html>.

U.S. Fish and Wildlife Service (USFWS) Arkansas Ecological Services Field Office. 2015. Rattlesnake-Master Borer Moth (*Papaipema eryngii*). Available Online at: <https://www.fws.gov/arkansas-es/Species/inverts/RMBM.html>.

U.S. Fish and Wildlife Service (USFWS) Arkansas Ecological Services Field Office. 2015. Running Buffalo Clover (*Trifolium stoloniferum*). Available Online at: <https://www.fws.gov/arkansas-es/Species/Plants/RBC.html>.



U.S. Fish and Wildlife Service (USFWS) Arkansas Ecological Services Field Office. 2018. Missouri Bladderpod (*Physaria filiformis*). Available Online at: <https://www.fws.gov/arkansas-es/Species/Plants/missouribladderpod.html>.

U.S. Fish and Wildlife Service (USFWS) Midwest Region. 2019. Least Tern - Interior Population (*Sterna antillarum*) Fact Sheet. Available Online at: <https://www.fws.gov/midwest/endangered/birds/leasttern/IntLeastTernFactSheet.html>.

U.S. Fish and Wildlife Service (USFWS) Midwest Region. 2019. Northern Long-Eared Bat (*Myotis septentrionalis*) Fact Sheet. Available Online at: <https://www.fws.gov/Midwest/endangered/mammals/nleb/nlebFactSheet.html>.

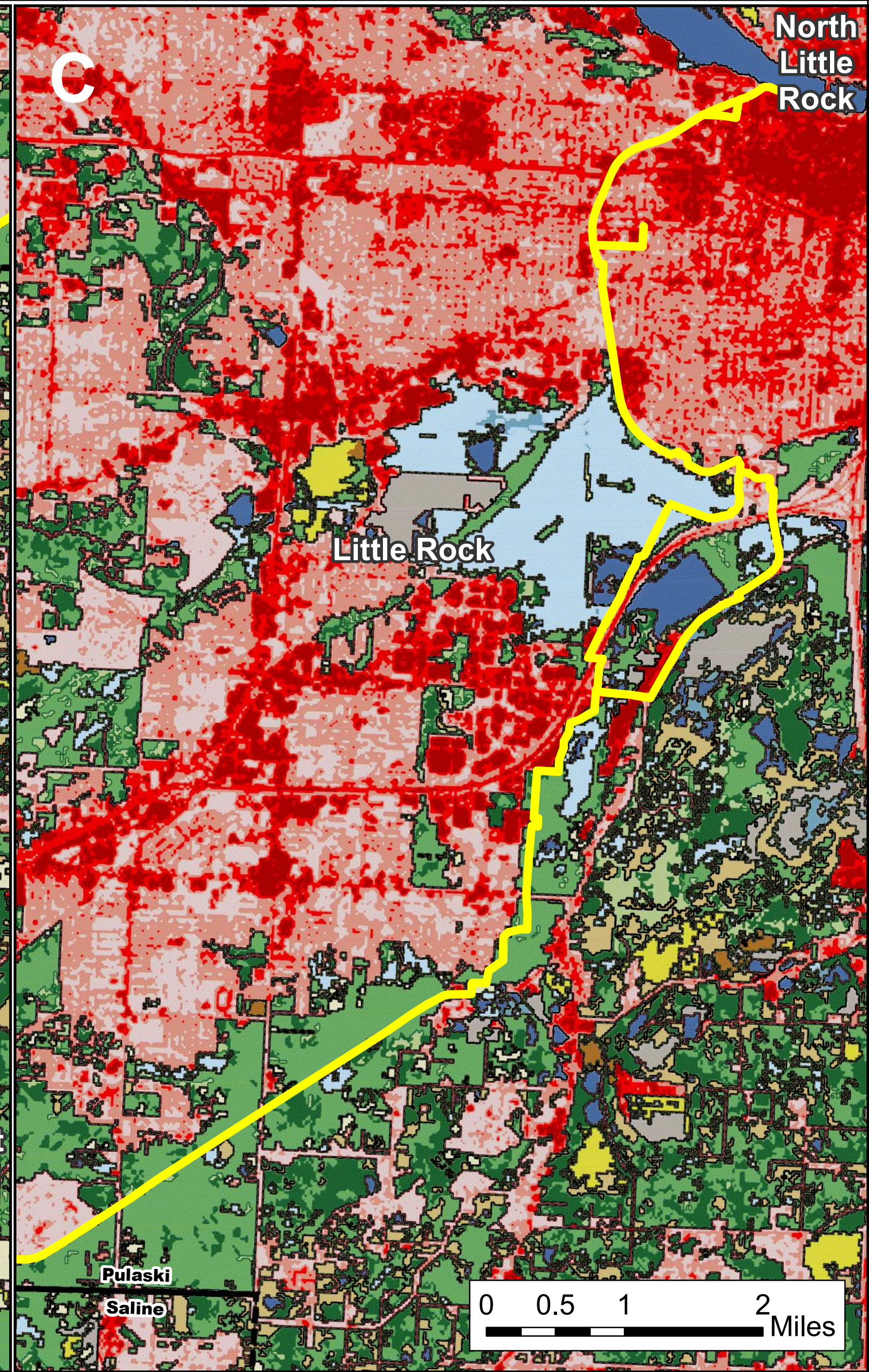
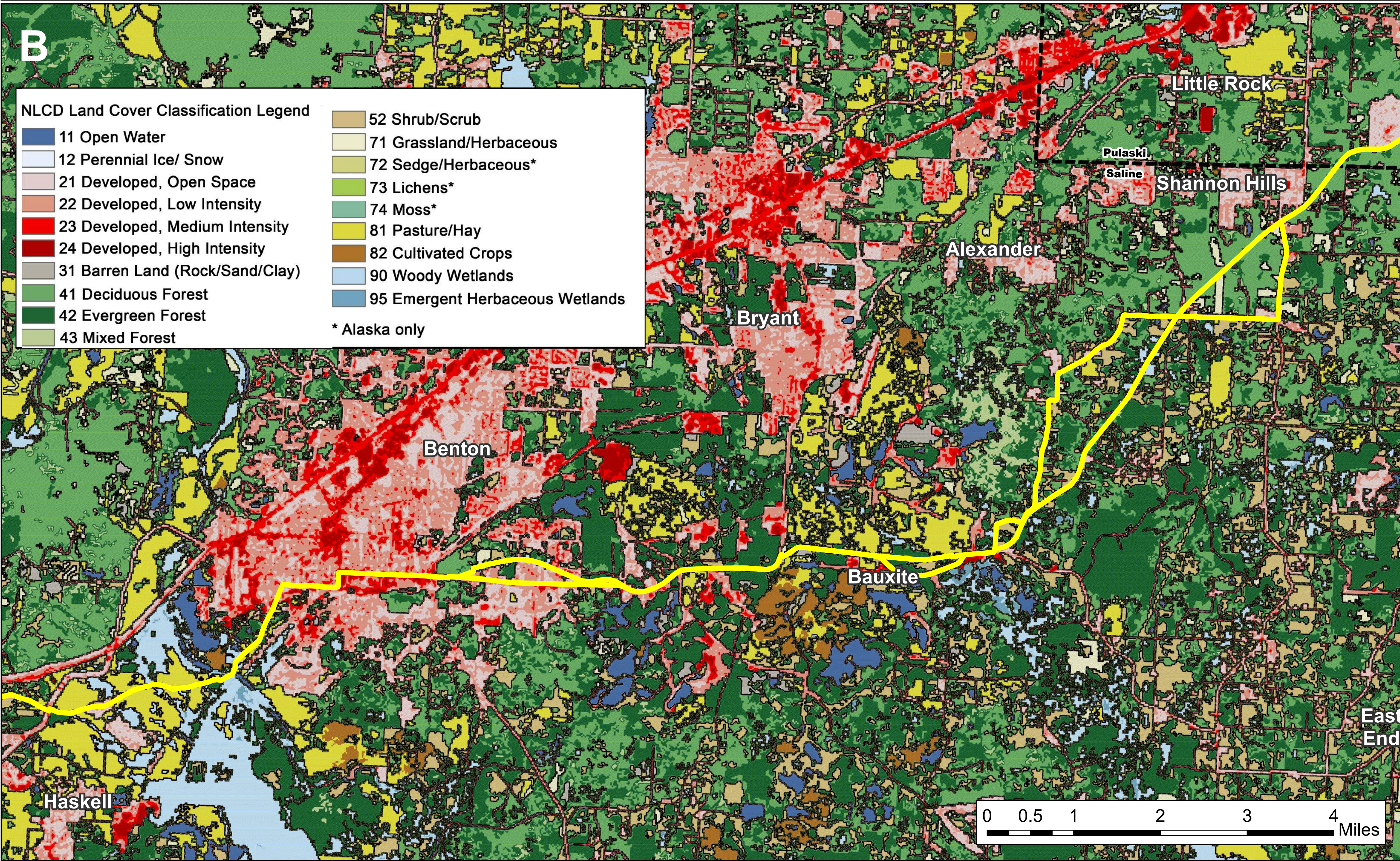
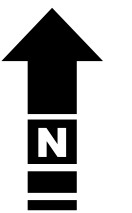
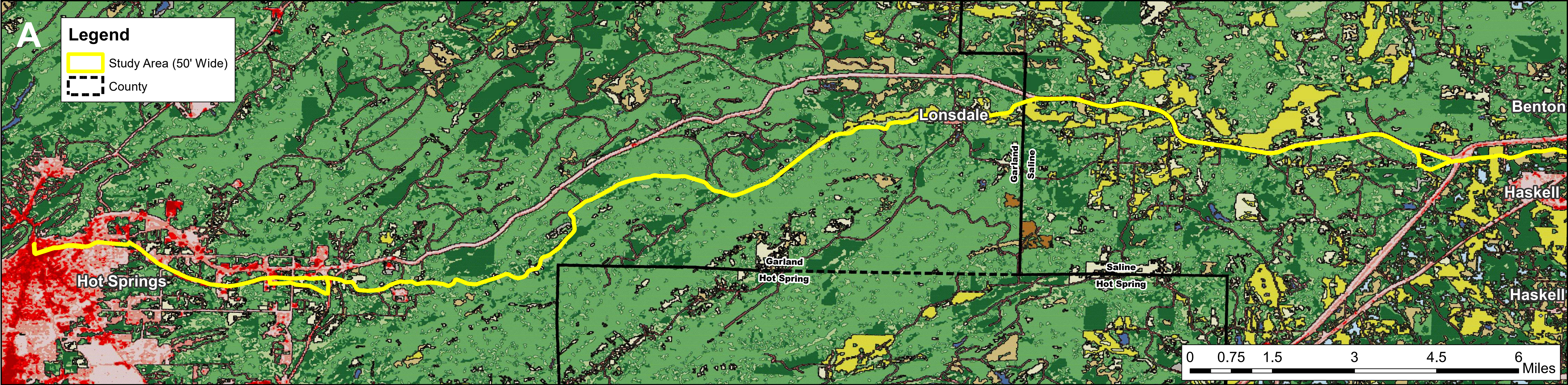
U.S. Fish and Wildlife Service (USFWS) Midwest Region. 2019. Piping Plover Fact Sheet Fact Sheet. Available Online at: <https://www.fws.gov/midwest/endangered/birds/leasttern/IntLeastTernFactSheet.html>.

U.S. Fish and Wildlife Service (USFWS) Midwest Region. 2019. Winged Mapleleaf (*Quadrula fragosa*) Fact Sheet. Available Online at: https://www.fws.gov/midwest/endangered/clams/wima/winge_fc.html.



ATTACHMENT A

National Land Cover Data Overview Map



PULASKI, GARLAND, AND SALINE COUNTIES
ARKANSAS
SOUTHWEST TRAIL SYSTEM

JOB NO.: 061562
DATE: AUGUST 2019

T&E HABITAT
ASSESSMENT -
OVERVIEW MAP

ATTACHMENT A



ATTACHMENT B

USFWS Species Lists and NLEB Consultation Map

ANHC Database Review

May Affect Verification Letter for NLEB



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Arkansas Ecological Services Field Office
110 South Amity Suite 300
Conway, AR 72032-8975
Phone: (501) 513-4470 Fax: (501) 513-4480
<http://www.fws.gov/arkansas-es>

In Reply Refer To:

August 27, 2019

Consultation Code: 04ER1000-2019-SLI-0651

Event Code: 04ER1000-2019-E-02963

Project Name: ARDOT Job No. 060562, Federal Air Project ("FAP") No. FLAP-FLAP (16) – Southwest Trail

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies endangered, threatened, 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.*). **This letter only provides an official species list and technical assistance; if you determine that listed species and/or designated critical habitat may be affected in any way by the proposed project, even if the effect is wholly beneficial, consultation with the Service will be necessary.**

If you determine that this project will have no effect on listed species and their habitat in any way, then you have completed Section 7 consultation with the Service and may use this letter in your project file or application.

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. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found on our website.

Please visit our website at <http://www.fws.gov/arkansas-es/IPaC/home.html> for species-specific guidance to avoid and minimize adverse effects to federally endangered,

threatened, proposed, and candidate species. Our web site also contains additional information on species life history and habitat requirements that may be useful in project planning.

If your project involves in-stream construction activities, oil and natural gas infrastructure, road construction, transmission lines, or communication towers, please review our project specific guidance at <http://www.fws.gov/arkansas-es/IPaC/ProjSpec.html>.

The karst region of Arkansas is a unique region that covers the **northern third of Arkansas** and we have specific guidance to conserve sensitive cave-obligate and bat species. **Please visit <http://www.fws.gov/arkansas-es/IPaC/Karst.html> to determine if your project occurs in the karst region and to view karst specific-guidance.** Proper implementation and maintenance of best management practices specified in these guidance documents is necessary to avoid adverse effects to federally protected species and often avoids the more lengthy formal consultation process.

If your species list includes any mussels, Northern Long-eared Bat, Indiana Bat, Yellowcheek Darter, Red-cockaded Woodpecker, or American Burying Beetle, your project may require a presence/absence and/or habitat survey prior to commencing project activities. Please check the appropriate species-specific guidance on our website to determine if your project requires a survey. We strongly recommend that you contact the appropriate staff species lead biologist (see office directory or species page) prior to conducting presence/absence surveys to ensure the appropriate level of effort and methodology.

Under the ESA, it is the responsibility of the Federal action agency or its designated representative to determine if a proposed action "may affect" endangered, threatened, or proposed species, or designated critical habitat, and if so, to consult with the Service further. Similarly, it is the responsibility of the Federal action agency or project proponent, not the Service, to make "no effect" determinations. If you determine that your proposed action will have "no effect" on threatened or endangered species or their respective critical habitat, you do not need to seek concurrence with the Service. Nevertheless, it is a violation of Federal law to harm or harass any federally-listed threatened or endangered fish or wildlife species without the appropriate permit.

