



## A Note on Bat Survey and Monitoring Activities Requiring Site-Specific Authorization

All survey, monitoring, and/or other similar research activities for federally listed bats that may result in take (as defined in the Endangered Species Act (ESA) as listed below) are regulated under the U.S. Fish and Wildlife Service's 10(a)(1)(A) Recovery Permit program. The Section 10(a)(1)(A) Recovery Permit (Permit) authorizes certain activities for scientific purposes or to enhance the propagation or survival of listed species ([50 CFR §17.22](#)).

One of the conditions within the Permit states that permittees are required to coordinate with the appropriate USFWS Field Office and obtain written concurrence before conducting permitted activities. Compliance is typically achieved through the submission of a **Site-Specific Authorization (SSA)** request which provides the local Field Office with detailed information on proposed survey methods, timing, and locations.

The requirement for Field Office authorization ensures that:

1. Proposed activities are consistent with the conditions of the Permit.
2. USFWS biologists can determine whether the activity may result in take, if alternative actions can be used to avoid or minimize take, and whether additional conservation measures are warranted.
3. Potential impacts to listed bat species are reviewed in the context of range-wide and local population status, seasonality, magnitude, and permanence of activity.

The following bat survey, monitoring, and/or research activities that may result in take must be completed by [a qualified biologist](#) holding a valid Federal Recovery Permit and require a SSA:

- Handling/capturing bats with mist nets or harp traps, or other methods
- Entering hibernacula, maternity caves, or other roosts known to be occupied by bats
- Emergence surveys from trees or other roosts that may disturb bat activity
- Collecting biological samples (e.g. hair, blood, DNA)
- Temporary or permanent marking of bats (e.g. banding, pit tagging, radio-tagging)

Activities that are not likely to result in take of bats (e.g., acoustical surveys) do not require an SSA. However, regardless of whether authorization is required, project proponents are encouraged to use the fillable [Site Study Plan Form for Bat Survey and Monitoring](#) when coordinating with Field Offices and following the recommendations in the Bat Survey Guidelines. The form streamlines survey reviews by ensuring all necessary information is provided and gives Field Offices an opportunity to provide feedback on proposed surveys. Additionally, the SSA Service-approval page (p. 6) of the fillable form facilitates the required authorization (when necessary) of your request as part of the USFWS Field Office Study Plan review.

If you are uncertain if an SSA is required for a proposed project or survey, review the conditions specified in your Permit, or contact your local Field Office or Regional Recovery Permit Coordinator.



## Study Plan Form for Bat Surveys and Monitoring (v. 2.6)

### PROJECT & SURVEY INFORMATION

Project Name: \_\_\_\_\_ Proposed Survey Start Date: \_\_\_\_\_

Project Proponent's Name (e.g., client/company/institution): \_\_\_\_\_

Project Location: State(s): \_\_\_\_\_ County(s): \_\_\_\_\_

Latitude: \_\_\_\_\_ Longitude: \_\_\_\_\_

REQUIRED: Attach shapefiles and/or Google Earth® KMZ files  
(mapping must show project boundaries, impacted forest habitat (if known) and all proposed survey sites)

Files are attached: Yes      No

File link/URL (if applicable): \_\_\_\_\_

Project Summary. In the space provided below, please provide a description of the proposed action, including any activities that will permanently or temporarily alter the current environment and existing habitat features.

### CONTACT INFORMATION

Project Manager/Primary Point of Contact (POC): \_\_\_\_\_ Phone: \_\_\_\_\_

Field Survey Crew Leader (if different from POC): \_\_\_\_\_ Cell Phone: \_\_\_\_\_

Institution/Company Name: \_\_\_\_\_

Mailing Address: \_\_\_\_\_ Resumes included for all personnel: Yes

POC Email Address: \_\_\_\_\_

USFWS Sec. 10(a)(1)(A) Permit No.(s) (if applicable): \_\_\_\_\_

State Permit No.(s) (if applicable): \_\_\_\_\_

Have project proponents been informed that abiding by protective time-of-year restrictions (where available) may be sufficient to avoid take of federally listed bats and (in some cases) may negate the need for a bat survey? Yes      No

