

February 7, 2013

Send via electronic mail to:
indiana_bat@fws.gov

**Re: USFWS Draft Revised Indiana Bat Summer Survey Protocols
Requested Comments**

Pittsburgh Wildlife & Environmental, Inc. is pleased to provide the following comments, clarification questions, and suggestions to the U.S. Fish & Wildlife Service (USFWS) regarding the proposed USFWS Draft Revised Indiana Bat Summer Survey Protocol. If you require any additional information or have any questions please feel free to contact us.

Overall

1. Going with an entirely acoustic based presence/probable absence survey protocol for Indiana bats range-wide with unproven and highly contested bat call identification software is ill-advised. It is not based upon current scientific, peer reviewed literature. The pilot study that was completed was extremely narrow in scope and did not prove that this can work. Other recent studies have indicated that Indiana bat call identification is problematic at best. Proceeding with implementation of an untested acoustic survey protocol in 2013 could create significant hardship for the Indiana bat.
2. When this protocol was originally presented in 2012 it was claimed that acoustic presence/probable absence surveys would cost significantly less to complete than surveys completed using the 2007 protocol. At that time, acoustic survey sights consisted of 2 nights. There were really no actual cost differences between the 2007 and 2012 survey protocol. Now that the 2013 survey protocol requires 6 acoustic survey sight nights the cost is actually higher and the length of the entire project is significantly longer.
3. Can project proponents assume presence on large scale projects without doing any survey activity? If so, is this assumption for only that project?
4. Based upon the high level of project/survey coordination between the project applicants and the USFWS FO it appears that many large scale projects will require 2 years to complete presence/absence surveys instead of 1 summer.
5. While this survey protocol is for Indiana bats, there are other federally listed bat species within the range of the Indiana bat that could be encountered. Will the acoustic surveys completed for Indiana bats also fulfill presence/probable absence survey requirements for other federally listed species? What process is to be used if Gray bats are identified in Pennsylvania? Guidance must be included in this protocol

that assists project applicants and field offices how to proceed in areas of known or potential species overlap or when species presence is indicated far outside of a known range.

6. Research has shown that mist net surveys capture 50 to 75 percent of the bats in the area (MacCarthy et al. 2006) and results in both species identification and gender determination. The minimum required level of acoustic detection with identification to species, in the document is 40 percent. This level of effort does not appear to provide for adequate presence or probable absence survey results. Murray et al., (1999) as well as many others, stated that “the combination of both survey methods (acoustic and mist netting) provides the most effective means of determining bat species composition in an area”.
7. As stated “Unless otherwise agreed to by the USFWS, negative acoustic survey results obtained using these protocols are valid for a minimum of two years from the completion of the acoustic survey.” This time frame is not sufficient for large scale projects. At a minimum it should specifically state that survey results can be renewed for an additional 2 years by the FO if no new information is available. Ideally negative survey results should be valid for 4 to 5 years.
8. Please provide further explanation on how the Service will monitor and regulate acoustic positive survey results. Specifically, what is the process if two or more projects are going on close together? If Project A detects Indiana bats and elects not to do mist netting there is a 5 mile management area around that detection. How will Project B be notified if it is within this new 5 mile management area? What if Project B did not identify any Indiana bats? What if Project B is already in the construction phase? Is it different if Project B is still in permitting? Does Project B need to mist net within the 5 mile management area their project crosses to document that Project A Indiana bats don't occur in Project B area? Can Project B complete mist netting for Project A? Furthermore, how will these 5 mile management areas be treated during subsequent years? Will Project C, occurring within the established 5 mile management area be informed that they may or may not be in the area of an Indiana bat maternity colony? Should Project C do acoustic surveys or just mist netting?