Through the consultation process, we will analyze information contained in a biological assessment that you provide. If your proposed action is associated with Federal funding or permitting, consultation will occur with the Federal agency under section 7(a)(2) of the ESA. Otherwise, an incidental take permit pursuant to section 10(a)(1)(B) of the ESA (also known as a habitat conservation plan) is necessary to harm or harass federally listed threatened or endangered fish or wildlife species. In either case, there is no mechanism for authorizing incidental take "after-the-fact." For more information regarding formal consultation and HCPs, please see the Service's Consultation Handbook and Habitat Conservation Plans at www.fws.gov/endangered/esa-library/index.html#consultations.

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.

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 Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.**

Attachment(s):

- Official Species List

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:

Arkansas Ecological Services Field Office

110 South Amity Suite 300

Conway, AR 72032-8975

(501) 513-4470

Project Summary

Consultation Code: 04ER1000-2019-SLI-0651

Event Code: 04ER1000-2019-E-02963

Project Name: ARDOT Job No. 060562, Federal Air Project (“FAP”) No. FLAP-FLAP (16) – Southwest Trail

Project Type: TRANSPORTATION

Project Description: Garver Inc. is preparing a National Environmental Policy Act (NEPA) document for the Arkansas Department of Transportation (ARDOT) for this project. The purpose of the project is to develop a 63-mile long recreational and alternative transportation resource trail, centrally located and spanning the area from Hot Springs National Park in Garland County to the Arkansas River Trail and the Little Rock Central High School National Historic Site in Pulaski County.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/34.62552101421556N92.38484859560316W>



Counties: Garland, AR | Pulaski, AR | Saline, AR

Endangered Species Act Species

There is a total of 11 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 Fisheries¹, 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
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Birds

NAME	STATUS
Least Tern <i>Sterna antillarum</i> Population: interior pop. No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8505	Endangered
Piping Plover <i>Charadrius melodus</i> Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6039	Threatened

Clams

NAME	STATUS
Arkansas Fatmucket <i>Lampsilis powellii</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2213	Threatened
Pink Mucket (pearlymussel) <i>Lampsilis abrupta</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7829	Endangered
Rabbitsfoot <i>Quadrula cylindrica cylindrica</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5165	Threatened
Winged Mapleleaf <i>Quadrula fragosa</i> Population: Wherever found, except where listed as an experimental population No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4127	Endangered

Insects

NAME	STATUS
Rattlesnake-master Borer Moth <i>Papaipema eryngii</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7863	Candidate

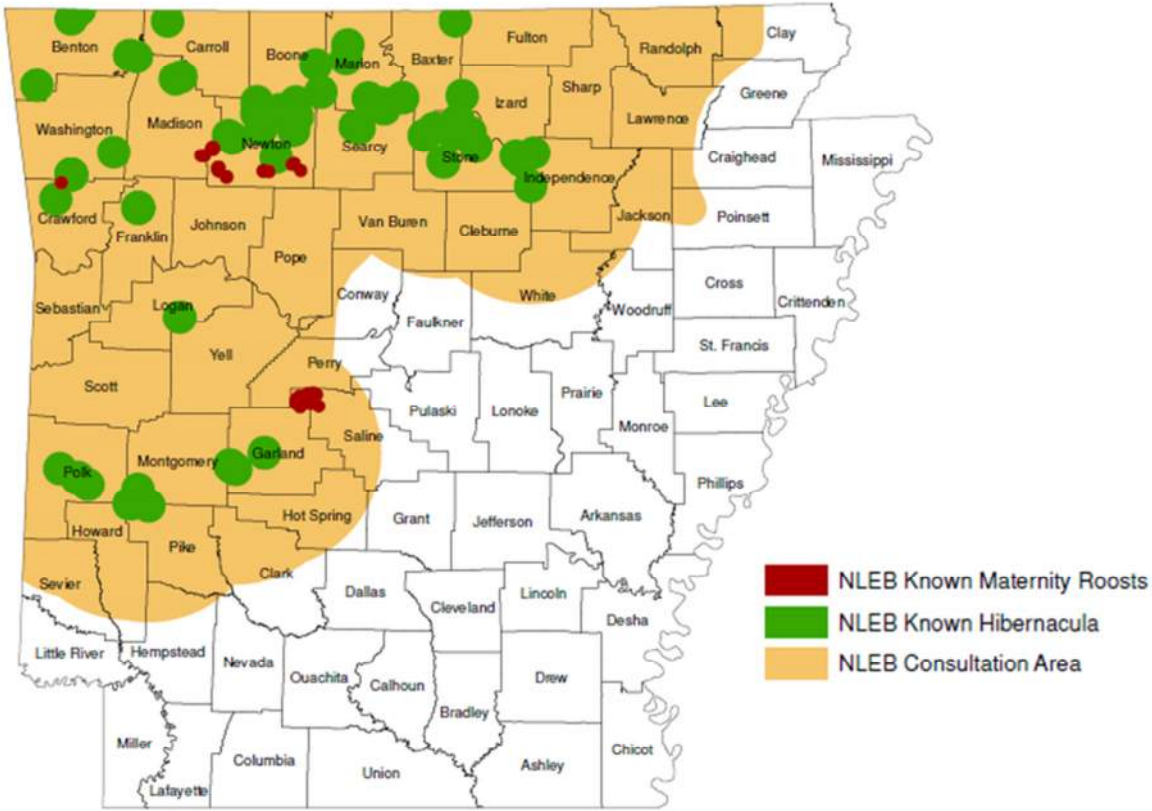
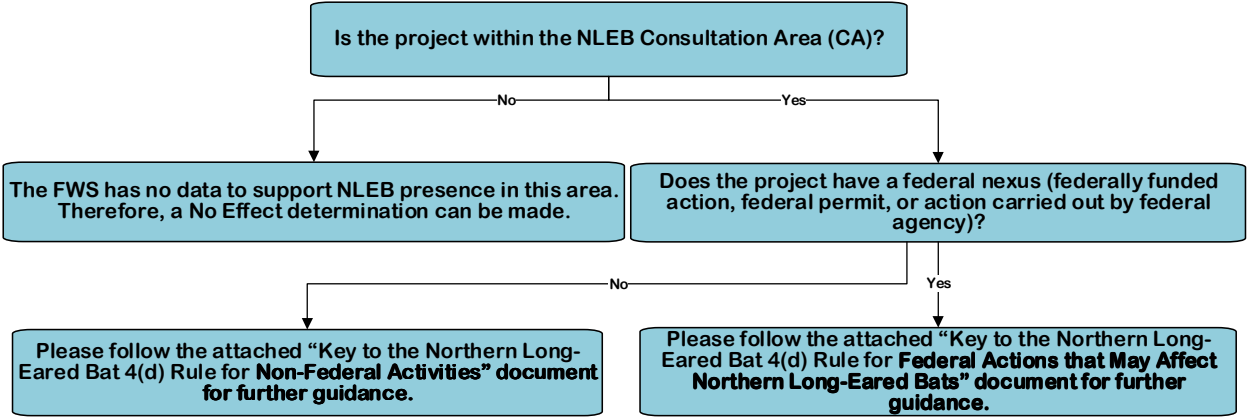
Flowering Plants

NAME	STATUS
Harperella <i>Ptilimnium nodosum</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3739	Endangered
Missouri Bladderpod <i>Physaria filiformis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5361	Threatened
Running Buffalo Clover <i>Trifolium stoloniferum</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2529	Endangered

Critical habitats

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

**NORTHERN LONG-EARED BAT CONSULTATION AREA AND FINAL 4(d) RULE GUIDANCE
FLOWCHART FOR ARKANSAS**



This flow chart was created by the Arkansas ES Field Office of the U.S. Fish and Wildlife Service to provide consistency and streamline the decision making process for any actions under Sections 7 or 10 of the Endangered Species Act. The **recommendations** provided in this guidance pertain specifically to actions occurring in Arkansas and should not be used to assess projects in other states. Furthermore, please note the following NLEB season dates that should be used when following the Service recommendations provided in the attached Keys: Active Season (March 15 – November 14); Spring Staging (March 15 – April 30); Pup Season (May 15 – July 31); Fall Swarming (August 15 – November 14); Winter Season/Hibernation (November 15 – March 14). Any updates to these documents will be posted on the Arkansas ES Field Office website at <http://www.fws.gov/arkansas-es/>. If you need any further assistance please call Tommy Inebnit at 501-513-4483.

LAST UPDATED: February 2, 2016



**Key to the Northern Long-Eared Bat 4(d) Rule
for Federal Actions that May Affect Northern Long-Eared Bats**
A separate key is available for non-Federal Activities

Federal agency actions that involve incidental take not prohibited under the final 4(d) rule may result in effects to individual northern long-eared bats. Per section 7 of the Act, if a federal agency's action may affect a listed species, consultation with the Service is required. This requirement does not change when a 4(d) rule is implemented. However, for this 4(d) rule, the Service proposed a framework to streamline section 7 consultations when federal actions may affect the northern long-eared bat but will not cause prohibited take. Federal agencies have the option to rely upon the finding of the programmatic biological opinion for the final 4(d) rule to fulfill their project-specific section 7 responsibilities by using the framework. This key will help federal agencies determine if their actions may cause prohibited incidental take of northern long-eared bats as defined in the 4(d) rule under the Endangered Species Act and if separate section 7 consultation may be necessary. Also, the framework for streamlining northern long-eared bat section 7 consultation is provided.

1. Is the action area (i.e., the area affected by all direct and indirect project effects) located wholly **outside the White-nose Syndrome Zone**? For the most current version of the White-nose Syndrome Zone map, please see

www.fws.gov/midwest/endangered/mammals/nleb/pdf/WNSZone.pdf

Yes, the action area is located wholly outside the white-nose syndrome zone.

Incidental take (see Definitions below) of northern long-eared bats is not prohibited in areas outside the White-nose Syndrome Zone. The federal agency can rely upon the finding of the programmatic biological opinion for the final 4(d) rule to fulfill their project-specific section 7 responsibilities if they use the framework described below. This framework is optional, if the federal agency chooses not to follow the framework, standard section 7 consultation procedures apply.

No, the action area is located partially or wholly inside the white-nose syndrome zone.

Continue to #2

2. Will the action take place **within a cave or mine where northern long-eared bats hibernate** (i.e., hibernaculum) **or could it alter the entrance or the environment (physical or other alteration)** of a hibernaculum?

Yes, the action will take place within a northern long-eared bat hibernaculum or it could alter the entrance or the environment (physical or other alteration) of a hibernaculum.

Take (see Definitions below) of northern long-eared bats within hibernacula is prohibited, including actions that may change the nature of the hibernaculum's environment or entrance to it, even when the bats are not present. If your activity includes work in a hibernaculum or it could alter its entrance or environment, please contact the Service's

Ecological Services Field Office located nearest to the project area. To find contact information for the Ecological Services Field Offices, please see www.fws.gov/offices.

No, the action will not take place within a northern long-eared bat hibernaculum or alter its entrance or environment.

Continue to #3

3. Will the action involve **tree removal** (see definition below)?

No, the action does not include tree removal.

Incidental take (see Definitions below) from activities that do not involve tree removal and do not take place within hibernacula or would not alter the hibernaculum's entrance or environment (see Question #3), is not prohibited. The federal agency can rely upon the finding of the programmatic biological opinion for the final 4(d) rule to fulfill their project-specific section 7 responsibilities if they use the framework described below. This framework is optional, if the federal agency chooses not to follow the framework, standard section 7 consultation procedures apply.

Yes - continue to #4

4. Is the action the **removal of hazardous trees** for protection of human life or property?

Yes, the action is removing hazardous trees.

Incidental take (see Definitions below) of northern long-eared bats as a result of hazardous tree removal is not prohibited. The federal agency can rely upon the finding of the programmatic biological opinion for the final 4(d) rule to fulfill their project-specific section 7 responsibilities if they use the framework described below. This framework is optional, if the federal agency chooses not to follow the framework, standard section 7 consultation procedures apply.

No, the action is not removing hazardous trees.

Continue to #5

5. Will the action include one or both of the following: **1) removing a northern long-eared bat known occupied maternity roost tree or any trees within 150 feet of a known occupied maternity roost tree from June 1 through July 31; or 2) removing any trees within 0.25 miles of a northern long-eared bat hibernaculum at any time of year?**

No

Incidental take (see Definitions below) from tree removal activities is not prohibited unless it results from removing a known occupied maternity roost tree or from tree removal activities within 150 feet of a known occupied maternity roost tree from June 1 through July 31 or results from tree removal activities within 0.25 mile of a hibernaculum at any time. The federal agency can rely upon the finding of the programmatic biological opinion for the final 4(d) rule to fulfill their project-specific section 7 responsibilities if they use the framework described below. This framework is optional, if the federal

agency chooses not to follow the framework, standard section 7 consultation procedures apply.

Yes

Incidental take (see Definitions below) of northern long-eared bats is prohibited if it occurs as a result of removing a known occupied maternity roost tree or removing trees within 150 feet of a known occupied maternity roost tree during the pup season from June 1 through July 31 or as a result of removing trees from within 0.25 mile of a hibernaculum at any time of year. This does not mean that you cannot conduct your action; however, standard section 7 consultation procedures apply. Please contact your nearest Ecological Services Field Office. To find contact information for the Ecological Services Field Offices, please see www.fws.gov/offices

How do I know if there is a maternity roost tree or hibernacula in the action area?

We acknowledge that it can be difficult to determine if a maternity roost tree or a hibernaculum is in your project area. Location information for both resources is generally kept in state Natural Heritage Inventory databases – the availability of this data varies state-by-state. Many states provide online access to their data, either directly by providing maps or by providing the opportunity to make a data request. In some cases, to protect those resources, access to the information may be limited. A web page with links to state Natural Heritage Inventory databases is available at www.fws.gov/midwest/endangered/mammals/nleb/nhisites.html.

When looking for information on the presence of maternity roost trees or hibernacula within your project area, our expectation is that the federal action agency will complete due diligence to determine if data is available. If information is not available, document your attempt to find the information and send it with your determination under step 1 of the framework (see below).

We do not require federal agencies to conduct surveys; however, we recommend that surveys be conducted whenever possible. Surveys will help federal agencies meet their responsibilities under section 7(a)(1) of the Act. Active participation of federal agencies in survey efforts will lead to a more effective conservation strategy for the northern long-eared bat. In addition, should the Service reclassify the species as endangered in the future, an agency with a good understanding of how the species uses habitat based on surveys within its action areas could have greater flexibility under section 7(a)(2) of the Act. Recommended survey methods are available at www.fws.gov/midwest/endangered/mammals/nleb.