Have project proponents been informed that the Service does not require presence/probable absence surveys for federally listed species and that presence can be assumed in a project area containing suitable habitat? Yes      No

Will this survey be conducted on private or public lands? (Check both if applicable):      Private      Public

Has permission of all necessary landowners/managing agencies been obtained? Yes No  
If no, explain: \_\_\_\_\_

Does this project have a federal nexus<sup>1</sup>? Yes No Unsure  
If yes, explain: \_\_\_\_\_

IPaC<sup>2</sup> Consultation Code (if applicable): \_\_\_\_\_

Purpose of Survey: Official P/A Survey Research Monitoring  
Educational Outreach/Training Other: \_\_\_\_\_

Survey Target Species: Indiana bat (IBAT) ☐ Northern long-eared bat (NLEB) ☐  
Tricolored bat (TCB) ☐ Other: \_\_\_\_\_

Has a Phase-1 Habitat Assessment\* of the project area been conducted? Yes No  
If yes, how was the habitat assessment conducted? Field Desktop Combo  
(\*if available, attach a written report)

Is suitable habitat<sup>3</sup> present (or assumed present) for all “target” species? Yes No  
If no, explain: \_\_\_\_\_

Does this project fall within the outer-tier<sup>4</sup> of any “target” species known home range? Yes No Unsure  
If yes, which species: \_\_\_\_\_

#### Project Configuration

Is this project **linear** (≥1 km in total length)? Yes No Combo Unsure  
If yes, how many 1-km sections containing suitable IBAT/NLEB habitat will be impacted? \_\_\_\_\_

Is this project **non-linear**? Yes No Combo Unsure  
If yes, how many acres of suitable IBAT/NLEB habitat is in the overall project area? \_\_\_\_\_  
If yes, how many acres of suitable IBAT/NLEB habitat will be directly impacted/cleared? \_\_\_\_\_

#### **PROPOSED METHODS & SURVEY LEVEL OF EFFORT**

Identify which method (acoustics, mist-netting, combination) proposed to be used: \_\_\_\_\_

Has availability of high-quality sites for target species been assessed via ground-truthing to meet the required LOE?

Yes No (If No, justify method selection): \_\_\_\_\_

<sup>1</sup> A project or action that is authorized, funded, and/or permitted by a federal agency.

<sup>2</sup> <https://ipac.ecosphere.fws.gov/>

<sup>3</sup> See Appendix A of the Bat Survey Guidelines regarding suitable habitat definitions.

<sup>4</sup> See Appendix G of the Bat Survey Guidelines regarding what constitutes “out-tier” of a known bat colony's range.

## ACOUSTICS

Total number of detector sites proposed to be surveyed: \_\_\_\_\_ Number of detector nights/site: \_\_\_\_\_

Total number of detector nights for entire survey: \_\_\_\_\_

Total proposed number of calendar nights to complete the entire survey: \_\_\_\_\_

Detector(s) (Brand, Model): \_\_\_\_\_ Microphone(s): directional omnidirectional

Recording Format: Full Spectrum Zero-Crossings

FWS-Approved<sup>5</sup> Acoustic Bat ID Software: **KaPro**: vers.\_\_\_\_ Classifier, NA vers. \_\_\_\_ **BCID** vers.\_\_\_\_  
**SonoBat**: vers. \_\_\_\_\_ Classifier \_\_\_\_\_ Other: \_\_\_\_\_

### Species to be included for automatic software ID classification analysis:

EPFU CORA COTO LABO LACI LANO LASE TABR MYCI MYEV MYGR MYLU  
MYLE MYSE MYSO MYTH MYVO NYHU PESU Others: \_\_\_\_\_

Will qualitative analysis (i.e., visual vetting) be used? Yes No Unsure

Name(s) of qualified biologist(s) conducting qualitative/visual identifications (attach resume or link with qualifications):  
\_\_\_\_\_