Contingency Plan

1. If there is no approved acoustic identification program for use in 2013 or later doesn't that mean that you cannot separate Indiana bat calls from other bat calls? How can presence of the Indiana bat be assumed if high frequency calls are recorded and unproven software is used? Individual call analysis is not standardized and could be highly inaccurate.
2. At a minimum, the contingency plan should require both netting and acoustic done side by side to validate each sampling technique. Since we know that we will get false positives and potentially a lot of them, we need a way to show that the calls

recorded were in fact false positive.

Habitat Assessment

1. This phase should not be mandatory. For small scale projects impacting limited amounts of forest it may be beneficial to complete. Large scale projects and projects which consist predominantly of forested habitat within the known range of the Indiana bat should be given the option of assuming suitable habitat and skipping to Phase II surveys. For large scale project this is an unnecessary taxation. Paying qualified individuals to cover entire project areas and fill out forms that document forest habitat that we can tell from aerial maps is potential Indiana bat habitat wastes time and money. At a minimum the USFWS FO should review projects for occurrence within known Indiana bat areas. If the project is not within a known Indiana bat area but covers a substantial area of forested habitat the FO should recommend skipping the Habitat Assessment phase. As the protocol is currently written this is not an option.
2. Guidance should be provided as to the overall goal of the habitat assessment, i.e. identification of potential primary and secondary roost trees and the abundance of such trees both within and adjacent to the project area. Additional guidance should be provided as to the methodology behind the habitat assessment. Should point counts or quadrants be completed to describe and categorize the forested habitat within the project area and if so at what rate? For example, should 1% of the overall area be assessed?
3. A detailed assessment for potential winter bat habitat with both a literature review and field view should be included in this phase as well as Phase II and III. While almost anybody can do this it should be noted that an experienced biologist who is familiar with the region and knows what (s)he is doing will typically find many more potential winter bat habitat areas than others who are less qualified.
4. Habitat Assessment data sheets should not include a "project description" section, as this is irrelevant to the habitat assessment. Many times after a habitat assessment the project or proponents of the project are adjusted. These highly variable items could lead to serious confusion.
5. Page 2 of the Habitat Assessment data sheet is very unclear. Is the requested information for a particular sample site or for the entire project? How many sample sites are needed for a project? What is a sample site?

Acoustic Surveys

1. Overall it is very difficult to address and understand the acoustic survey phase since the new, automated acoustic software program is not available. Furthermore, additional independent verification of the new, automated acoustic software program should be published in peer reviewed journals before implementation. If surveys are

completed before this is done many project consultations will be completed based upon information that has not been independently verified.

2. While it is understood that there are really no qualifications for setting up a bat detector (other than understanding the equipment and knowing about bats), some form of USFWS and/or State Resource agency authorization and/or scientific permitting should be required. Survey results collected by persons without such permits should not be accepted.
 - If no USFWS or State Resource agency survey and/or surveyor approval is required, any individual could purchase and use this equipment at any time or any place. This could lead to very complicated situations. Private land owners and anti-project groups could and would likely be actively deploying detectors for months at a time in order to try to record 1 Indiana bat call. Based upon this protocol, that means a 5 mile management buffer would then be established. Some credentials must be required to provide legal distinction between legitimately collected data and random data submitted by unqualified persons.
 - On the opposite side - project proponents are typically responsible for submitting report findings to the USFWS or State Resource agency for approval. Without survey and/or surveyor approval, agencies would not know if and when a survey was completed, how many times a survey was completed, and what the results were.
3. There is a lack of standardization in the proposed survey guidance for call identification software. Ideally there should be much stricter guidelines for detection equipment and call identification software, since all detection equipment and call identification methods do not produce equal results (Tyburec, 2012).
 - While there is no approved acoustic identification software package available at this time, what is to be done when there are several approved packages? Will project applicants have to analyze data with each approved call identification software package? What if each of the software packages returns different results?
 - If an acoustic survey documents Indiana bat presence, can a project applicant use a new or updated version of an approved acoustic identification software package to reanalyze calls at a later date? What happens if the new or updated software indicates that Indiana bats are not present?
4. While we are in agreement that some minimum level of call recording and minimum level of call identification is necessary, that is all that should be required. The weather parameters in addition to the 10 / 40 rule are absurd. First, 30 minutes of rain during a night only serves to increase bat activity prior to and after the rain event. If it does rain all night or if you have very high winds or temperatures below acceptable activity levels then you will not achieve the 10 / 40 rule. Having both requirements be met on a nightly basis makes no sense. Surveys could easily take

7, 8, 9, or more days to complete.