Optional Framework to Streamline Section 7 Consultation for the Northern Long-Eared Bat:

The primary objective of the framework is to provide an efficient means for U.S. Fish and Wildlife Service verification of federal agency determinations that their proposed actions are consistent with those evaluated in the programmatic intra-Service consultation for the final 4(d) rule and do not require separate consultation. Such verification is necessary because incidental take is prohibited in the vicinity of known hibernacula and known roosts, and these locations are continuously updated. Federal agencies may rely on this Biological Opinion to fulfill their project-specific section 7(a)(2) responsibilities under the following framework:

1. For all federal activities that may affect the northern long-eared bat, the action agency will provide project-level documentation describing the activities that are excepted from incidental take prohibitions and addressed in this consultation. The federal agency must provide written documentation to the appropriate Service Field Office when it is determined their action may affect (i.e., not likely to adversely affect or likely to adversely affect) the northern long-eared bat, but would not cause prohibited incidental take. This documentation must follow these procedures:
 - a. In coordination with the appropriate Service Field Office, each action agency must make a determination as to whether their activity is excepted from incidental taking prohibitions in the final 4(d) rule. Activities that will occur within 0.25 mile of a known hibernacula or within 150 feet of known, occupied maternity roost trees during the pup season (June 1 to July 31) are not excepted pursuant to the final 4(d) rule. This determination must be updated annually for multi-year activities.
 - b. At least 30 days in advance of funding, authorizing, or carrying out an action, the federal agency must provide written notification of their determination to the appropriate Service Field Office.
 - c. For this determination, the action agency will rely on the definitions of prohibited activities provided in the final 4(d) rule and the activities considered in this consultation.
 - d. The determination must include a description of the proposed project and the action area (the area affected by all direct and indirect project effects) with sufficient detail to support the determination.
 - e. The action agency must provide its determination as part of a request for coordination or consultation for other listed species or separately if no other species may be affected.
 - f. Service concurrence with the action agency determination is not required, but the Service may advise the action agency whether additional information indicates consultation for the northern long-eared bat is required; i.e., where the proposed project includes an activity not covered by the 4(d) rule and thus not addressed in the Biological Opinion and is subject to additional consultation.
 - g. If the Service does not respond within 30 days under (f) above, the action agency may presume its determination is informed by best available information and consider its project responsibilities under section 7(a)(2) with respect to the northern long-eared bat fulfilled through this programmatic Biological Opinion.

2. Reporting

- a. For monitoring purposes, the Service will assume all activities are conducted as described. If an agency does not conduct an activity as described, it must promptly report and describe such departures to the appropriate Service Field Office.
- b. The action agency must provide the results of any surveys for the northern long-eared bat to the appropriate Service Field Office within their jurisdiction.
- c. Parties finding a dead, injured, or sick northern long-eared bat must promptly notify the appropriate Service Field Office.

If a Federal action agency chooses not to follow this framework, standard section 7 consultation procedures will apply.

Section 7(a)(1) of the Act directs Federal agencies, in consultation with and with the assistance of the Secretary (a function delegated to the Service), to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Service Headquarters provides to federal action agencies who choose to implement the framework described above several conservation recommendations for exercising their 7(a)(1) responsibility in this context. Conservation recommendations are discretionary federal agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information. Service Headquarters recommends that the following conservation measures to all Federal agencies whose actions may affect the northern long-eared bat:

1. Perform northern long-eared bat surveys according to the most recent Range-wide Indiana Bat/ northern long-eared bat Summer Survey Guidelines. Benefits from agencies voluntarily performing northern long-eared bat surveys include:
 - a. Surveys will help federal agencies meet their responsibilities under section 7(a)(1) of the Act. The Service and partners will use the survey data to better understand habitat use and distribution of northern long-eared bats, track the status of the species, evaluate threats and impacts, and develop effective conservation and recovery actions. Active participation of federal agencies in survey efforts will lead to a more effective conservation strategy for the northern long-eared bat.
 - b. Should the Service reclassify the species as endangered in the future, an agency with a good understanding of how the species uses habitat based on surveys within its action areas could inform greater flexibility under section 7(a)(2) of the Act. Such information could facilitate an expedited consultation and incidental take statement that may, for example, exempt taking associated with tree removal during the active season, but outside of the pup season, in known occupied habitat.
2. Apply additional voluntary conservation measures, where appropriate, to reduce the impacts of activities on northern long-eared bats. Conservation measures include:
 - a. Conduct tree removal activities outside of the northern long-eared bat pup season (June 1 to July 31) and/or the active season (April 1 to October 31). This will minimize impacts to pups at roosts not yet identified.

- b. Avoid clearing suitable spring staging and fall swarming habitat within a 5-mile radius of known or assumed northern long-eared bat hibernacula during the staging and swarming seasons (April 1 to May 15 and August 15 to November 14, respectively).
- c. Manage forests to ensure a continual supply of snags and other suitable maternity roost trees.
- d. Conduct prescribed burns outside of the pup season (June 1 to July 31) and/or the active season (April 1 to October 31). Avoid high-intensity burns (causing tree scorch higher than northern long-eared bat roosting heights) during the summer maternity season to minimize direct impacts to northern long-eared bat.
- e. Perform any bridge repair, retrofit, maintenance, and/or rehabilitation work outside of the northern long-eared bat active season (April 1 to October 31) in areas where northern long-eared bats are known to roost on bridges or where such use is likely.
- f. Do not use military smoke and obscurants within forested suitable northern long-eared bat habitat during the pup season (June 1 to July 31) and/or the active season (April 1 to October 31).
- g. Minimize use of herbicides and pesticides. If necessary, spot treatment is preferred over aerial application.
- h. Evaluate the use of outdoor lighting during the active season and seek to minimize light pollution by angling lights downward or via other light minimization measures.
- i. Participate in actions to manage and reduce the impacts of white-nose syndrome on northern long-eared bat. Actions needed to investigate and manage white-nose syndrome are described in a national plan the Service developed in coordination with other state and federal.

Definitions

“Incidental take” is defined by the Endangered Species Act as take that is "incidental to, and not the purpose of, the carrying out of an otherwise lawful activity." For example, harvesting trees can kill bats that are roosting in the trees, but the purpose of the activity is not to kill bats.

“Known hibernacula” are defined as locations where one or more northern long-eared bats have been detected during hibernation or at the entrance during fall swarming or spring emergence. Given the challenges of surveying for northern long-eared bats in the winter, any hibernacula with northern long-eared bats observed at least once, will continue to be considered “known hibernacula” as long as the hibernacula remains suitable for northern long-eared bat.

“Known occupied maternity roost trees” is defined in the 4(d) rule as trees that have had female northern long-eared bats or juvenile bats tracked to them or the presence of female or juvenile bats is known as a result of other methods. Once documented, northern-long eared bats are known to continue to use the same roosting areas. Therefore, a tree will be considered to be a “known occupied maternity roost” as long as the tree and surrounding habitat remain suitable for northern long-eared bat. The incidental take prohibition for known occupied maternity roosts trees applies only during the during the pup season (June 1 through July 31).

“Take” is defined by the ESA as ‘to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect” any endangered species. Purposeful take is when the reason for the activity or action is to conduct some form of take. For instance, conducting a research project that includes collecting and putting bands on bats is a form of purposeful take.

“Tree removal” is defined in the 4(d) rule as cutting down, harvesting, destroying, trimming, or manipulating in any other way the trees, saplings, snags, or any other form of woody vegetation likely to be used by northern long-eared bats.



THE DEPARTMENT OF ARKANSAS
HERITAGE

Asa Hutchinson
Governor

Stacy Hurst
Director

Date: July 26, 2018

Subject: Southwest Trail between Hot Springs and Little Rock, AR

ARDOTJob NO. 061562

FAP No. FLAP-FLAP (16) – Southwest Trail

ANHC No.: P-CF..-18-058

Mr. Bill McAbee
Garver LLC
4701 Northshore Drive
North Little Rock, AR 72118

Dear Mr. McAbee:

Staff members of the Arkansas Natural Heritage Commission have reviewed our files for records indicating the occurrence of rare plants and animals, outstanding natural communities, natural or scenic rivers, or other elements of special concern within or near the study corridor for the proposed Southwest Trail between Hot Springs and Little Rock, Arkansas. The purpose of the project is to develop a 63-mile long recreational and alternative transportation resource trail spanning the area between Hot Springs National Park in Garland County and the Arkansas River Trail and the Little Rock Central High School National Historic Site in Pulaski County, Arkansas. We have included the 1.7 mile extension to the north end of the trail as requested in your letter of July 25, 2018 in the review. This area includes the new office building for the Department of Arkansas Heritage. The results of our review are provided as Geographic Information System (GIS) shapefiles. Documentation is included to help you interpret the information in the shapefiles (Attachment A).

Our records indicate the occurrence of seventeen species of state conservation concern within the study corridor. A list of these species with brief habitat information is attached for your reference (Attachment B). Approximate locations are depicted in the GIS shapefiles.

The study corridor includes at least seven streams known to support aquatic species of conservation concern (provided as a GIS shapefile). Two of these streams also have special designations for reaches in the study area:

- Saline River
 - Extraordinary Resource Water - Arkansas Department of Environmental Quality (Regulation 2)
 - Ecologically Sensitive Waterbody - Arkansas Department of Environmental Quality (Regulation 2)
 - Nationwide Rivers Inventory (National Park Service)
 - State Registry of Natural and Scenic River (Arkansas Natural Heritage Commission)
- Ten Mile Creek
 - Ecologically Sensitive Waterbody - Arkansas Department of Environmental Quality (Regulation 2)

Trail design should seek to avoid and limit impacts to these streams.

Arkansas Arts Council

Arkansas Historic
Preservation Program

Arkansas State Archives

Delta Cultural Center

Historic Arkansas Museum

Mosaic Templars
Cultural Center

Old State House Museum



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Other significant habitat types occur in the project area including seepage wetland and glade habitat. These are significant and declining habitat types that frequently support rare species. Seepage wetlands (seeps) often occur along the lower slopes of smaller valleys where water seeps out of the hillsides and in the riparian zones of creeks. They are characterized by poorly drained soils, permanently saturated by groundwater. They can support a variety of rare and unusual species. Forested seeps can often be identified by lush growth of fern species including cinnamon fern, royal fern, lady fern and netted chain fern. Glades occur where the bedrock is at or near the surface. They are characterized by areas of bare rock, expanses with grasses and forbs, and, where the soil is deeper, often cedar trees. In the past, these areas were subject to wildfires, which maintained an open character and reduced the number of cedar trees. Glades are often more biologically diverse than surrounding forests, support rare species, and provide important wildlife habitat. We contracted with The Central Hardwoods Joint Venture to map glades by interpreting aerial images using GIS. This GIS layer identifies glades in the study area, and is available on-line at the following website:

<https://gcpolcc.databasin.org/datasets/a817fa247dd3440e814282f3063c51d0>

These are fragile habitat types and efforts should be made to avoiding routing the trail through these habitats.

We are aware of at least two projects in the study area that may be relevant to project planning. A wetland mitigation bank is currently under development along Little Fourche Creek in Little Rock near the northern end of the study corridor. I've attached a copy of the public notice issued in 2016 by the Little Rock District Corps of Engineers on the project for your reference (Attachment C). Also, Entergy is currently considering routes for a Potential 500 KV Electric Transmission Line from the Jones Mill vicinity in Hot Spring County to their substation in West Little Rock in Pulaski County (Happy Valley to Hot Springs EHV Transmission Project). Information and maps for this project are available at the following website:

http://www.entergy-arkansas.com/transmission/happy_valley.aspx

A list of elements known to occur within a five mile radius of the study corridor is enclosed for your reference (Attachment D). Represented on this list are elements for which we have records in our database. The list has been annotated to indicate those elements falling within a one-mile radius of the study area. A legend is enclosed to help you interpret the codes used on this list (Attachment E).

Please keep in mind that the project area may contain important natural features of which we are unaware. Staff members of the Arkansas Natural Heritage Commission have not conducted a field survey of the study corridor. Our review is based on data available to the program at the time of the request. It should not be regarded as a final statement on the elements or areas under consideration. Because our files are updated constantly, you may want to check with us again at a later time.

Thank you for consulting us. It has been a pleasure to work with you on this study.

Sincerely,



Cindy Osborne
Data Manager/Environmental Review Coordinator

Enclosures: GIS shapefiles (ANHCDATA, SensitiveStreams)
Documentation for shapefiles (Attachment A)
Element list with Habitat Information (Attachment B)
Public Notice for Central Arkansas Mitigation Bank (Attachment C)
Element list within 5-mile radius (Attachment D)
Legend (Attachment E)
Data Agreement
Invoice

Documentation
ANHCDATA
Shapefile



Tags

Rare species, threatened species, endangered species, Southwest Trail

Summary

This shapefile was created in response to an information request from the Garver, LLC. The data will be used to assist in the development of the Southwest Trail between Hot Springs and Little Rock.

Description

Description of Data:

Occurrence data entered into the Natural Diversity Database represent known locations of elements, which the Arkansas Natural Heritage Commission (ANHC) currently tracks. These elements include species considered either endangered, threatened, rare, peripheral or status undetermined as well as outstanding examples of natural communities (terrestrial, palustrine and aquatic), geologic features, and colonial bird nesting sites. Generally speaking, the basic requirement for entering an occurrence into the natural diversity database is that the place marked as an occurrence must contribute to the survival of the element. The specific criterion used for each type of element depends on the basic biology of the element. Data has been "summarized" into 20-acre hexagons.

Contact Information:

Cindy Osborne, Data Manager

Arkansas Natural Heritage Commission

1100 North Street

Little Rock, AR 72201

Phone: 501-324-9762

Fax: 501-324-9618

e-mail: Cindy.Osborne@Arkansas.gov

Source of Data:

Data entered into the database have been collected from literature sources, herbaria, museums, Universities and field surveys by staff biologists.

Mapping Information:

All mappable occurrence data entered into the natural diversity database are mapped on 7.5'

likelihood of rediscovery.

GNR = Unranked. The global rank not yet assessed.

GNA = Not Applicable. A conservation status rank is not applicable.

T-RANKS= T subranks are given to global ranks when a subspecies, variety, or race is considered at the state level. The subrank is made up of a "T" plus a number or letter (1, 2, 3, 4, 5, H, U, X) with the same ranking rules as a full species.

Q = A "Q" in the global rank indicates the element's taxonomic classification as a species is a matter of conjecture among scientists.

RANGES= Ranges are used temporarily until a final rank decision can be made.

? = A question mark is used temporarily when there is some indecision regarding the rank assignment or when an element has not been ranked.

