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Melissa	ML
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United States Department of the Interior



FISH AND WILDLIFE SERVICE

110 S. Amity Road, Suite 300

Conway, Arkansas 72032

Tel.: 501/513-4470 Fax: 501/513-4480

IN REPLY REFER TO:

June 18, 2015

Reference: TA0721

Mark Skelton
 FNBC
 P.O. Box 8
 Ash Flat, AR 72513

Dear Mr. Skelton:

The U.S. Fish and Wildlife Service (Service) has reviewed the information supplied in your letter dated June 4, 2015, regarding the proposed construction of six broiler houses for Nathan and Jennifer Barnett near the city of Cave City, Independence County, Arkansas. Our comments are submitted in accordance with the Endangered Species Act (ESA; 87 Stat. 884, as amended 16 U.S.C. 1531 et seq.) and the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d).

The following listed species are known to occur in this region: Pink Mucket (*Lampsilis abrupta*), Gray Bat (*Myotis grisescens*), Indiana Bat (*Myotis sodalis*), Running Buffalo Clover (*Trifolium stoloniferum*), Scaleshell (*Leptodea leptodon*), Ozark Hellbender (*Cryptobranchus alleganiensis bishopi*), Rabbitsfoot (*Quadrula cylindrica cylindrica*), Fat Pocketbook (*Potamilus capax*), and Northern Long-eared Bat (*Myotis septentrionalis*). In addition, the federally protected Bald Eagle (*Haliaeetus leucocephalus*) also occurs in this region. The White River provides critical habitat for the Rabbitsfoot.

The designation of critical habitat for Rabbitsfoot by the Service considers physical or biological features essential to the conservation of these species. These include, but are not limited to:

1. Space for individual and population growth and for normal behavior;
2. Food, water, air, light, minerals, or other nutritional or physiological requirements; and
3. Sites for breeding, reproduction, or rearing; and

Primary constituent elements are those specific elements of the physical or biological features that provide for a species' life history processes and are essential to the conservation of these species. Based on our current knowledge of the physical or biological features and habitat characteristics required to sustain life history processes for Rabbitsfoot, the primary constituent elements specific to these species are:

1. Primary Constituent Element 1— Geomorphically stable river channels and banks (channels that maintain lateral dimensions, longitudinal profiles, and sinuosity patterns over time without an aggrading or degrading bed elevation) with habitats that support a diversity of freshwater mussel and native fish (such as, stable riffles, sometimes with runs, and mid-channel island habitats that provide flow refuges consisting of gravel and

sand substrates with low to moderate amounts of fine sediment and attached filamentous algae).

2. Primary Constituent Element 2— A hydrologic flow regime (the severity, frequency, duration, and seasonality of discharge over time) necessary to maintain benthic habitats where the species are found and to maintain connectivity of rivers with the floodplain, allowing the exchange of nutrients and sediment for maintenance of the mussel's and fish host's habitat, food availability, spawning habitat for native fishes, and the ability for newly transformed juveniles to settle and become established in their habitats.
3. Primary Constituent Element 3— Water and sediment quality (including, but not limited to, conductivity, hardness, turbidity, temperature, pH, ammonia, heavy metals, and chemical constituents) necessary to sustain natural physiological processes for normal behavior, growth, and viability of all life stages.
4. Primary Constituent Element 4— The presence and abundance (currently unknown) of fish hosts necessary for recruitment of the rabbitsfoot. The occurrence of natural fish assemblages, reflected by fish species richness, relative abundance, and community composition, for each inhabited river or creek will serve as an indication of appropriate presence and abundance of fish hosts until appropriate host fish can be identified.
5. Primary Constituent Element 5— Either no competitive or predaceous invasive (nonnative) species, or such species in quantities low enough to have minimal effect on survival of freshwater mussels.

The Service recommends that potential roost trees not be removed between April 1 and October 15 because Indiana bats roost in trees throughout the Karst region and northeast Arkansas during these dates. Potential roost trees include live trees and snags ≥ 5 "DBH (diameter at breast height) that have exfoliating bark, cracks, crevices and/or hollows.