## MIST-NETTING

Total number of net sites to be surveyed: \_\_\_\_\_ Total number of net nights/site: \_\_\_\_\_

Total number of net nights for entire survey (No. of sites X No. of net nights/site): \_\_\_\_\_

Total proposed number of calendar nights to complete the entire survey: \_\_\_\_\_

- A) Maximum number of net set-ups that will be operated/checked (10-min interval) on a given calendar night at a given survey site: \_\_\_\_\_
- B) Minimum Number of personnel present to operate/check X (see A) net set-ups on a given site: \_\_\_\_\_
- C) Proposed Staffing Rate (A divided by B): \_\_\_\_\_

### Staffing Rate

Number of Section 10-permitted biologists per net site (or state-permitted in USFWS R5): \_\_\_\_\_

Do you propose to band bats? Yes No

If yes, please answer the following:

What species will be banded? COTO MYGR MYLU MYSE MYSO PESU

Others: \_\_\_\_\_

If banding *Myotis* sp. or PESU, specify band size: \_\_\_\_\_

Describe your proposed bands (color and letter-numbers) and banding scheme: \_\_\_\_\_

Will banding pliers be used? Yes No

Will any biological samples be collected from captured bats (e.g., guano, hair, swab, wing punch)? Yes No

If yes, explain: \_\_\_\_\_

Name of institution or facility to conduct DNA analysis: \_\_\_\_\_

<sup>5</sup> <https://www.fws.gov/media/automated-acoustic-bat-id-software-programs>

## **RADIO-TRACKING**

Will any bats be radio-tagged and tracked?      Yes                      No

If yes, please answer following:

Which species will be radio-tagged? \_\_\_\_\_

Name of USFWS Section 10 permitted biologist(s) who will apply transmitter(s): \_\_\_\_\_

Make/model and approximate weight of transmitter(s) to be used: \_\_\_\_\_

Manufacturer date and estimated life-span of transmitters to be used: \_\_\_\_\_

Frequency range (MHz) of transmitters (e.g., 150.xxx or 172.xxx): \_\_\_\_\_

If radio-tracking multiple targeted bats/species, what criteria\* will be used in selecting individuals? \_\_\_\_\_

Will all radio-tagged bats be tracked (min. of 4-hrs. search effort/day) to their diurnal roosts for the minimum recommended period of 7 days? Yes                      No

If no, explain: \_\_\_\_\_

Will night-time foraging data/telemetry be collected?      Yes                      No

Glue used for attaching transmitters: Type: \_\_\_\_\_ Name: \_\_\_\_\_

(\*for additional space, use p.5)      Manufacturer: \_\_\_\_\_ Other: \_\_\_\_\_

## **EMERGENCY SURVEYS**

After diurnal roost sites of radio-tagged bats are identified, will emergence surveys be conducted at each identified roost (assuming landowner permission is obtained)? Yes                      No

If yes, how many emergence surveys/roost? \_\_\_\_\_

Have you identified a small number (e.g., ≤10) of potentially suitable roost trees\* that you propose to conduct emergence surveys for? Yes                      No

(\*If yes, provide photographs of each tree documenting that all of the tree can be observed by the surveyor along with coordinates (lat/long and/or KML/shapefile) of all trees to be surveyed.)

## **POTENTIAL HIBERNACULA SURVEYS**

Are any known hibernacula used by the target species located within or adjacent to the project area?

Yes                      No                      Unknown

If yes or unknown, list sites or explain: \_\_\_\_\_

Has your desktop analysis identified any natural or man-made features that could be used as a hibernaculum by any of the target bat species?      Yes                      No

If yes, underground features (e.g., caves, mines, tunnels, bunkers, cisterns) present: Yes                      No

If yes, above-ground features\* (e.g., crawl spaces) present: Yes                      No

If unknown, explain: \_\_\_\_\_

Are you requesting approval of a field survey for potential hibernacula at this time? Yes\*                      No

(\*If yes, attach a separate narrative explaining how the project area(s) will be surveyed for potential hibernacula.)

