



Indiana Bat, FW3 <indiana\_bat@fws.gov>

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## Fwd: Fw: Indiana Bat Summer Survey Guidelines

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To: FW3 Indiana Bat <indiana\_bat@fws.gov>

Mon, Feb 25, 2013 at 2:52 PM

**"Ryan Malloy"**

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cc: David Smith <[davidsmith@ecologicalsolutions.net](mailto:davidsmith@ecologicalsolutions.net)>

Subject: Indiana Bat Summer Survey Guidelines

02/08/2013 03:34 PM

To whom it may concern:

Attached please find comments regarding the 2013 *Draft Revised Rangewide Indiana Bat Summer Survey Guidelines*. The comments were prepared by Ecological Solutions, Inc. and represent a southeastern perspective on the draft guidance protocols. Should you have questions or comments, please do not hesitate to contact us at 770 998-7848.

Sincerely,

Ryan Malloy  
Ecologist

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(See attached file: *ESI\_comments\_2013guidance.pdf*)



**ESI\_comments\_2013guidance.pdf**

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February 8, 2013

U.S. Fish and Wildlife Service  
620 South Walker Street  
Bloomington, IN 47403-2121

Re: Comments regarding 2013 *Draft Revised Rangewide Indiana Bat Summer Survey Guidelines*

To Whom It May Concern:

Ecological Solutions, Inc. has prepared these comments regarding 2013 *Draft Revised Rangewide Indiana Bat Summer Survey Guidelines* (hereafter, draft guidance), prepared by U.S. Fish and Wildlife Service (USFWS). Our comments are focused primarily on the applicability of this survey protocol for linear (utility and transportation) projects within the state of Georgia. It should be noted that our comments have been formed (at least in part) by the linear nature of projects for which we will be employing the protocols detailed in the draft guidance. These comments follow the format of the draft guidance: Phase 1 – Habitat Assessment; Phase 2 – Acoustic Surveys (including data analysis); Phase 3 – Mist-net Surveys; and Phase 4 – Radio-tracking and Emergence Surveys. Where applicable, page numbers and direct quotes are used to reference specific sections of the draft guidance followed by our comments, questions, and/or request for clarification.

### **Phase 1 – Habitat Assessment**

Pages 3 & 7: “Suitable summer habitat for Indiana bats consists of...snags greater than 3 inches<sup>2</sup> (7.6 centimeters)...”

Pages 3 & 7 (footnote<sup>2</sup>): “Suitable roosting habitat is defined as forest patches with trees of greater than or equal to 5 inches dbh (12.7 centimeters), although trees as small as 3 inches within the forest patch(es) may also be included.”

Comment – The inclusion of the footnote adds confusion regarding which size tree is considered a potentially suitable roost site. When considering individual trees, should we be looking at 3-inch or 5-inch diameter at breast height (dbh) trees/snags? In addition, the footnote briefly mentions even-aged stands of 3-inch dbh trees as not likely being suitable; however, no specific guidance is suggested for determining the size of the forest patch to consider in which 3-inch trees might be present. Clarification here would be helpful.

Pages 7-8: Submission of habitat assessment and Phase 2 study plan

Comment: We would prefer to combine Phase 1 and Phase 2 reports so that projects may proceed at a slightly faster pace. The survey season is relatively short (~61 days for Phases 2-4), and in many cases

it will be likely that Phase 1 surveys may not be approved for commencement until after May 15. In addition, we would only be implementing the surveys described in the draft guidance in areas where we cannot rule out the possibility that potentially suitable habitat exists. Therefore, we would likely make the recommendation to move to Phase 2 surveys for (almost) all projects. In such cases, it would expedite the process if we could combine Phase 1 and 2 reports as opposed to submitting separate reports.

## **Phase 2 – Acoustic Surveys**

Comments for Phase 2 are divided into three categories: data collection, data analysis, and reporting.

### *Data collection*

Pages 13-14 (and 7-8 FAQ): “Using detection probabilities as determined in post WNS environments as the baseline necessary to document Indiana bats, all projects will require (1) a minimum of two acoustic survey sites, (2) the deployment of...one detector per survey site, and (3) all sampling to be conducted for at least six suitable nights.”

Comment: We feel this level of sample effort (six nights) is high, especially for smaller linear projects (i.e., projects less than one mile in length). We would prefer to implement thresholds that better determine sample effort for small projects with relatively small footprints? For example, consider a sampling period of two nights if a linear project consists of widening an existing road, the location of the project is greater than 50 miles from the closest known occurrence, and the project site is not located near streams, wetlands, and/or large patches of contiguous forests (other scenarios possible). This may require projects to be evaluated on a project-by-project basis, but it could be an improvement over treating all projects equally even when proposed impacts/footprints are in fact not equal.

Page 17 (FAQ): “Why does the guidance only address passive acoustic survey techniques instead of active survey techniques?”

Comment: While we understand the need to provide consistent survey methods through this protocol via deploying stationary detectors, we feel that this potentially ignores a valuable source of data during each sampling period. Ultimately, active monitoring would be a beneficial addition to Phase 2 of the draft guidance, especially considering Indiana bats are extremely rare in Georgia (according to historical records). The addition of active monitoring during sampling events could serve to justify shorter sampling periods (< 6 nights). We have two comments/questions regarding this area of sampling.

1) As a means of supplementing existing data collection efforts (passive monitoring), would it be possible to incorporate driving acoustic surveys into Phase 2? Some state natural resource agencies (e.g., Georgia Department of Natural Resources) currently use active acoustic survey methods such as driving surveys with hood-mounted microphones attached to acoustic detectors and GPS units (<http://www.georgiawildlife.com/AnabatProject>). Would it be possible to modify this protocol (or others) to incorporate for linear road projects?