During the summer, Northern Long-eared Bats (NLEB) typically roost singly or in colonies in cavities, underneath bark, crevices, or hollows of both live and dead trees and/or snags (typically ≥ 3 inches dbh). Males and non-reproductive females may also roost in cooler places, like caves and mines. This bat seems opportunistic in selecting roosts, using tree species based on presence of cavities or crevices or presence of peeling bark. It has also been occasionally found roosting in structures like barns and sheds (particularly when suitable tree roosts are unavailable). They forage for insects in upland and lowland woodlots and tree lined corridors. During the winter, NLEB predominately hibernate in caves and abandoned mine portals.

The proposed project occurs within the consultation area for NLEB but outside individual buffers surrounding hibernacula and known maternity roosts. The proposed project includes conversion of forested habitat to non-forested habitat or clear-cutting. The total acres of tree removal are greater than one acre. If the project will be conducted from April 1 – October 15, NLEB presence/absence surveys are necessary. The Service's **2015 Range-wide Indiana Bat Summer Survey Guidelines** must be used for presence/probable absence surveys for the NLEB in 2015. These protocols can be found at

<http://www.fws.gov/midwest/Endangered/mammals/inba/inbasummersurveyguidance.html>.

Surveys must be conducted by a qualified bat biologist with a federal endangered species permit. A report detailing the survey findings must be submitted to this office prior to the action agency final decision to provide federal financial assistance or issuance of a federal permit. For positive (NLEB present) surveys, the Service requests a meeting between the federal action agency, Service, and project proponent to discuss steps necessary to satisfy ESA section 7 consultation requirements. If the project is conducted during NLEB hibernation period (October 15 – April 1), no surveys for NLEB presence/absence are necessary.

Sediment and/or nutrient transport from the proposed project location may have direct, indirect, and/or cumulative effects to mussels, fish hosts, and/or their habitat(s). The effects of sedimentation and nutrients (e.g., ammonia, etc.) on mussels, fish, and their habitats are well documented in the scientific literature. Adverse effects associated with sedimentation and nutrification from all phases of construction activities may be minimized and/or alleviated through proper implementation and maintenance of erosion control best management practices and maintaining vegetative buffers. Buffer width is dependent upon slope, vegetation type, and soil types. The Service can provide additional technical assistance on appropriate vegetative buffer widths upon request.

Erosion and Sediment Control

BMPs should be implemented for all construction projects within karst landscapes. BMPs should include filter fences, straw bales, interceptor dikes and swales, sediment traps, ditch checks, detention basins, mulching, seeding, and/or revegetation as appropriate. Mats or netting should be applied on steep slopes and stream banks. Erosion and sediment control measures should be sized to handle at least the 25 year flood and 24-hour storm event. Erosion and sediment control BMP's should be implemented to prevent sediment and contaminants from entering groundwater.

It is important that construction plans reduce erosion and sedimentation into streams and karst features by:

- Identifying areas with potential for erosion problems prior to construction initiation.
- Avoiding wetlands and low lying areas.
- Restoring steep embankments with seed, mulch, fertilizer, and implementing erosion control measures such as silt fences, straw bales, matting, and sediment traps. Soil stabilization immediately after earth work is complete is critical.
- Restoring steep approaches to stream crossings by seeding, mulching, fertilizing, and implementing erosion control measures such as silt filter fences, ditch checks, straw bales, matting, and sediment traps. It is critical that restoration be implemented immediately after construction.
- On approaches to stream crossings, drainage control structures should be located at the top and base of the slope/bank. Runoff should be routed to stable slopes on either side of

the right of way, or routed via temporary conveyance structures to the base of the approach slope where it can infiltrate into the stream bank and eventually seep back to the channel.

Construction in Sensitive Areas

As the true extent of the underground environment is difficult to clearly delineate, undiscovered karst features; such as cave openings, sinkholes, and underground passages may occur on or near a project site, even in previously developed areas. Therefore, the Service recommends the following precautionary measures be taken to avoid impacts to groundwater and sensitive or endangered species which may inhabit karst features not previously surveyed.

- Survey existing and any new right-of-ways for karst features such as caves, sinkholes, losing streams, and springs.
- Establish a natural area of 300 feet or greater around any cave, sinkhole, losing stream, or spring found during the survey (or during any aspect of project implementation). The Service should be contacted for further evaluation to determine if caves are used by sensitive or federally listed species.
- If a cave is used by sensitive or federally listed species, the Service may request that the cave be mapped to determine if additional openings or passages may be affected by the project. The Service may recommend modifications of the proposed project to allow natural areas to be established. Incorporation of natural areas may be necessary to avoid impacts.
- If caves or other openings are encountered during construction, the Service requests that work efforts cease within 300 feet of the opening. The opening should be adequately marked and protected from work activities, and the Service should be contacted immediately. No fill materials should be placed into the opening until Service or Service approved personnel have the opportunity to inventory the site.
- The Service should assess caves located prior to or during construction for sensitive/endangered species and provide recommendations before activities proceed.
- No blasting should be permitted in the vicinity of any known karst feature without previous consultation.

Additional measures may be required for construction near sensitive areas including stream channels and karst features. Care should be taken when working around streams and karst features to prevent unnecessary damage to or removal of vegetation. If a cave or fracture is breached or surface water is rerouted into a karst feature, all activities should cease and the Service should be contacted to assess the situation and provide further consultation before proceeding.

Staging areas should be at least 300 feet away from streams, wetlands, and karst features. All streams, wetlands, and karst features adjacent to disturbed areas should be protected by the use

of silt fence, straw bales, and other BMPs necessary to prevent sediment from entering water bodies. A combination of several measures may be necessary to decrease damage at stream crossings. In streams with enough flow, temporary in-stream settling ponds should be used to catch sediment generated by construction. Sediment should be removed as soon as construction is completed. For smaller streams or where appropriate, water could be bypassed through construction areas by the use of flume pipes, pumps, or coffer dams. Stream can be bypassed using directional drilling techniques, as discussed later.

Streams and karst areas should be restored and stabilized immediately following construction activities. Native plants, mats, netting, and other BMPs should be used to stabilize banks. Instream deflectors and anchored logs should be used in high velocity streams to protect vulnerable banks and allow for reestablishment of vegetation. Riprap revetment should also be used, if necessary, to help stabilize slopes in areas of high velocity stream flows. The use of riprap should, however, be minimized. Rock typical of the local geology should be used if available. Monitoring of BMP performance in critical areas, particularly at sensitive stream crossings and stream approach slopes should be conducted and documented on a routine basis prior to and after storms during construction and operation. Based on monitoring, additional BMPs or other improvements may be necessary to insure minimization of impact.

All efforts should be made to minimize stream alterations which could impact water quality and fish and wildlife resources. Construction along streams should not take place during fish spawning seasons if possible.

Stormwater

Stormwater concerns occur during construction and after the site is developed and stabilized. Threats to groundwater shift from sediment and fuel/oil/grease, to lawn chemicals, oil and grease from personal vehicles, brake dust, chip seals, roof tar, and other household contaminants. Plans should be made to address post construction stormwater contaminants.

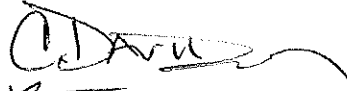
The Arkansas Department of Environmental Quality and the Environmental Protection Agency oversee and permit stormwater runoff. In 2003, the Northwest Arkansas Regional Planning Commission developed the Northwest Arkansas Stormwater Quality Best Management Practices Preliminary Guide Manual for community use. The manual was developed with six control measures including public education and outreach, public participation and involvement, illicit discharge, detection and elimination, construction site runoff control, post-construction runoff control, pollution prevention, and good housekeeping. When open land is developed the hydrology of the site completely changes. Possible contaminants associated with development include sediment, nutrients, microbes, organic matter, toxic chemicals, trash, and debris. Each of these together or separately can pollute groundwater. Once contaminants leave the site and enter drainage within a groundwater recharge zone, whatever the water was carrying is now contributing to groundwater contamination and threatens rare and endangered karst animals.

The comments herein are for the sole purpose of providing technical assistance to the action agency or for individual pre-project planning assistance. These comments and opinions should not be misconstrued as an "effect determination" or considered as concurrence with any proceeding determination(s) by the action agency in accordance with Section 7 of the ESA. These comments do not authorize the "take" of a threatened or endangered species as defined

under the ESA. In the absence of authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, a finding concurrence letter, etc.) from the Service, both lethal and nonlethal "take" of protected species are in violation of the ESA.

We appreciate your interest in the conservation of endangered species. If you have any questions, please contact the Arkansas Ecological Services Staff at (501) 513-4487.

Sincerely,

A handwritten signature in black ink, appearing to read "Melvin Tobin", with a long, sweeping horizontal flourish extending to the right.

Melvin Tobin
Project Leader

WHITE RIVER INSURANCE AGENCY

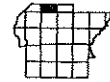
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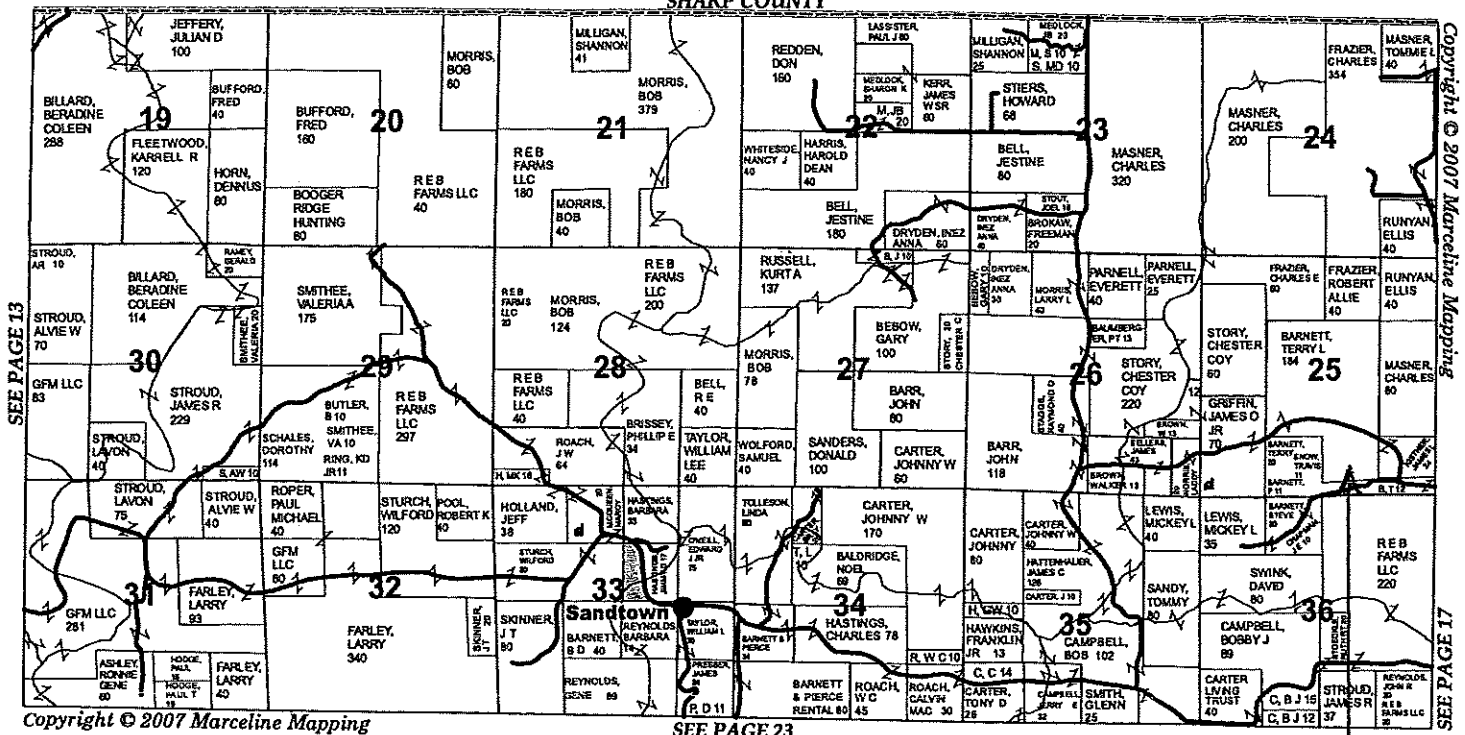
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