Are you submitting the results of a Phase 1 Habitat Assessment of potentially suitable hibernacula identified from field surveys? Yes\*                      No

(\*If yes, provide a Phase 1 Habitat Assessment Data Sheet for each potential hibernaculum/portal(s)<sup>6</sup> identified to be surveyed.)

<sup>6</sup> If multiple cave entrances/portals, please list all locations.

## **BRIDGE & CULVERT ASSESSMENTS**

Do any bridges or culverts exist within the project area that have the potential to be used by the target species?

Yes                      No

If 'yes', complete the following fields:

Structure type(s) (check all that apply):                      Bridge                      Culvert                      Other

If "other", explain: \_\_\_\_\_

Survey methodology for structure(s) (check all that apply):

Visual inspection                      Guano collection                      Emergence survey                      Acoustics\*  
Mist-net\*                      Harp-trap\*                      Other \_\_\_\_\_

(\*Due to site-specific conditions of structures, coordination with the local USFWS Field Office and appropriate state agency(ies) is necessary before proceeding with these survey methodologies)

Will guano be collected and analyzed to confirm species ID?                      Yes                      No

If "yes", name of institution/entity performing analysis: \_\_\_\_\_

Acknowledgment that USFWS bats & transportation structures virtual training materials<sup>10</sup> have been viewed: Yes

### **ADDITIONAL SURVEY INFORMATION**

Will the proposed bat survey deviate from the current version of the USFWS Survey Guidelines?<sup>7</sup>                      Yes                      No

If 'yes', provide justification for any departures or modifications to the guidelines, as well as any additional pertinent information, below:

I hereby acknowledge that the information being provided to the Service is accurate and complete as of today's date.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

<sup>7</sup> Proposed surveys deviating from the current Range-wide Bat Survey Guidelines will only be accepted with a thoroughly described justification; coordinate with your local USFWS Field Office (<https://www.fws.gov/our-facilities>) for acceptable modifications.



United States Department of the Interior  
Fish and Wildlife Service  
Ecological Services Program



**SITE-SPECIFIC AUTHORIZATION FOR ESA SECTION 10(a)(1)(A) ACTIVITIES**

Our Field Office has reviewed your study plan and found it to contain sufficient information. When signed, this statement serves as your site-specific authorization to conduct the proposed activities authorized by your section 10(a)(1)(A) federal permit (permit) at the specified locations included in the attached Study Plan Form and must be carried with your permit when conducting work for this project. All activities must be carried out with strict adherence to conditions and authorizations specified in your permit as well as your state permit(s) (if needed). The permit issued by our agency authorizing the activities (if applicable) must remain with the surveyor at all times. For proposed activities on private lands, this authorization is not valid without explicit private landowner permission.

In addition to the final survey report, surveyors must maintain supporting data and files and use the appropriate U.S. Fish and Wildlife Service (USFWS) bat survey data spreadsheet, available on the Range-wide Bat Survey Guidelines website, for reporting Section 10(a)(1)(A) permit-authorized results. If the work expands beyond the scope of your original study plan or if there are adverse effects to bats that were not anticipated, cease all survey and/or research activities, and contact this office prior to continuing. Additionally, if a federally listed bat is captured or detected, this USFWS Field Office must be notified within 48 hours.

**Approving Official:** \_\_\_\_\_

**Field Office:** \_\_\_\_\_

**Email:** \_\_\_\_\_

**Phone:** \_\_\_\_\_

**Authorized as Proposed:**

**Authorized with Conditions:**

**Not Authorized** (see comments)

**Additional Comments**

**Signature:** \_\_\_\_\_

**Date:** \_\_\_\_\_

<sup>8</sup><https://www.fws.gov/library/collections/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines>