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.

U.S. Fish and Wildlife Service

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

PROJECT & SURVEY INFORMATION

Project Name: Renwick Brook Culvert Improvement

Proposed Survey Start Date: 15 July 2026

Project Proponent's Name (e.g., client/company/institution): Village of Cayuga Heights

Project Location: State(s): NY

County(s): Tompkins

Latitude: 42.472923°N

Longitude: 76.497183°W

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.

The Village of Cayuga Heights proposes to replace an existing culvert that transmits Renwick Brook under Cayuga Heights Road, immediately north of W Remington Road in Cayuga Heights, Town of Lansing, Tompkins County, NY. They must remove 5 trees that were determined by the USACE to be potential roost trees for northern long-eared bat (Myotis septentrionalis) during the maternity season and have requested emergence surveys for those trees (see attached map indicating tree locations).

CONTACT INFORMATION

Project Manager/Primary Point of Contact (POC): Michael S. Fishman

Phone: (315) 456-8731

Field Survey Crew Leader (if different from POC): (same)

Cell Phone: _____

Institution/Company Name: Edgewood Environmental Consulting, LLC

Mailing Address: 5 Edgewood Parkway, Fayetteville, NY 13066

Resumés included for all personnel: Yes ☑

POC Email Address: mfishman@edgewoodenviro.com

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

State Permit No.(s) (if applicable): NYSDEC Scientific Collection License #1

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[1]? Yes ◉ No ○ Unsure ○

If yes, explain: US Army Corps of Engineers

IPaC[2] Consultation Code (if applicable): 2026-0044366

Purpose of Survey: Official P/A Survey ☑ Research ☐ Monitoring ☐
Educational Outreach/Training ☐ Other: Emergence Survey for tree clearing

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

Has a 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[3] present (or assumed present) for all "target" species? Yes ◉ No ○

If no, explain: _____

Does this project fall within the outer-tier[4] 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? <0.1 ac

If yes, how many acres of suitable IBAT/NLEB habitat will be directly impacted/cleared? <0.1 ac

PROPOSED METHODS & SURVEY LEVEL OF EFFORT

Identify which method (acoustics, mist-netting, combination) proposed to be used: Visual and acoustic emergence survey.

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)*:

[1] A project or action that is authorized, funded, and/or permitted by a federal agency.
[2] https://ipac.ecosphere.fws.gov/
[3] See Bat Survey Guidelines regarding suitable habitat definitions.
[4] See 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: 2 Number of detector nights/site: 1

Total number of detector nights for entire survey: 2

Total proposed number of calendar nights to complete the entire survey: 1

Detector(s) (Brand, Model): Wildlife Acoustics SM4 Microphone(s): directional ☐ omnidirectional ☑

Recording Format: Full Spectrum ☑ Zero-Crossings ☐

FWS-Approved[5] Acoustic Bat ID Software: **KaPro**: vers. 5.9.0 Classifier, NA vers. 5.7.0 **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):
Michael S Fishman

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): 1/4

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: _____

[5] 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? MYSO, MYSE, PESU

Name of USFWS Section 10 permitted biologist(s) who will apply transmitter(s): Michael Fishman

Make/model and approximate weight of transmitter(s) to be used: Holohil LB2X, 0.27-0.31 gm

Manufacturer date and estimated life-span of transmitters to be used: 2026; up to 20 days

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

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

Only reproductive females will be tagged to identify potential maternity roosts

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: Latex-based Surgical Cen Name: Torbot

Manufacturer Torbot Group, Inc. Other: _____

*(*for additional space, use p.5)*

EMERGENCE 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? 1

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 Habitat Assessment of potentially suitable hibernacula identified from field surveys? Yes* ○ No ○

*(*If yes, provide a Habitat Assessment Data Sheet for each potential hibernaculum/portal(s)[6] identified to be surveyed.)*

[6] 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[10] have been viewed: Yes☐

ADDITIONAL SURVEY INFORMATION

Will the proposed bat survey deviate from the current version of the USFWS Survey Guidelines?[7] Yes ◉ No ○
If 'yes', provide justification for any departures or modifications to the guidelines, as well as any additional pertinent information, below:

We will have 3 observers to watch trees (trees are clustered, so all should be observable with 3 observers). We will also have at least 2 acoustic bat detectors (Wildlife Acoustics SongMeter4 with UMM2 omnidirectional microphones) set to continuous record on trigger, so that we may identify bats by both sight and sound. Immediately following the survey, we will download the recorders, and process them using Kaleidoscope Pro v. 5.9.0 with bat identifiers for North America v. 5.7.0, to identify calls to species. If any listed bat species are auto-classified, we will vet the calls per the 2026 protocol. If any M. septentrionalis are identified we will alert the contractor and no trees will be cut the following morning. If no listed species are indicated, then tree cutting will proceed the following morning. Results of the emergence survey will be reported to USFWS and contractor by email immediately following the survey. Recorded bat calls and vetting results will be available for USFWS review upon request.

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

Signature: Michael S. Fishman Digitally signed by Michael S. Fishman Date: 2026.07.03 18:19:51 -04'00' Date: 3 July 2026

[7] 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:**_____

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