B = Breeding status

N = Non-breeding status

SRANK

State Rank. This is a conservation rank used by State Heritage Programs and The Nature Conservancy. The rank indicates the relative rarity of an element throughout Arkansas. The following codes are used:

S1 = Critically imperiled in the state due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors making it vulnerable to extirpation.

S2 = Imperiled in the state due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it vulnerable to extirpation.

S3 = Vulnerable in the state due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.

S4 = Apparently secure in the state. Uncommon but not rare; some cause for long-term concern

due to declines or other factors.

S5 = Secure in the state. Common, widespread and abundant.

SH = Of historical occurrence, with some possibility of rediscovery. Its presence may not have been verified in the past 20-40 years. A species may be assigned this rank without the 20-40

year delay if the only known occurrences were destroyed or if it had been extensively and unsuccessfully sought.

SU = Unrankable. Currently unrankable due to lack of information or due to substantially conflicting information about status or trends.

SX = Presumed extirpated from the state. Not located despite intensive searches and virtually no likelihood of rediscovery.

SNR = Unranked. The state rank not yet assessed.

SNA = Not Applicable. A conservation status rank is not applicable.

USES A

U.S. Endangered Species Act status. This field provides information on whether the species is listed as Endangered or Threatened by the U.S. Fish and Wildlife Service. A blank indicates the element has no federal listing. The following codes are used:

C = Candidate species. The U.S. Fish and Wildlife Service has enough scientific information to warrant proposing these species for listing as endangered or threatened under the Endangered Species Act.

LE = Listed Endangered; the U.S. Fish and Wildlife Service has listed these species as endangered under the Endangered Species Act.

LT = Listed Threatened; the U.S. Fish and Wildlife Service has listed these species as threatened under the Endangered Species Act.

PE = Proposed Endangered; the U.S. Fish and Wildlife Service has proposed these species for listing as endangered.

PT = Proposed Threatened; the U.S. Fish and Wildlife Service has proposed these species for listing as threatened.

T/SA = Threatened (or Endangered) because of similarity of appearance.

E/SA

STATESTAT

State Status Code. At present, Arkansas does not have a law providing special state protection to species considered endangered or threatened in Arkansas. However, lists of species of special concern have been developed by this program in cooperation with other government agencies, and professionals. Species appearing on these lists are believed to be rare in the state and are presently being inventoried by this agency. The following codes have been used in this field:

INV = Inventory Element; The Arkansas Natural Heritage Commission is currently conducting

active inventory work on these elements. Available data suggests these elements are of conservation concern. These elements may include outstanding examples of Natural Communities, colonial bird nesting sites, outstanding scenic and geologic features as well as plants and animals which, according to current information, may be rare, peripheral, or of an undetermined status in the state. The ANHC is gathering detailed location information on these elements.

SE = State Endangered; this term is applied differently for plants and animals

Animals - These species are afforded protection under Arkansas Game and Fish Commission (AGFC) Regulation. The AGFC states that it is unlawful to import, transport, sell, purchase, hunt, harass or possess any threatened or endangered species of wildlife or parts. The AGFC lists as endangered any wildlife species or subspecies endangered or threatened with extinction, listed or proposed as a candidate for listing by the U.S. Fish and Wildlife Service or any native species or subspecies listed as endangered by the Commission.

Plants - These species have been recognized by the Arkansas Natural Heritage Commission as being in danger of being extirpated from the state. This is an administrative designation with no regulatory authority.

ST = State Threatened; These species have been recognized by the Arkansas Natural Heritage Commission as being likely to become endangered in Arkansas in the foreseeable future, based on current inventory information. This is an administrative designation with no regulatory authority.

LASTOBS

Last Observed Date. The most recent date that the occurrence was last observed and recorded as extant within the hexagon shape.

FIRSTOBS

First Observed Date. The date of the earliest observation record falling within the hexagon shape.

CNT_of_OBS

Count of Observations. This is a count of the number of observation records falling within the hexagon shape.

COUNTYCODE

County Code. A four digit code for the county(s) in which the occurrence falls. The code is in the following format:

1st 4 letters of county name

Example: GARL = Garland County

SITE

Site Name. This is a short site name for the area in which the occurrence falls. Not all records will have a site name associated with them. This is listed for quick reference.

PRECISION

Precision of mapped location. All mappable occurrence data entered into the natural diversity database are mapped on topographic quadrangles and are assigned a township, range and section as well as latitude and longitude coordinates. In some cases the actual mapped location represents a "best guess" based on the information available. Careful attention should be paid to the precision code assignments to distinguish these "best guesses" from confirmed locations. The location given represents the centrum of the occurrence. The following codes are used:

S = Element is specifically mapped (within a three second radius, ~100 feet).

M = Element mapped to within one minute radius (1.5 mile).

G = Element is mapped to a general region identified by a geographic name on a U.S.G.S. quadrangle.

blank = This is a new "observation" record for which a precision code has not been assigned.

QUADNAME

Quadrangle Name. The name of the 7.5' topographic quadrangle(s) on which the occurrence falls.

TRS

The Township/Range/Section of the record of the most recent record within the hexagon shape.

DIRECTIONS

Directions to the most recent record within the hexagon shape

GENDESC

General Description of the location/habitat of the most recent record within the hexagon shape.

EODATA

Element Occurrence Data (size, number of individuals, vigor, etc...) for the most recent record within the hexagon shape.

BESTSOURCE

Best Source of information used for the most recent record in the hexagon shape.

EOCODE

Element Occurrence Code. A unique identifier for the occurrence. This number identifies the most recent occurrence of a given species within the hexagon shape.

LATNUM

Latitude. The latitude of the centrum of the occurrence in decimal degrees.

LONGNUM

Longitude. The longitude of the centrum of the occurrence in decimal degrees.

SHAPE_ID

A unique identifier for the element within the shape. This number should be used when requesting or supplying data on an occurrence to the Arkansas Natural Heritage Commission.

SHAPECODE

An arbitrary number assigned to the shape.

Credits

This data was compiled by the Arkansas Natural Heritage Commission, an agency of the Department of Arkansas Heritage, Little Rock, AR.

Use limitations

Reproduction and/or distribution of the complete electronic data set or subsets thereof to any parties other than Garver, LLC is strictly prohibited.

Extent

West	-92.965866	East	-92.276601
North	34.710875	South	34.506169

Scale Range

Maximum (zoomed in)	1:5,000
Minimum (zoomed out)	1:150,000,000

Documentation

Sensitive_Streams

Shapefile



Tags

streams, rare speices, endangered species, threatened species

Summary

This shapefile was developed to help identify those streams supporting rare species.

Description

Description of Data:

Using the USGS Streams shapefile, Arkansas Natural Heritage Commission Staff s developed a layer of streams in the state that are known to support rare species. Listing in this shapefile does not imply any legal designation or regulatory authority. The file was developed for information purposes only.

Contact Information:

Cindy Osborne, Data Manager

Arkansas Natural Heritage Commission

1100 North Street

Little Rock, AR 72201

Phone: 501-324-9762

Fax: 501-324-9618

e-mail: Cindy.Osborne@Arkansas.Gov

Source of Data:

Streams were selected using the Arkansas Natural Heritage Commission's sensitive species database. Those streams having database records for G1-G3 species were included.

Mapping Information:

The streams were derived using the USGS Streams Layer. Each stream segment was united into a single feature.

Credits

This shapefile was developed by the Arkanas Natural Heritage Commission, a division of the Department of Arkansas Heritage.

Use limitations

This file should not be redistributed without prior written permission from the Arkansas Natural Heritage Commission

Extent

West	-93.010408	East	-92.256205
North	34.600201	South	33.919193

Scale Range

Maximum (zoomed in)	1:5,000
Minimum (zoomed out)	1:150,000,000

7/27/2018

Arkansas Natural Heritage Commission
Department of Arkansas Heritage
Elements of Special Concern

Scientific Name	Common Name	Federal Status	State Status	Global Rank	State Rank	Habitat
Animals-Invertebrates						
<i>Alasmidonta marginata</i>	Elktoe	-	INV	G4	S3	Small streams with good current and sand, gravel or cobble substrate
<i>Cyprogenia sp. cf aberti</i>	Ouachita Fanshell	-	INV	GNR	S3	Rock, gravel, and soft mud bottoms in medium sized rivers in flowing water only. Generally confined to shallow riffles and runs in predominantly clean, moderately compacted gravel-sand substrate.
<i>Fusconaia ozarkensis</i>	Ozark Pigtoe	-	INV	G3G4	S3	Medium to large headwater streams, preferably in riffle or run areas, but sometimes in glide or pools.
<i>Pleurobema sintoxia</i>	Round Pigtoe	-	INV	G4G5	S3	Medium to large rivers in mixed mud, sand, and gravel.
<i>Ptychobranhus occidentalis</i>	Ouachita Kidneyshell	-	INV	G3G4	S3	Upland streams in silt, sand, gravel or rocky substrates in slow to moderate currents
<i>Villosa lienosa</i>	little spectaclecase	-	INV	G5	S3	Small creeks to medium-sized rivers, usually along the banks in slower currents
Animals-Vertebrates						
<i>Ambystoma annulatum</i>	Ringed Salamander	-	INV	G4	S3	Ponds, lakes, and water holes, mesic hardwood forest, riparian, pine-oak forest, woodland, sinkhole and depression pond
<i>Etheostoma parvipinne</i>	goldstripe darter	-	INV	G4G5	S3	Clay- and sand-bottomed runs and pools of vegetated, spring-fed headwaters and creeks. Occurs in or near springs, in small sluggish streams, and occasionally in seepages adjacent to small streams.
<i>Hyla avivoca</i>	Bird-voiced Treefrog	-	INV	G5	S3	Pools and slow runs of warm, clear, small to medium rivers with gravel substrate
<i>Notropis perpallidus</i>	peppered shiner	-	INV	G3	S3	Ponds, Lakes, water holes, forested bottomlands
<i>Noturus lachneri</i>	Ouachita madtom	-	INV	G2	S2	Pools, backwaters, and runs of creeks and small rivers of moderate to high gradient with clear, cool water, gravel-rubble-sand bottoms, and alternating pools and riffles.
<i>Percina vigil</i>	saddleback darter	-	INV	G5	S3	Creeks and small to medium rivers in areas of moderate current over sand and gravel or gravel and rubble substrates, often at the foot of chute or riffle or near snags or logjams, sometimes in very shallow water.
Plants-Vascular						
<i>Carex arkansana</i>	Arkansas sedge	-	INV	G4	S1	Wet Prairie, seasonally wet depressions in flatwoods
<i>Eleocharis wolfii</i>	Wolf's spike-rush	-	INV	G3G5	S3	Wet depressions in prairie, glades, seeps, flatwoods, and barrens
<i>Eustoma exaltatum</i>	catchfly prairie-gentian	-	INV	G5	S2	Riverbanks and possibly prairies
<i>Rhynchospora colorata</i>	white-top sedge	-	SE	G5	S1	Seeps, wetlands and wet margins
<i>Rhynchospora gracilentia</i>	slender beaksedge	-	INV	G5	S2	Seeps, ditches, wet savannas, barrens, and flatwoods



US Army Corps
of Engineers®
Little Rock District

PUBLIC NOTICE

CORPS OF ENGINEERS

Application Number: 2015-00221

Date: November 23, 2016

Comments Due: December 23, 2016

TO WHOM IT MAY CONCERN: Comments are invited on the work described below. Please see the Public Involvement section for details on submitting comments.

Point of Contact. If additional information is desired, please contact the project manager, Jim Ellis, telephone number: (501) 324-5295, mailing address: Little Rock District Corps of Engineers, Regulatory Division, PO Box 867, Little Rock, Arkansas 72203-0867, email address: Jim.D.Ellis@usace.army.mil. An electronic copy of the Little Fourche Creek Mitigation Bank (LFCMB) prospectus can be viewed on the Little Rock District, Regulatory Division webpage at <http://www.swl.usace.army.mil/Missions/Regulatory/PublicNotices.aspx> or a hard copy can be obtained from the Corps of Engineers through the contact information listed above.

Project Information. Pursuant to Section 404 of the Clean Water Act (33 U.S. Code 1344), notice is hereby given that

**Ms. Danielle Litaker Nall
Central Arkansas Mitigation Bank, LLC
9800 Maumelle Blvd.
North Little Rock, AR 72113**

has submitted their LFCMB prospectus. The prospectus outlines the proposal for developing and operating the bank, which is known as the banking instrument. After public comments are received and any issues are resolved on the prospectus, Central Arkansas Mitigation Bank, LLC will submit a draft banking instrument to the District Engineer of the Little Rock District. The District Engineer will then distribute the draft banking instrument to the Interagency Review Team (IRT), which is made up of the Corps and the pertinent state and Federal resource agencies. The IRT will review the banking instrument and coordinate with Central Arkansas Mitigation Bank, LLC on any issues until a final banking instrument is completed. Finally, the District Engineer will review the final instrument and make a decision to approve or not approve.

The primary purpose of this bank is to mitigate for unavoidable impacts to streams and wetlands authorized under Section 404 of the Clean Water Act. The project goals are to preserve and enhance stream and wetland functions and services within the mitigation bank area.

The proposed project is located in Little Fourche Creek and associated tributaries and wetlands, in sections 5, 6, and 7, T. 1 S., R. 12 W., in Little Rock, Pulaski County, Arkansas. The mitigation bank, as proposed by the applicant's consultant, GBM^c and Associates, includes three pieces of property (Sites A-C), two contiguous, and one in close proximity to the others along Little Fourche Creek, which consist of approximately 240 acres. The applicant proposes to preserve in perpetuity, through the establishment of a conservation easement, Little Fourche Creek, and its associated riparian buffer within the three properties. Little Fourche Creek is

relatively undisturbed throughout these three sites and will not require any channel alterations to maintain a stable dimension, pattern, and profile according to the applicant's consultant. One-hundred-foot-wide riparian buffers will be preserved and enhanced beyond the stream channel ordinary high water mark (OHWM), where possible, including jurisdictional wetlands located in the riparian buffer areas. Supplemental plantings of native tree/shrub and herbaceous vegetation will occur. Wetlands that are not part of the protected stream riparian buffer corridors will be preserved and enhanced (see enclosed Sheets 3 through 5 of 7). Supplemental plantings of native species will be completed to reach desired diversity and density. Where possible an upland buffer will be preserved and enhanced along the perimeter of the wetlands. Supplemental plantings of native tree/shrub species will be completed in the upland buffers to promote diversity and wildlife. Tree/shrub plantings will be in the form of seedlings.

The applicant's consultant has identified approximately 6,800 linear feet of stream channel in Site A, 5,000 linear feet in Site B, and 5,300 linear feet in site C. All streams will have some level of associated riparian buffers (most with 100-foot-wide buffers on both sides) totaling over 70 acres of protected stream corridor. The three sites total over 100 acres of wetlands. A large portion of these wetlands will be preserved as riparian buffer for the meandering stream system. Also, approximately 115 acres of wetlands will remain outside the protected stream riparian buffer corridor and be accounted for as wetland habitat. The wetlands can generally be classified as either riverine forested or riverine scrub-shrub. There are some smaller areas that are riverine emergent, mostly in historical creek channel remnants. The three sites will be monitored for a minimum of ten years to ensure hydrologic and revegetation success, and will be perpetually preserved.

Stream compensatory mitigation credits will be calculated utilizing the 2011 Little Rock District Stream Method. Credits will be calculated with the assistance of the USACE and will be approved by the IRT with the Mitigation Banking Instrument (MBI). Wetland credits will be calculated using the 2002 Charleston Method and its more recent Little Rock District addendum. Approximately 80,000 stream credits and 124 wetland credits are anticipated to be generated by the LFCMB.

The proposed bank sites lie within the Lower Arkansas-Maumelle Watershed 8-digit (11110207) hydrologic unit code (HUC) as designated by the U.S. Geological Survey. The proposed Primary Geographic Service Area for wetlands and streams includes the Lower Arkansas-Maumelle (11110207) and the Lake Conway – Point Remove (11110203) HUC. Historically, activities requiring compensatory mitigation within the White Oak Bayou Watershed (111102070401), which is part of the Lower Arkansas-Maumelle Watershed (11110207), have been mitigated within the White Oak Bayou Watershed and therefore excluded as part of any bank service area.

During the public review period, members of the IRT will conduct a site visit to the proposed mitigation bank. The location and general plan for the proposed work are shown on the enclosed sheets, 1 through 7 of 7.

Cultural Resources. A Corps staff archeologist will review topographic maps, the National Register of Historic Places, and other data on reported sites in the area. The District Engineer

invites responses to this public notice from Native American Nations or tribal governments; Federal, State, and local agencies; historical and archeological societies; and other parties likely to have knowledge of or concerns with historic properties in the area.

Endangered Species. Our preliminary determination is that the proposed activity will not affect listed Endangered Species or their critical habitat. A copy of this notice is being furnished to the U.S. Fish and Wildlife Service and appropriate state agencies and constitutes a request to those agencies for information on whether any listed or proposed-to-be-listed endangered or threatened species may be present in the area which would be affected by the proposed activity.

Floodplain. We are providing copies of this notice to appropriate floodplain officials in accordance with 44 CFR Part 60 (Floodplain Management Regulations Criteria for Land Management and Use) and Executive Order 11988 on Floodplain Management.

Section 404(b)(1) Guidelines. The evaluation of activities to be authorized under this permit which involves the discharge of dredged or fill material will include application of guidelines promulgated by the Administrator, Environmental Protection Agency, under authority of Section 404(b) of the Clean Water Act. These guidelines are contained in 40 Code of Federal Regulations (CFR) 230.

Public Involvement. Any interested party is invited to submit to the above-listed POC written comments or objections relative to the proposed work on or before **December 23, 2016**. Substantive comments, both favorable and unfavorable, will be accepted and made a part of the record and will receive full consideration in determining whether this work would be in the public interest. The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people.

The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Any person may request in writing within the comment period specified in this notice that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing. The District Engineer will determine if the issues raised are substantial and whether a hearing is needed for making a decision.

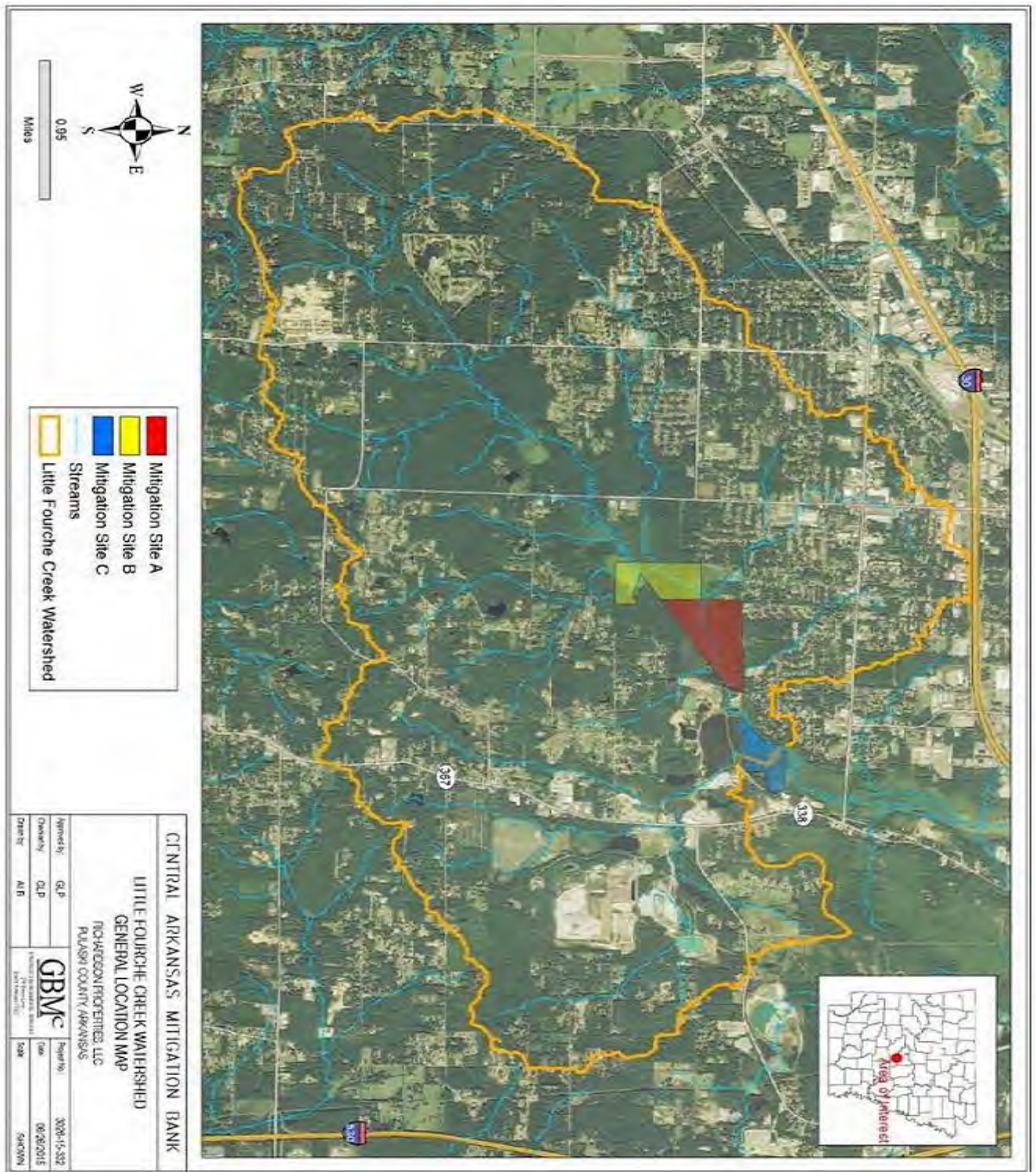
NOTE: The mailing list for this Public Notice is arranged by state and county(s) where the project is located, and also includes any addressees who have asked to receive copies of all public notices. Please discard notices that are not of interest to you. If you have no need for any of these notices, please advise us so that your name can be removed from the mailing list.

Enclosures

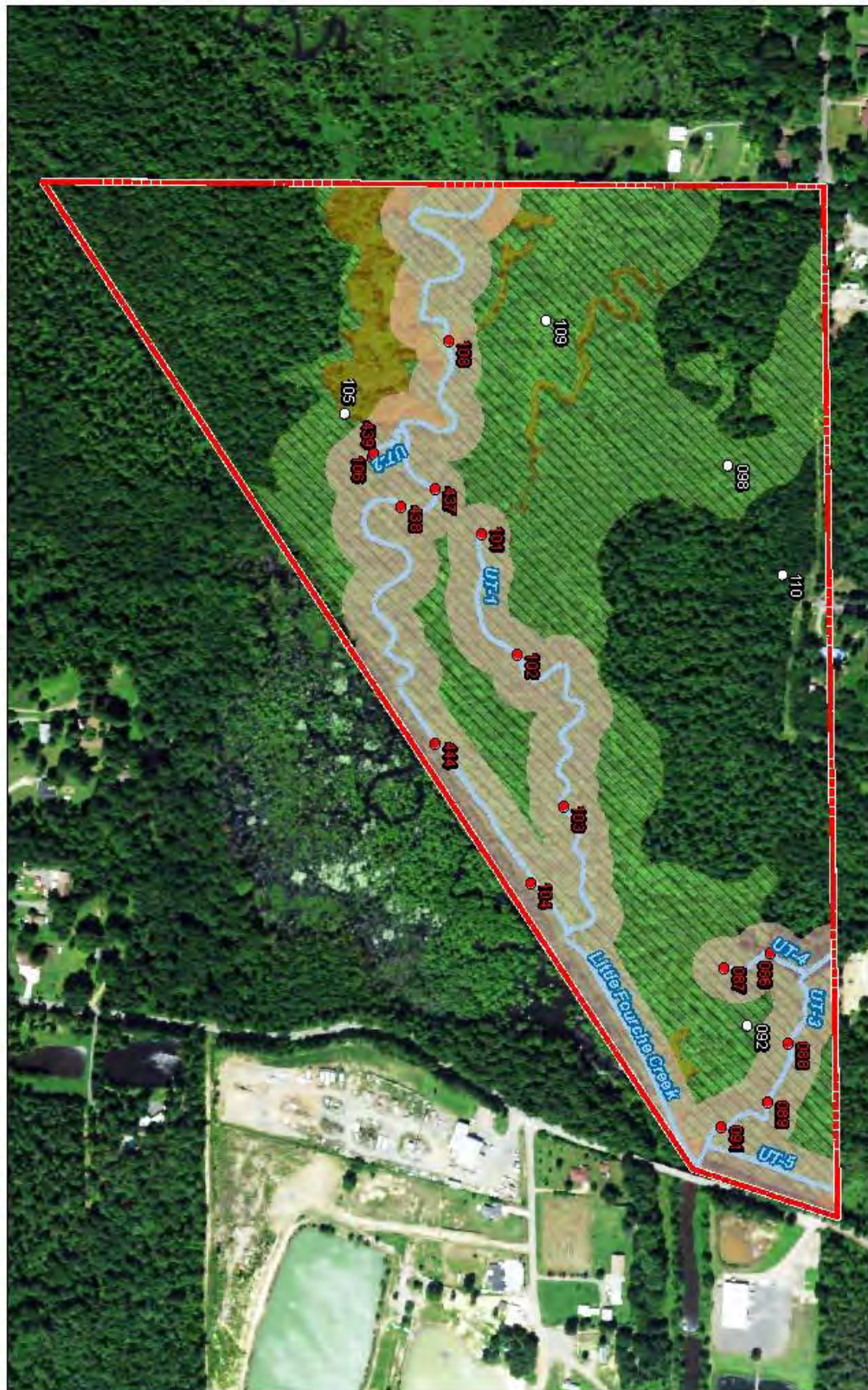
Approximate Coordinates of Project Center

Latitude: **34.65384** Longitude: **-92.33319**

UTM Zone: **15** North: **3834858** East: **561102**



ACTION NO.: 2015-00221
 Central Arkansas Mitigation Bank, LLC
 PROPOSED MITIGATION BANK
 Little Fourche Creek and Tributaries
 Sections 5, 6, and 7, T. 1 S., R. 12 W.
 November 2016 Sheet 2 of 7



MITIGATION SITE A			
CENTRAL ARKANSAS MITIGATION BANK			
RICHARDSON PROPERTIES, LLC			
PULASKI COUNTY, ARKANSAS			
Prepared by:	GLP	 GRAND BAY MITIGATION COMPANY 2000 N. RICHARDSON PULASKI COUNTY, ARKANSAS 72454	Project No.:
Checked by:	GLP		Date:
Drawn by:	ALB		Scale:
			3025-15-102
			DT/182016
			SHOON

ACTION NO.: 2015-00221

Central Arkansas Mitigation Bank, LLC

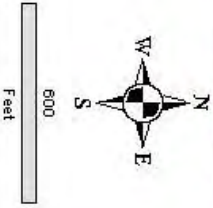
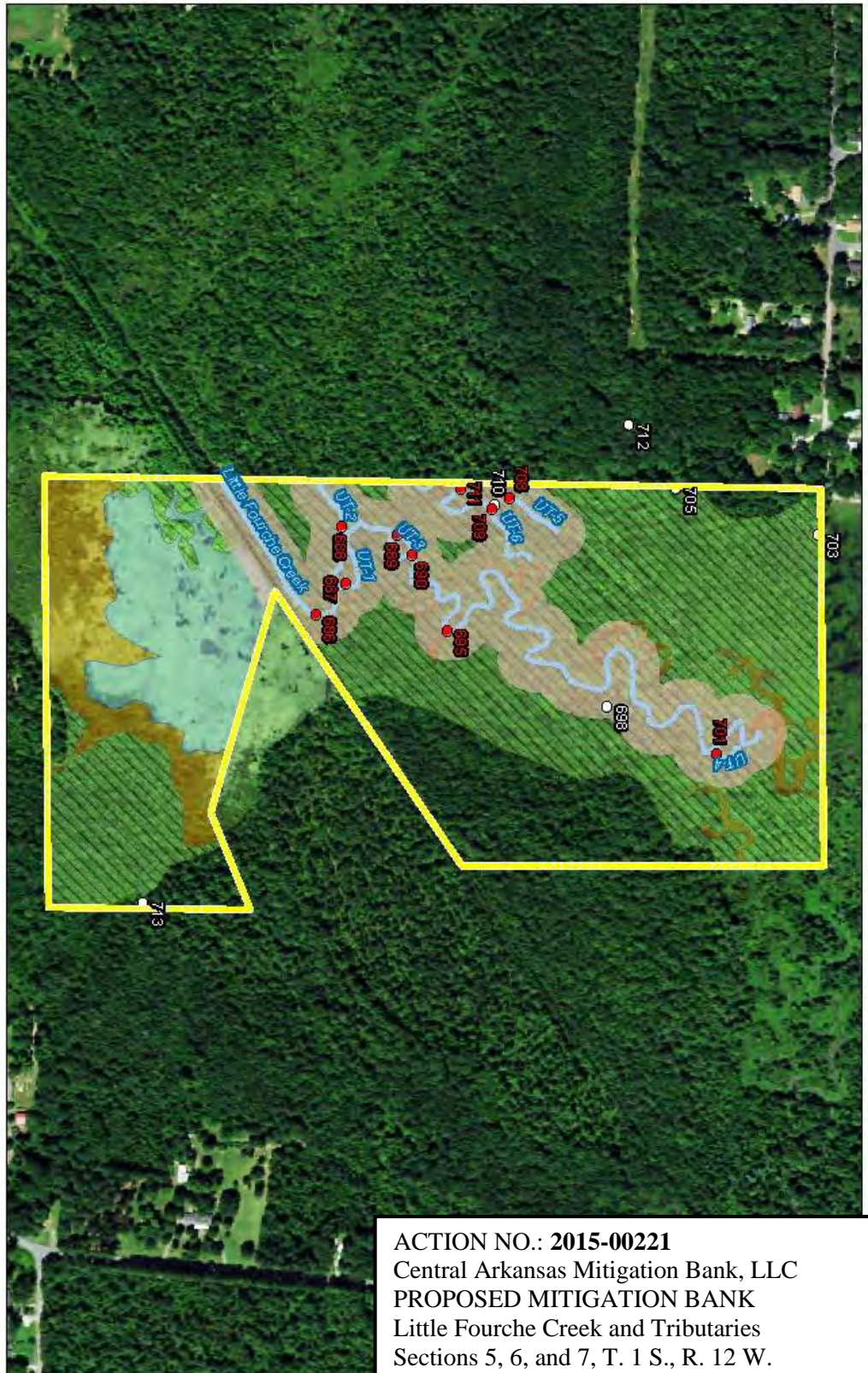
PROPOSED MITIGATION BANK

Little Fourche Creek and Tributaries

Sections 5, 6, and 7, T. 1 S., R. 12 W.

