



IN REPLY REFER TO:

## 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



September 7, 2012

Reference: TA0802

Anthony Bassak  
Burns & McDonnell  
15950 N Dallas Parkway,  
Suite 700  
Dallas, TX 75248-6630

Dear Mr. Bassak:

The U.S. Fish and Wildlife Service (Service) has reviewed the information supplied in your letter dated August 31, 2012, regarding the proposed construction of approximately 50 miles of new electrical transmission lines and a new Kings River Station near the City of Centerton, Benton County, Arkansas. Our comments are submitted in accordance with the Endangered Species Act (87 Stat. 884, as amended 16 U.S.C. 1531 et seq.) and Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c).

The following federally listed threatened and endangered species are known to occur in this region: Ozark cavefish (*Amblyopsis rosae*), cave crayfish (*Cambarus aculabrum*), gray bat (*Myotis grisescens*), Indiana bat (*Myotis sodalis*), Ozark big-eared bat (*Corynorhinus townsendii ingens*), and piping plover (*Charadrius melodus*). In addition, the candidate species Neosho mucket (*Lampsilis rafinesqueana*), rabbitsfoot (*Quadrula cylindrica cylindrica*), Arkansas darter (*Etheostoma cragini*), and the federally protected Bald Eagle (*Haliaeetus leucocephalus*) are also known to occur in this region.

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 eutrophication 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.

The following best management practices (BMPs) do not override other BMPs that may have been specified to use from other sources, but are in addition to those instructions.

### **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 breeched 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 contaminants, 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 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,

  
for Jim Boggs  
Project Leader