## **Species Protective Measures for Indiana Bats**

The following avoidance and minimization measures shall be implemented to minimize the adverse effects of the project to Indiana Bats.

- Survey the project area for karst features, mines or underground passages that provide complete darkness (large culverts, covered canals, etc.) prior to construction and notify the Arkansas Ecological Services Field Office of all such features. The Field Office can be reached at (501) 513-4470.
- No blasting shall occur within 1 mile of an occupied cave where bats are present.
- \*Suitable habitat shall not be removed from April 15 October 15 within 2.5 miles of a known roost tree.
- \*In areas with other Indiana bat records, suitable habitat will not be removed from May 1 –
   October 15 within 2.5 miles of a record.
- \* These seasonal restrictions are specific to this SPMs document, which is directly tied to questions asked in the AFO Dkey in IPaC. These dates do not indicate active/inactive season clearing dates for bats.

In addition to the above conditions, the U.S. Fish and Wildlife Service (Service) recommends the following:

- Cave entrance and structure should not be obstructed or modified.
- 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 federally listed species.
- 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.
- 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.
- Prescribed fire should be planned so that smoke does not enter occupied caves while bats are present.
- When possible and not a hazard, retain Shagbark Hickories, snags, and other trees that have exfoliating or scaling bark, cracks, or cavities that could provide bat habitat.