November 2016

Sheet 3 of 7



- Mitigation Site B
- Stream Data Points
- Wetland Data Points
- Stream (6831 feet)
- 100-foot Riparian Buffer (20 acres)
- PEM (8.0 acres)
- PFO (48 acres)

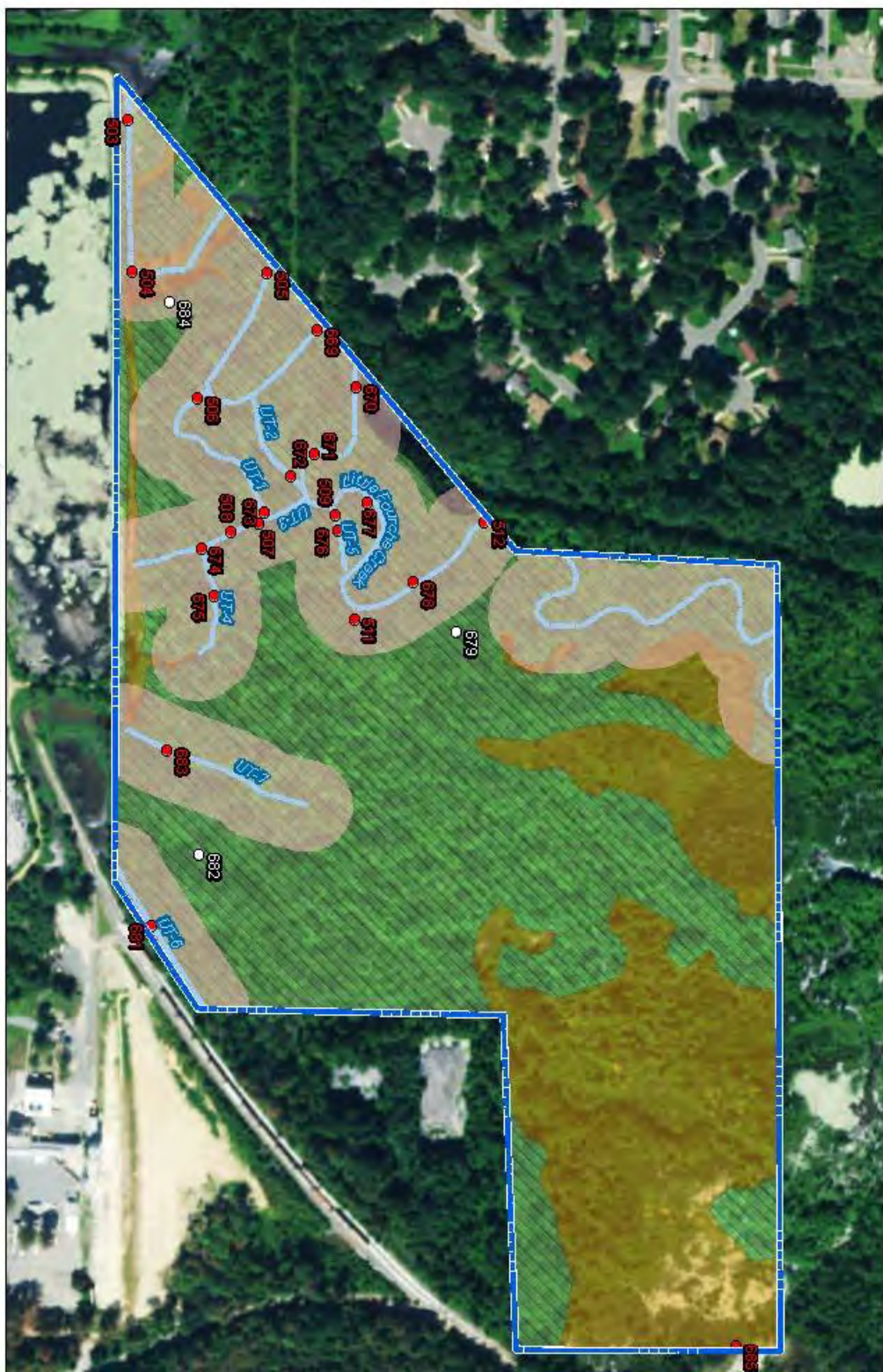
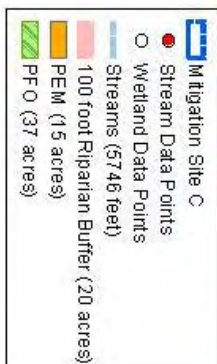
MITIGATION SITE B

CENTRAL ARKANSAS MITIGATION BANK

RICHARDSON PROPERTIES, LLC
PULASKI COUNTY, ARKANSAS

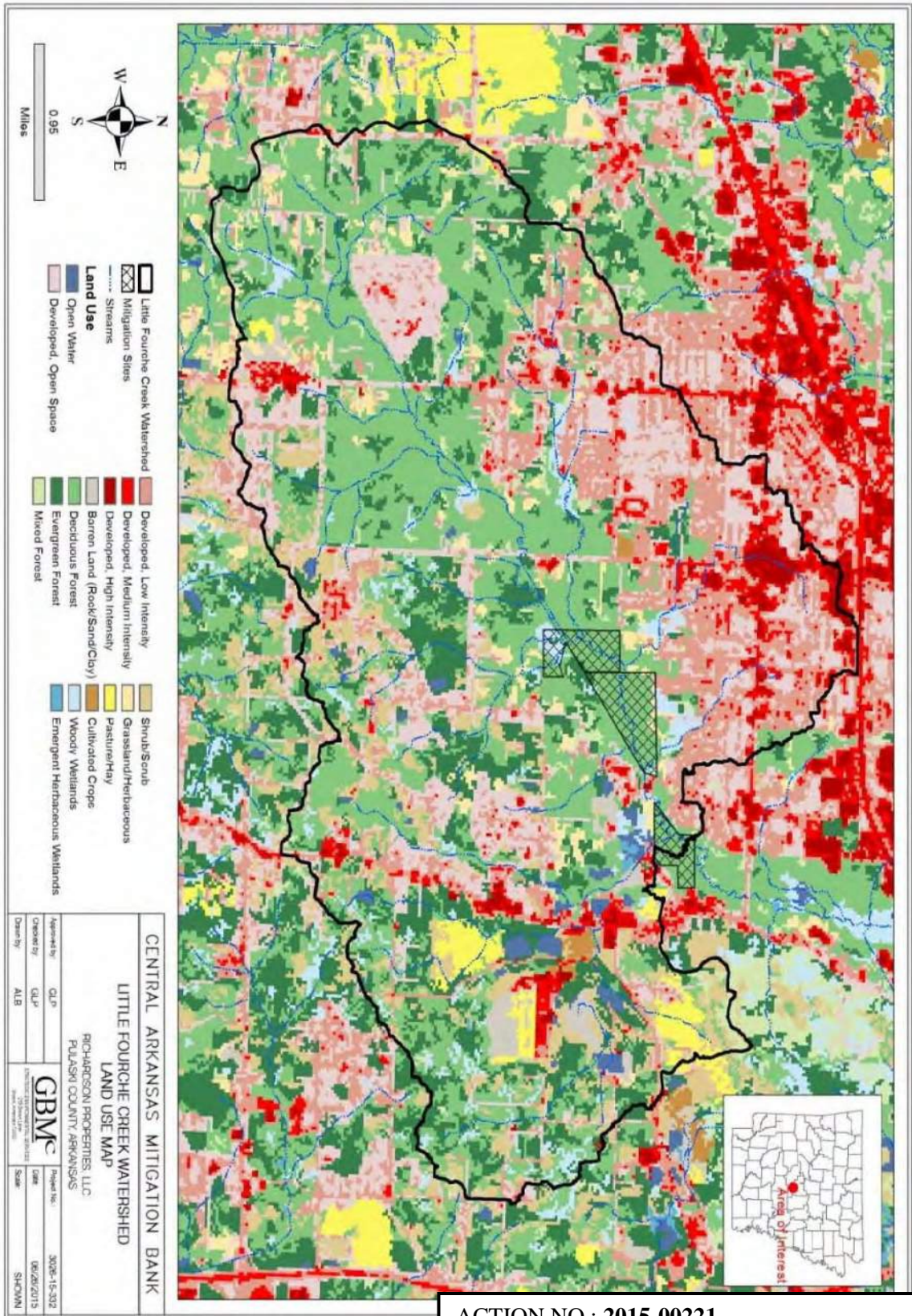
Approved by:	GLP	Project No.:	2015-15-002
Checked by:	GLP	Date:	07/18/2016
Drawn by:	ALB	Scale:	SHOWN

ACTION NO.: 2015-00221
 Central Arkansas Mitigation Bank, LLC
 PROPOSED MITIGATION BANK
 Little Fourche Creek and Tributaries
 Sections 5, 6, and 7, T. 1 S., R. 12 W.
 November 2016
 Sheet 4 of 7



<p>MITIGATION SITE C</p> <p>CENTRAL AFKANSAS MITIGATION BANK</p> <p>RICARDSON PROPERTIES, LLC PULASKI COUNTY, ARKANSAS</p>	
<p>Approved By: GLP</p> <p>Checked By: GLP</p> <p>Drawn By: ALEB</p>	<p>Project No.: TMS-15-02</p> <p>Date: 07/18/2015</p> <p>Scale: SHOWN</p>

ACTION NO.: 2015-00221
Central Arkansas Mitigation Bank, LLC
PROPOSED MITIGATION BANK
Little Fourche Creek and Tributaries
Sections 5, 6, and 7, T. 1 S., R. 12 W.
November 2016 **Sheet 5 of 7**



ACTION NO.: 2015-00221

Central Arkansas Mitigation Bank, LLC

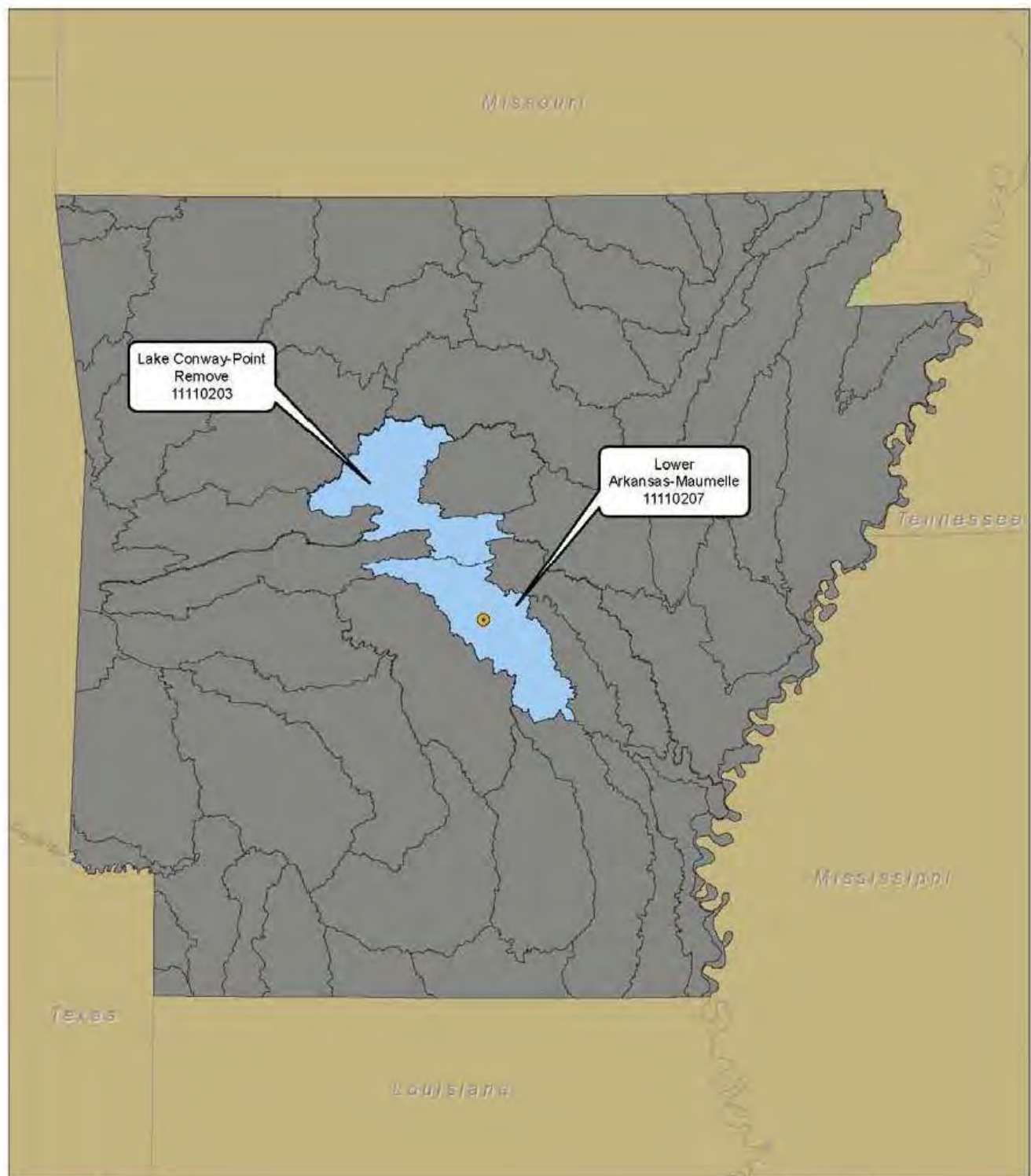
PROPOSED MITIGATION BANK

Little Fourche Creek and Tributaries

Sections 5, 6, and 7, T. 1 S., R. 12 W.