2) Would it be possible to incorporate active monitoring into each acoustic monitoring sample period? For example, we could traverse acoustic sampling sites with hand-held units for pre-determined lengths of time at specific time intervals during acoustic sampling in order to better sample sites that have been chosen as potentially suitable for Indiana bats. This would increase the area surveyed at each site during each sampling event. Similar methods were implemented (with success) in 2012 at the Rachel Carson National Wildlife Refuge, as well as other northeastern USFWS field stations, in order to develop a standardized sampling protocol which combined both active and passive sampling (<http://www.fws.gov/fieldnotes/regmap.cfm?arskey=32847>).

### *Data analysis*

This section of comments/questions pertains to general aspects of data analysis and not to specific items in the draft guidance. Therefore, direct/block quotes may not precede comments/questions.

Question: When establishing classification accuracy rates, what proportion of the data should be set aside for training (a wide range of values can be found from the literature)? This is something that should be standardized across all projects; however, it is not mentioned in the draft guidance.

Question: Which call parameters should be used for automatic identification? This is something that should be standardized across all projects; however, it is not mentioned in the draft guidance.

Question: Can non-target species (non-Myotis) be lumped into one category during automatic identification?

*Following comments/questions based on Acoustic Bat Identification Software Testing Criteria; # indicates the criterion number as stated in original document*

#2: Should call libraries be the same for all projects within a specific region (e.g. northeast, southeast, midwest)? This is something that could affect species identification and should be standardized for all projects by region. This call library could be maintained and updated (as needed) by a university or a specific USFWS FO.

#4: Should filters (and filter settings) be the same for all projects? This is something that could affect species identification and should be standardized for all projects.

#5: How should the “unknown” category be established? There are many ways to do this (i.e., during call filter stage, during analysis, or some combination); therefore, should this be standardized for everyone? If not, how can identifications be compared across programs?

#6: “Minimum correct classification rate on software’s training data must be 90% or better for all Myotis species that may occur within the range of the Indiana bat.” AND #20: “...the primary purpose of this survey guidance is not to document the species complex present within and area, but rather to document the presence or probable absence of Indiana bats within a specific project area.” Is it acceptable to lump all non-Myotis species into one category when establishing classification accuracy rates of just Myotis? Doing so reduces the misclassification of non-target species among each other

thereby increasing the classification accuracy of the remaining species (in this case, only *Myotis*). Species identification could still be carried out for every species (if desired by USFWS); however, classification accuracy rates would be based only on *Myotis*.

#7: What maximum likelihood estimator should be used (i.e., maximum likelihood test, maximum likelihood estimation for DFA, etc.)? This section is vague in draft guidance, FAQ, and software testing criteria. A detailed example would help clarify this point.

### *Reporting*

Page 14-15: If acoustic surveys document the presence of Indiana bats, then the appropriate USFWS FO(s) must be notified within 48 hours by providing project name...A complete acoustic survey report documenting the presence and/or absence of Indiana bats must be submitted to the appropriate USFWS FO(s) for review and concurrence and the conclusion of all project-specific summer survey field work discussed in this guidance document.”

Comment: Does this mean notification is required within 48 hours after conducting surveys or analyzing data? Submission of acoustic survey results changed from 10 days (2012 draft guidance) to conclusion of all project-specific summer field surveys (2013 draft guidance). Has this been done in the interest in time due to survey timing constraints?

### **Phase 3 – Mist-netting and Phase 4 – Radio-tracking**

Page 17: Summer mist-netting season: May 15 – August 15

Comment: Length of mist netting extended to August 15. What was the reasoning behind extending the mist-net survey season?

Comment: If Indiana bats are captured on a linear utility or transportation project site, design modifications and special provisions will be recommended/implemented to avoid impacts to Indiana bats in that area. Therefore, is it possible to transfer the radio tracking responsibilities to USFWS? We will still be responsible for mist-netting bats and attaching radio transmitters where applicable; however, radio-tracking and emergence surveys can be conducted by USFWS. The reason for this is the actual radio telemetry data will likely have little impact on the course of action taken to avoid or minimize impacts to roosting Indiana bats, even if formal Section 7 measures are to be taken.

Page 27: “...track all radio-tagged bats captured to diurnal roosts for at least 7 days and must conduct a minimum of 2 evening emergence counts at each identified roost...”

Comment: Because bats can potentially fly long distances and most of our projects will be linear and/or narrow, it is possible that a mist-net captured bat roosting far away from a project site. Aerial searches will likely not be used in Georgia, and locating radio-tagged individuals will likely be conducted using a homing technique (on foot with hand-held receivers). When does the 7-day period start for radio-tracking bats? Assuming radio-tracking commences immediately following radio tag deployment, does the 7-day period begin on the first day of tracking or once the radio-tagged

individual(s) is found? What if a radio-tagged individual(s) is not found the first day of radio-tracking? What if the radio-tagged individual is not found within 7 or more days? Is it safe to assume that the individual is not roosting close to the project and therefore the project will not adversely affect the bat?

### **Conclusion**

We appreciate the opportunity to provide feedback on this draft guidance. We look forward to seeing the final guidance in the near future. Should you have any questions or comments regarding our comments, please do not hesitate to contact us 770-998-7848.

Sincerely,  
**ECOLOGICAL SOLUTIONS, INC.**

A handwritten signature in blue ink that reads "David N. Smith".

**David Smith**  
**Vice President**

A handwritten signature in blue ink that reads "Ryan A. Malloy".

**Ryan Malloy**  
**Ecologist**