5. Is there any guidance on when weather proofing can or cannot be used? With everyone coming up with a slightly different weather proofing system, it seems that survey results will be far from standard. Furthermore, can weather proofing be used on one night and not the next night?
6. The description of where acoustic detectors should be placed directly contradicts itself multiple times. It is unclear as to how you are to sample stream corridors without having your detector near water surfaces, or road corridors without deploying your detector near vegetation.
7. If you cannot use detectors near high voltage lines what kind of survey should be done for expansion of high voltage lines?
8. The potential inability to identify bat calls when they are leaving their roosts is problematic. If an area within a project area contains a high amount of large potential primary roost trees, it should be sampled as close to the area as possible. Completing an emergence survey for an area like this accomplishes nothing.
9. The number of detector sites for land tracts is 1 site per 30 acres but for linear projects it is only 1 site per 100 meter-wide kilometer. This level of effort for linear projects is very inadequate based upon the fact that quality suitable survey locations for linear projects are typically more limited. On tracts of land surveyors have the option to survey the entire area. On linear projects surveyors can only survey where they have permission along the project alignment. Two survey locations per 100 meter-wide kilometer should be a minimum requirement.

Mist Net Survey

1. The protocol indicates the start time should be sunset. That is wrong. Start time should be dusk.
2. If you want to limit the number of net sites a permitted individual can run, just state the criteria. A 10 minute walk means something different to everyone. The limiting factor is that all bats must be processed, identified, and released within 10 minutes of removal from a net. If a permitted person cannot demonstrate that this was done, they should lose their permit.
3. One permitted person can run and identify 2 net sets independently. One permitted person can identify multiple net sets with multiple assistants each running 2 net sets as long as they have constant communication and each survey location can be reached within 10 minutes by the permitted person. Again, the limiting factor is that all bats must be processed, identified, and released within 10 minutes of removal from a net. If a permitted person cannot demonstrate that this was done they should

lose their permit.

4. If no Indiana bats are captured with double the minimum level of mist netting effort at good mist netting sites, doesn't that indicate that there really are not Indiana bats present or that the population is so low that impacts to the habitat on the local scale would not adversely affect the overall Indiana bat population?
5. Some discussion regarding how to handle apparent false positive acoustic detections must be included in the protocol for the FO and project applicants.

Radio Tracking

1. Radio tracking should at a minimum include enough nights of foraging data collection to determine foraging areas and habitat being utilized. While identification of primary and secondary roost trees is of high importance, such resources are ephemeral. The foraging habitat should be documented so it can be properly conserved and also protected as described in the Endangered Species Act - Section 2 (b).

References

MacCarthy, K.A., T.C. Carter, B.J. Steffen, and G.A. Feldhamer. 2006. Efficacy of the mist-net protocol for Indiana bats: A video analysis. *Northeastern Naturalist* 13:25-28.

Murray, K. L., E. R. Britzke, B. M. Hadley, and L. W. Robbins. 1999. Surveying bat communities: a comparison between mist nets and the Anabat II bat detector system. *Acta Chiropterologica* 1:105-112.

Tyburec, J. 2012. Acoustic Monitoring: A "Silver Bullet" or a "Sticky Wicket?". Northeast Bat Working Group Meeting.

Again, if you have any questions or require any additional information please contact me at nbossart@windstream.net or at (717) 860-7679.

Very truly yours,

Pittsburgh Wildlife & Environmental, Inc.



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