November 2016

Sheet 6 of 7



- Central Arkansas Mitigation Bank
- Primary Service Area

SERVICE AREA			
CENTRAL ARKANSAS MITIGATION BANK			
RICHARDSON PROPERTIES, LLC. PULASKI COUNTY, ARKANSAS			
Approved by:	GLP	 <small>27000 PULASKI COUNTY, ARKANSAS 2015 Service Area Project Number 11110207</small>	Project No.: 3026-15-332
Checked by:	GLP		Date: 09/23/2016
Drawn by:	ALB		Scale: SHOWN

ACTION NO.: 2015-00221

Central Arkansas Mitigation Bank, LLC

PROPOSED MITIGATION BANK

Little Fourche Creek and Tributaries

Sections 5, 6, and 7, T. 1 S., R. 12 W.

November 2016

Sheet 7 of 7

7/27/2018

Arkansas Natural Heritage Commission
Department of Arkansas Heritage
Elements of Special Concern
Within a 5-mile Radius of the Southwest Trail Study Corridor

Scientific Name	Common Name	Federal Status	State Status	Global Rank	State Rank
Animals-Invertebrates					
* <i>Alasmodonta marginata</i>	Elktoe	-	INV	G4	S3
* <i>Cyprogenia sp. cf aberti</i>	Ouachita Fanshell	-	INV	GNR	S3
<i>Euphyes dion</i>	Dion Skipper	-	INV	G4	S3
* <i>Fusconaia ozarkensis</i>	Ozark Pigtoe	-	INV	G3G4	S3
<i>Hesperia leonardus</i>	Leonard's Skipper	-	INV	G5	S3
<i>Lampsilis abrupta</i>	Pink Mucket	LE	SE	G2	S2
* <i>Lampsilis ornata</i>	Southern Pocketbook	-	INV	G5	S2
* <i>Lampsilis powellii</i>	Arkansas Fatmucket	LT	SE	G2	S2
* <i>Ophiogomphus westfalli</i>	Westfall's snaketail	-	INV	G3	S1S2
* <i>Pleurobema rubrum</i>	Pyramid Pigtoe	-	INV	G2G3	S2
* <i>Pleurobema sintoxia</i>	Round Pigtoe	-	INV	G4G5	S3
* <i>Procambarus parasimulans</i>	Bismark burrowing crayfish	-	INV	G4	S3
* <i>Ptychobranchus occidentalis</i>	Ouachita Kidneyshell	-	INV	G3G4	S3
<i>Speyeria diana</i>	Diana Fritillary	-	INV	G3G4	S2S3
* <i>Toxolasma lividum</i>	Purple Lilliput	-	INV	G3Q	S3
* <i>Toxolasma parvum</i>	Lilliput	-	INV	G5	S3
<i>Truncilla donaciformis</i>	Fawnsfoot	-	INV	G5	S3
<i>Unio merus tetralasmus</i>	Pondhorn	-	INV	G5	S2
<i>Venustaconcha pleasii</i>	Bleedingtooth Mussel	-	INV	G3G4	S3
* <i>Villosa lienosa</i>	little spectaclecase	-	INV	G5	S3
Animals-Vertebrates					
<i>Alosa alabamiae</i>	Alabama shad	-	INV	G2G3	S1
* <i>Ambystoma annulatum</i>	Ringed Salamander	-	INV	G4	S3
* <i>Cycleptus elongatus</i>	blue sucker	-	INV	G3G4	S3
* <i>Etheostoma parvipinne</i>	goldstripe darter	-	INV	G4G5	S3
<i>Eurycea paludicola</i>	Western Dwarf Salamander	-	INV	GNR	S3
<i>Eurycea subfluvicola</i>	Ouachita Streambed Salamander	-	INV	GNR	S1
<i>Haliaeetus leucocephalus</i>	Bald Eagle	-	INV	G5	S3B,S4N
* <i>Hemidactylium scutatum</i>	Four-toed Salamander	-	INV	G5	S2
<i>Hybognathus placitus</i>	plains minnow	-	INV	G4	SH
* <i>Hyla avivoca</i>	Bird-voiced Treefrog	-	INV	G5	S3
* <i>Lasiurus seminolus</i>	Seminole bat	-	INV	G5	S3
* <i>Liodytes rigida</i>	Glossy Swampsnake	-	INV	G5	S3
<i>Myotis lucifugus</i>	little brown bat	-	INV	G3	S1
* <i>Myotis septentrionalis</i>	northern long-eared bat	LT	SE	G1G2	S1S2
* <i>Notropis perpallidus</i>	peppered shiner	-	INV	G3	S3
* <i>Noturus lachneri</i>	Ouachita madtom	-	INV	G2	S2
* <i>Percina vigil</i>	saddleback darter	-	INV	G5	S3
<i>Picoides borealis</i>	Red-cockaded Woodpecker	LE	SE	G3	S1
<i>Polyodon spathula</i>	paddlefish	-	INV	G4	S3
<i>Scaphiopus huerterii</i>	Hurter's Spadefoot	-	INV	G5	S2
* <i>Terrapene ornata</i>	Ornate Box Turtle	-	INV	G5	S2

Scientific Name	Common Name	Federal Status	State Status	Global Rank	State Rank
Plants-Non-vascular					
* <i>Phormidium treleasei</i>	A blue-green alga	-	INV	GNR	S2
Plants-Vascular					
<i>Acer saccharum</i> var. <i>leucoderme</i>	chalk maple	-	INV	G5T5	S2S3
<i>Amorpha ouachitensis</i>	Ouachita indigo-bush	-	INV	G3Q	S3
<i>Apocynum sibiricum</i>	clasping dogbane	-	INV	GNR	S1
<i>Aristida lanosa</i>	woolly three-awn	-	INV	G5	S2
* <i>Asplenium pinnatifidum</i>	lobed spleenwort	-	INV	G4	S3
* <i>Asplenium x gravesii</i>	Graves' spleenwort	-	INV	GNA	S1
<i>Buchnera floridana</i>	Florida bluehearts	-	INV	GNR	S1
* <i>Camassia angusta</i>	prairie wild hyacinth	-	INV	G5?Q	S2S3
* <i>Cardamine douglassii</i>	purple cress	-	INV	G5	S1
* <i>Carex alata</i>	broad-wing sedge	-	INV	G5	S1
* <i>Carex arkansana</i>	Arkansas sedge	-	INV	G4	S1
* <i>Carex atlantica</i> ssp. <i>atlantica</i>	prickly bog sedge	-	INV	G5T5	S2
<i>Carex bullata</i>	button sedge	-	INV	G5	S1
<i>Carex conjuncta</i>	soft fox sedge	-	INV	G4G5	S1
* <i>Carex laevivaginata</i>	smooth-sheath sedge	-	INV	G5	S2
<i>Carex lupuliformis</i>	false hop sedge	-	INV	G4	S1S2
<i>Carex stricta</i>	tussock sedge	-	INV	G5	S3
<i>Chelone glabra</i>	white turtlehead	-	INV	G5	S1
<i>Clematis glaucophylla</i>	white-leaf leather-flower	-	INV	G4?	S1
<i>Crassula aquatica</i>	water pygmyweed	-	INV	G5	S1S3
<i>Crataegus ouachitensis</i>	Ouachita hawthorn	-	INV	GNR	S1
<i>Crataegus reverchonii</i>	Reverchon's Hawthorn	-	INV	G4?	S1
<i>Cyperus haspan</i>	haspan flatsedge	-	INV	G5	S2
<i>Cyperus hystrixinus</i>	bristly flatsedge	-	INV	G4	S2S3
<i>Dalea lanata</i> var. <i>lanata</i>	woolly prairie-clover	-	INV	G5TNR	S2S3
<i>Draba aprica</i>	open-ground whitlow-grass	-	ST	G3	S2
<i>Eleocharis flavescens</i> var. <i>flavescens</i>	yellow spike-rush	-	INV	G5T5	S1S2
* <i>Eleocharis wolfii</i>	Wolf's spike-rush	-	INV	G3G5	S3
* <i>Eriocaulon koernickianum</i>	small-head pipewort	-	SE	G2	S2
* <i>Euphorbia missurica</i>	Missouri spurge	-	INV	G5	S2
* <i>Euphorbia ouachitana</i>	Ouachita spurge	-	INV	GNR	S3
* <i>Eustoma exaltatum</i>	catchfly prairie-gentian	-	INV	G5	S2
* <i>Fuirena bushii</i>	Bush's umbrella sedge	-	INV	G5	S3
* <i>Galium arkansanum</i> var. <i>pubiflorum</i>	hairy-flower Arkansas bedstraw	-	INV	G5T2	S2
<i>Hydrophyllum brownei</i>	Browne's waterleaf	-	INV	G2	S2
<i>Hypericum canadense</i>	Canadian St. John's-wort	-	INV	G5	S1
<i>Ilex verticillata</i>	winterberry	-	ST	G5	S2
<i>Ipomoea cordatotriloba</i> var. <i>cordatotriloba</i>	tie-vine morning-glory	-	INV	G5T5	S1
* <i>Iris verna</i> var. <i>smalliana</i>	dwarf iris	-	INV	G5T4T5	S2
* <i>Liatris compacta</i>	Ouachita blazing-star	-	INV	G3	S3
<i>Micranthes virginianensis</i>	early saxifrage	-	INV	G5	S1S2
<i>Nemastylis nuttallii</i>	Nuttall's pleat-leaf	-	INV	G4	S2
<i>Opuntia nemoralis</i>	Ouachita prickly-pear	-	INV	GNR	S2
<i>Oxalis texana</i>	Texas yellow wood-sorrel	-	INV	GNR	SU
* <i>Panicum rigidulum</i> ssp. <i>pubescens</i>	red-top panic grass	-	INV	G5T5?	S1
* <i>Paspalum bifidum</i>	pitchfork paspalum	-	INV	G5	SH
<i>Photinia melanocarpa</i>	black chokeberry	-	INV	G5	S1

Scientific Name	Common Name	Federal Status	State Status	Global Rank	State Rank
<i>Platanthera cristata</i>	crested fringed orchid	-	INV	G5	S1S2
* <i>Platanthera peramoena</i>	purple fringeless orchid	-	ST	G5	S2
<i>Platanthera x channellii</i>	Channell's fringed orchid	-	INV	GNA	S1
<i>Ranunculus aquatilis</i> var. <i>diffusus</i>	white water crowfoot	-	INV	G5T5	S2S3
* <i>Rhynchospora colorata</i>	white-top sedge	-	SE	G5	S1
* <i>Rhynchospora gracilentia</i>	slender beaksedge	-	INV	G5	S2
<i>Rhynchospora scirpoides</i>	long-beak bald-rush	-	INV	G4	S1
<i>Rudbeckia maxima</i>	great coneflower	-	INV	G4?	S3
* <i>Sabatia arkansana</i>	Pelton's rose-gentian	-	INV	G1	S1
<i>Scleria muehlenbergii</i>	Muhlenberg's nut-rush	-	INV	G5	S1S2
<i>Scleria verticillata</i>	whorled nut-rush	-	ST	G5	S1
* <i>Scutellaria cardiophylla</i>	Gulf skullcap	-	INV	G4?	S1S2
<i>Stachys iltisii</i>	Ouachita hedge-nettle	-	INV	G3	S3
* <i>Streptanthus maculatus</i> ssp. <i>obtusifolius</i>	Arkansas twistflower	-	INV	G3T3Q	S3
* <i>Thalictrum arkansanum</i>	Arkansas meadow-rue	-	ST	G2Q	S2
<i>Tradescantia bracteata</i>	long-bract spiderwort	-	INV	G5	S2
<i>Triadenum virginicum</i>	Virginia marsh-St. John's-wort	-	INV	G5	S1
<i>Trifolium carolinianum</i>	Carolina clover	-	INV	G5	S1?
<i>Utricularia subulata</i>	zigzag bladderwort	-	INV	G5	S2
<i>Valerianella palmeri</i>	Palmer's cornsalad	-	INV	G3	S3
<i>Veratrum woodii</i>	Wood's false hellebore	-	INV	G5	S3
<i>Vicia ludoviciana</i> ssp. <i>ludoviciana</i>	Louisiana vetch	-	INV	G5TNR	SH
* <i>Xyris ambigua</i>	Coastal Plain yellow-eyed-grass	-	INV	G5	S2S3
Special Elements-Natural Communities					
	Ouachita Novaculite Glade and Woodland	-	INV	GNR	SNR
	Ouachita Shale Glade and Barrens	-	INV	GNR	SNR
*	Ozark-Ouachita Shortleaf Pine-Oak Forest	-	INV	GNR	SNR
*	Spring-Ouachita Mountains	-	INV	GNR	SNR
*	West Gulf Coastal Plain Nepheline Syenite Glade	-	INV	GNR	SNR
Special Elements-Other					
*	Colonial nesting site, water birds	-	INV	GNR	SNR
*	Geological feature	-	INV	GNR	SNR

* - These elements have been recorded within a one-mile radius of the study corridor

LEGEND

STATUS CODES

FEDERAL STATUS CODES

C	=	Candidate species. The U.S. Fish and Wildlife Service has enough scientific information to warrant proposing this species for listing as endangered or threatened under the Endangered Species Act.
LE	=	Listed Endangered; the U.S. Fish and Wildlife Service has listed this species as endangered under the Endangered Species Act.
LT	=	Listed Threatened; the U.S. Fish and Wildlife Service has listed this species as threatened under the Endangered Species Act.
-PD	=	Proposed for Delisting; the U.S. Fish and Wildlife Service has proposed that this species be removed from the list of Endangered or Threatened Species.
PE	=	Proposed Endangered; the U.S. Fish and Wildlife Service has proposed this species for listing as endangered.
PT	=	Proposed Threatened; the U.S. Fish and Wildlife Service has proposed this species for listing as threatened.
T/SA E/SA	=	Threatened (or Endangered) because of similarity of appearance.

STATE STATUS CODES

INV	=	Inventory Element; The Arkansas Natural Heritage Commission is currently conducting active inventory work on these elements. Available data suggests these elements are of conservation concern. These elements may include outstanding examples of Natural Communities, colonial bird nesting sites, outstanding scenic and geologic features as well as plants and animals, which, according to current information, may be rare, peripheral, or of an undetermined status in the state. The ANHC is gathering detailed location information on these elements.
WAT	=	Watch List Species; The Arkansas Natural Heritage Commission is not conducting active inventory work on these species, however, available information suggests they may be of conservation concern. The ANHC is gathering general information on status and trends of these elements. An “*” indicates the status of the species will be changed to “INV” if the species is verified as occurring in the state (this typically means the agency has received a verified breeding record for the species).
MON	=	Monitored Species; The Arkansas Natural Heritage Commission is currently monitoring information on these species. These species do not have conservation concerns at present. They may be new species to the state, or species on which additional information is needed. The ANHC is gathering detailed location information on these elements.
SE	=	State Endangered; this term is applied differently for plants and animals. Animals – These species are afforded protection under Arkansas Game and Fish Commission (AGFC) Regulation. The AGFC states that it is unlawful to import, transport, sell, purchase, hunt, harass or possess any threatened or endangered species of wildlife or parts. The AGFC lists as endangered any wildlife species or subspecies endangered or threatened with extinction, listed or proposed as a candidate for listing by the U.S. Fish and Wildlife Service or any native species or subspecies listed as endangered by the Commission. Plants – These species have been recognized by the Arkansas Natural Heritage Commission as being in danger of being extirpated from the state. This is an administrative designation with no regulatory authority.
ST	=	State Threatened; These species have been recognized by the Arkansas Natural Heritage Commission as being likely to become endangered in Arkansas in the foreseeable future, based on current inventory information. This is an administrative designation with no regulatory authority.

DEFINITION OF RANKS

Global Ranks

G1	=	Critically imperiled globally. At a very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.
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G2	=	Imperiled globally. At high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors.
G3	=	Vulnerable globally. At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors.
G4	=	Apparently secure globally. Uncommon but not rare; some cause for long-term concern due to declines or other factors.
G5	=	Secure globally. Common, widespread and abundant.
GH	=	Of historical occurrence, possibly extinct globally. Missing; known from only historical occurrences, but still some hope of rediscovery.
GU	=	Unrankable. Currently unrankable due to lack of information or due to substantially conflicting information about status or trends.
GX	=	Presumed extinct globally. Not located despite intensive searches and virtually no likelihood of rediscovery.
GNR	=	Unranked. The global rank not yet assessed.
GNA	=	Not Applicable. A conservation status rank is not applicable.
T-RANKS=		T subranks are given to global ranks when a subspecies, variety, or race is considered at the state level. The subrank is made up of a "T" plus a number or letter (1, 2, 3, 4, 5, H, U, X) with the same ranking rules as a full species.

State Ranks

S1	=	Critically imperiled in the state due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors making it vulnerable to extirpation.
S2	=	Imperiled in the state due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it vulnerable to extirpation.
S3	=	Vulnerable in the state due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.
S4	=	Apparently secure in the state. Uncommon but not rare; some cause for long-term concern due to declines or other factors.
S5	=	Secure in the state. Common, widespread and abundant.
SH	=	Of historical occurrence, with some possibility of rediscovery. Its presence may not have been verified in the past 20-40 years. A species may be assigned this rank without the 20-40 year delay if the only known occurrences were destroyed or if it had been extensively and unsuccessfully sought.
SU	=	Unrankable. Currently unrankable due to lack of information or due to substantially conflicting information about status or trends.
SX	=	Presumed extirpated from the state. Not located despite intensive searches and virtually no likelihood of rediscovery.
SNR	=	Unranked. The state rank not yet assessed.
SNA	=	Not Applicable. A conservation status rank is not applicable.

General Ranking Notes

Q	=	A "Q" in the global rank indicates the element's taxonomic classification as a species is a matter of conjecture among scientists.
RANGES=		Ranges are used to indicate a range of uncertainty about the status of the element.
?	=	A question mark is used to denote an inexact numeric rank.
B	=	Refers to the breeding population of a species in the state.
N	=	Refers to the non-breeding population of a species in the state.



United States Department of the Interior



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In Reply Refer To:

September 09, 2019

Consultation Code: 04ER1000-2019-TA-0651

Event Code: 04ER1000-2019-E-03075

Project Name: ARDOT Job No. 060562, Federal Air Project ("FAP") No. FLAP-FLAP (16) – Southwest Trail

Subject: Verification letter for the 'ARDOT Job No. 060562, Federal Air Project ("FAP") No. FLAP-FLAP (16) – Southwest Trail' project under the January 5, 2016, Programmatic Biological Opinion on Final 4(d) Rule for the Northern Long-eared Bat and Activities Excepted from Take Prohibitions.

Dear Garver Engineers:

The U.S. Fish and Wildlife Service (Service) received on September 09, 2019 your effects determination for the 'ARDOT Job No. 060562, Federal Air Project ("FAP") No. FLAP-FLAP (16) – Southwest Trail' (the Action) using the northern long-eared bat (*Myotis septentrionalis*) key within the Information for Planning and Consultation (IPaC) system. This IPaC key assists users in determining whether a Federal action is consistent with the activities analyzed in the Service's January 5, 2016, Programmatic Biological Opinion (PBO). The PBO addresses activities excepted from "take"^[1] prohibitions applicable to the northern long-eared bat under the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.).

Based upon your IPaC submission, the Action is consistent with activities analyzed in the PBO. The Action may affect the northern long-eared bat; however, any take that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o). Unless the Service advises you within 30 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the PBO satisfies and concludes your responsibilities for this Action under ESA Section 7(a)(2) with respect to the northern long-eared bat.

Please report to our office any changes to the information about the Action that you submitted in IPaC, the results of any bat surveys conducted in the Action area, and any dead, injured, or sick northern long-eared bats that are found during Action implementation. If the Action is not completed within one year of the date of this letter, you must update and resubmit the information required in the IPaC key.

This IPaC-assisted determination allows you to rely on the PBO for compliance with ESA Section 7(a)(2) only for the northern long-eared bat. It **does not** apply to the following ESA-protected species that also may occur in the Action area:

- Arkansas Fatmucket, *Lampsilis powellii* (Threatened)
- Harperella, *Ptilimnium nodosum* (Endangered)
- Least Tern, *Sterna antillarum* (Endangered)
- Missouri Bladderpod, *Physaria filiformis* (Threatened)
- Pink Mucket (pearlymussel), *Lampsilis abrupta* (Endangered)
- Piping Plover, *Charadrius melodus* (Threatened)
- Rabbitsfoot, *Quadrula cylindrica cylindrica* (Threatened)
- Rattlesnake-master Borer Moth, *Papaipema eryngii* (Candidate)
- Running Buffalo Clover, *Trifolium stoloniferum* (Endangered)
- Winged Mapleleaf, *Quadrula fragosa* (Endangered)

If the Action may affect other federally listed species besides the northern long-eared bat, a proposed species, and/or designated critical habitat, additional consultation between you and this Service office is required. If the Action may disturb bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act is recommended.

[1]Take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct [ESA Section 3(19)].

Action Description

You provided to IPaC the following name and description for the subject Action.

1. Name

ARDOT Job No. 060562, Federal Air Project ("FAP") No. FLAP-FLAP (16) – Southwest Trail

2. Description

The following description was provided for the project 'ARDOT Job No. 060562, Federal Air Project ("FAP") No. FLAP-FLAP (16) – Southwest Trail':

Garver Inc. is preparing a National Environmental Policy Act (NEPA) document for the Arkansas Department of Transportation (ARDOT) for this project. The purpose of the project is to develop a 63-mile long recreational and alternative transportation resource trail, centrally located and spanning the area from Hot Springs National Park in Garland County to the Arkansas River Trail and the Little Rock Central High School National Historic Site in Pulaski County.

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/34.62552101421556N92.38484859560316W>

**Determination Key Result**

This Federal Action may affect the northern long-eared bat in a manner consistent with the description of activities addressed by the Service's PBO dated January 5, 2016. Any taking that may occur incidental to this Action is not prohibited under the final 4(d) rule at 50 CFR §17.40(o). Therefore, the PBO satisfies your responsibilities for this Action under ESA Section 7(a)(2) relative to the northern long-eared bat.

Determination Key Description: Northern Long-eared Bat 4(d) Rule

This key was last updated in IPaC on May 15, 2017. Keys are subject to periodic revision.

This key is intended for actions that may affect the threatened northern long-eared bat.

The purpose of the key for Federal actions is to assist determinations as to whether proposed actions are consistent with those analyzed in the Service's PBO dated January 5, 2016.

Federal actions that may cause prohibited take of northern long-eared bats, affect ESA-listed species other than the northern long-eared bat, or affect any designated critical habitat, require ESA Section 7(a)(2) consultation in addition to the use of this key. Federal actions that may affect species proposed for listing or critical habitat proposed for designation may require a conference under ESA Section 7(a)(4).

Determination Key Result

This project may affect the threatened Northern long-eared bat; therefore, consultation with the Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.) is required. However, based on the information you provided, this project may rely on the Service's January 5, 2016, *Programmatic Biological Opinion on Final 4(d) Rule for the Northern Long-Eared Bat and Activities Excepted from Take Prohibitions* to fulfill its Section 7(a)(2) consultation obligation.

Qualification Interview

1. Is the action authorized, funded, or being carried out by a Federal agency?

Yes

2. Have you determined that the proposed action will have "no effect" on the northern long-eared bat? (If you are unsure select "No")

No

3. Will your activity purposefully **Take** northern long-eared bats?

No

4. Is the project action area located wholly outside the White-nose Syndrome Zone?

Automatically answered

No

5. Is the project action area located within 0.25 miles of a known northern long-eared bat hibernaculum?

Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency

Automatically answered

No

6. Is the project action area located within 150 feet of a known occupied northern long-eared bat maternity roost tree?

Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency

Automatically answered

No

Project Questionnaire

If the project includes forest conversion, report the appropriate acreages below. Otherwise, type '0' in questions 1-3.

1. Estimated total acres of forest conversion:

45

2. If known, estimated acres of forest conversion from April 1 to October 31

0

3. If known, estimated acres of forest conversion from June 1 to July 31

0

If the project includes timber harvest, report the appropriate acreages below. Otherwise, type '0' in questions 4-6.

4. Estimated total acres of timber harvest

0

5. If known, estimated acres of timber harvest from April 1 to October 31

0

6. If known, estimated acres of timber harvest from June 1 to July 31

0

If the project includes prescribed fire, report the appropriate acreages below. Otherwise, type '0' in questions 7-9.

7. Estimated total acres of prescribed fire

0

8. If known, estimated acres of prescribed fire from April 1 to October 31

0

9. If known, estimated acres of prescribed fire from June 1 to July 31

0

If the project includes new wind turbines, report the megawatts of wind capacity below. Otherwise, type '0' in question 10.

10. What is the estimated wind capacity (in megawatts) of the new turbine(s)?

0



ATTACHMENT C

Site Photographs



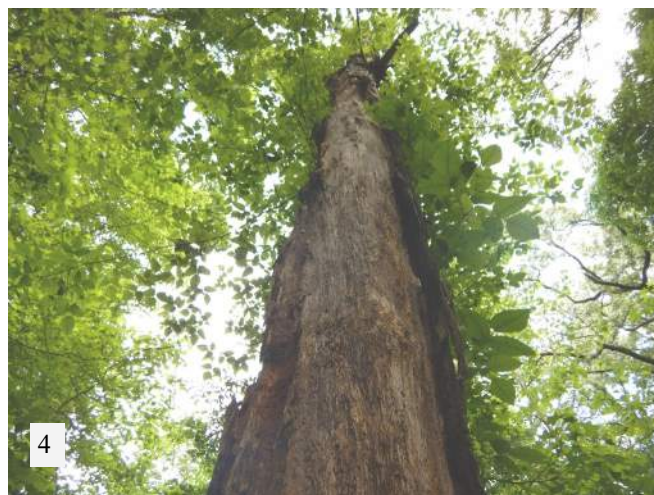
▲ Example of typical wooded riparian area suitable as NLEB habitat.



▲ Example of typical wooded riparian area and flyway suitable as NLEB habitat.



▲ Example of tree with crevice/cavity that could function as suitable NLEB habitat.



▲ Example of tree with peeling bark that could function as suitable NLEB habitat.



▲ Example of large hollow tree that could function as suitable NLEB habitat.



▲ Example of man-made structures containing suitable NLEB habitat. Bat sounds were heard at this bridge.



▲ View looking downstream at the Saline River, which may function as suitable mussel habitat.



▲ View looking upstream at the Saline River, which may function as suitable mussel habitat.



▲ View of Tenmile Creek, which may function as suitable rabbitsfoot and/or harperella habitat.



▲ View of Fourche Creek, which may function as suitable rabbitsfoot habitat.



▲ View of Hurricane Creek, which may function as suitable rabbitsfoot and/or harperella habitat.



▲ View of Gulpha Creek, which may function as suitable rabbitsfoot and/or harperella habitat.



▲ View of Middle Branch Gulpha Cr., which may contain suitable rabbitsfoot and/or harperella habitat.



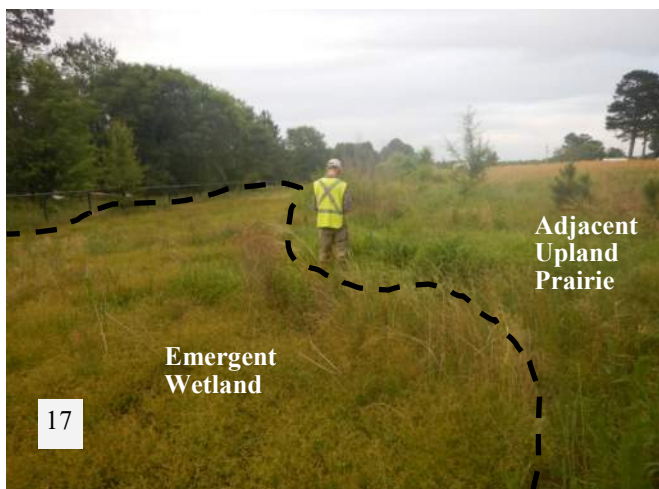
▲ View of Dodson Creek, which may contain suitable harperella habitat.



▲ View of Caney Creek, which may contain suitable harperella habitat.



▲ Example of wetland & prairie that may contain suitable habitat for the rattlesnake-master borer moth.



▲ Example of wetland & prairie that may contain suitable habitat for the rattlesnake-master borer moth.



▲ Example of wetland & prairie that may contain suitable habitat for the rattlesnake-master borer moth.