

U.S. Fish and Wildlife Service

Demonstrating and Documenting Qualifications for Federally Listed Bat Species 10(a)(1)(A) Recovery Permit Applications



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When reviewing recovery permit applications for gray bat (*Myotis grisescens*), Indiana bat (*Myotis sodalis*), northern long-eared bat (*Myotis septentrionalis*), Virginia big-eared bat (*Corynorhinus townsendii virginianus*), Ozark big-eared bat (*Corynorhinus townsendii ingens*), and the tricolored bat (*Perimyotis subflavus*)¹ – we (the Service) assess an applicant’s qualifications to conduct the activities requested. This includes, but may not be limited to, the applicant’s ability to correctly identify the target species, as well as existing experience with and ability to properly conduct the requested activities. This document provides advice to applicants on the type of information to include with their application to demonstrate and document their qualifications.

Applicants should clearly state which activities are being requested and inquire with the Regional Office (see Contacts Table on Page 2) if activities not listed require a Recovery Permit. Commonly used techniques that require a Recovery Permit include:

- Handling and taking measurements from bats
- Surveys for bats with mist nets or harp traps
- Applying permanent marks: banding, PIT tagging
- Applying temporary marks: radio-transmitting, light tagging
- Collecting samples from live bats: swabs, guano, blood, wing tissue, or hair
- Entering roosts (hibernacula, summer, transient caves, mines, or other structures) known to be occupied by listed bats.

Note - Trained assistants not named on a Recovery Permit may work on permitted bat activities under the direct and on-site supervision of a permitted individual. However, trained assistants may not work independently at a site. Trained assistants are individuals who are considered qualified by the permittee to select sampling sites, deploy sampling equipment, and handle bats in the field.

- In Permit applications, applicants should provide information requested for each activity in **Summary of Bat Related Experience** (Page 3) AND provide at least two **Letters of Reference** for each technique requested. Applications should demonstrate experience with each requested technique with at least one insectivorous North American bat. Experience with non-listed species for certain techniques is acceptable to demonstrate qualifications and will be assessed on a case-by-case basis (e.g. experience taking wing punches from little brown bats when requesting wing punching for Indiana bats). However, for Ozark and Virginia big-eared bats, we strongly recommend permittees gain experience using the requested techniques on these specific species prior to applying for a permit.

¹ **Adding PESU under review for listing to existing recovery bat permits:** Recovery permits may not be issued before a final rule for PESU is published, but you may apply to add them to your permit and we can review your qualifications and hold your permit until a final determination has been made.

Letters of Reference: For each technique requested, include at least two Letters of Reference from biologists who are federally permitted to work with listed bat species (include their federal recovery permit number in the letter). Ideally, both reference letters should be from biologists with different affiliations (i.e., different company or institution) than the applicant, but one reference can be from an individual who is affiliated with the applicant’s employer, if necessary. Reference letters should provide specific information that include where, when, and how many bats (by species names) the applicant handled/identified, etc., in the presence of the individual providing the reference. The applicant may need to submit more than two reference letters if applying for authorization for multiple species and/or multiple activities.

Unused Techniques: If you are currently authorized to perform an activity on your permit but have not performed that activity in the past 5 years and/or do not have specific plans to use that activity in the next 5 years, we ask you to consider withdrawing those activities when you renew your permit. We maintain records of your previous permits and activities you were permitted for in the past and we may consider reauthorizing previously approved activities to permits through an amendment to an existing permit should the need arise. We ask that you do this so that the Service can track how much certain activities are being used.

Entering Caves for Research or Monitoring – Prior to applying for a permit, send details of applicant’s proposed research to the U.S. Fish and Wildlife Service lead Recovery Biologist for the species to initiate a discussion.

Species	Lead Recovery Biologist	Email	Phone
Gray Bat	Vona Kuczynska	Vona_Kuczynska@fws.gov	573-540-3835
Indiana Bat	Andy King	Andrew_King@fws.gov	812-334-4261 x 216
Northern Long-eared Bat	Jill Utrup	Jill_Utrup@fws.gov	952-252-0092 x 207
Ozark Big-eared Bat	Richard Stark	Richard_Stark@fws.gov	918-382-4520
Tricolored Bat	Noelle Rayment (temporary)	Noelle_Rayman@fws.gov	607 753-9334
Virginia Big-eared Bat	Liz Stout	Elizabeth_Stout@fws.gov	304-866-3858

For any other questions, please contact a Recovery Permit Coordinator in the Region through which you plan to submit your permit application.

Region	Recovery Coordinator	Email	Phone
Southeast Region	Karen Marlowe	PermitsR4ES@fws.gov	404-679-7097
Mountain Prairie Region	Robert Krijgsman	PermitsR6ES@fws.gov	303-236-4347
Midwest Region	Nate Rathbun	PermitsR3ES@fws.gov	612-713-5343
Northeast region	Abby Goldstein	PermitsR5ES@fws.gov	413-253-8212
Southwest region	Sarah Thoman	PermitsR2ES@fws.gov	571-547-3213

***Documentation for bat surveyor/research for
Recovery Permit Application Form 3-200-59, Section E., Option 2.D.***

CV/Resume: For each individual included in the application, submit applicant's CV/resume and any necessary supporting documentation (e.g., copies of research papers, survey reports, etc.) demonstrating proficiency in being capable of independently conducting activities for the endangered or threatened bat species for which permit coverage is sought. Please be as specific as possible by including when, where, and who supervised the activity.

Summary of bat related experience: Provide information on relevant training and field experience with each activity/technique being requested. Please include the approximate amount of time, by activity, spent working with each species in occupied habitat. Additionally, demonstrate experience using or knowledge of US National White-nose Syndrome Decontamination Protocol. For proposed activities, proven repeated first-hand experience in conducting each requested activity on insectivorous bats is needed to demonstrate qualifications. Observing/participating in demonstrations in a workshop setting alone does not constitute sufficient experience for any permitted activities. However, we will consider the applicant's overall level of experience (relevant training, years of experience, number of locations, etc.) when reviewing the application.

1. **Species Identification** - Field experience capturing and identifying all listed bat species for which the applicant is seeking permit coverage, as well as non-listed bats with which the species is commonly mistaken for.

Demonstrate experience correctly identifying species that occur in the States for which a permit is requested. Include experience with both listed and non-listed species that may be misidentified as the target listed species. If you are applying for coverage in multiple States, you will need to demonstrate the ability to properly identify all listed and non-listed bats that could be misidentified as the target species for each State. Therefore:

- o Indiana and northern long-eared bat applications should include experience identifying the little brown bat (*Myotis lucifugus*).
- o Applications for northern long-eared bat that request coverage in the States of Montana, Nebraska, North Dakota and South Dakota should include experience identifying long-eared myotis (*Myotis evotis*). These Field Office may request wing punches or alternative forms of DNA samples (e.g buccal, fecal or hair samples with follicles) to confirm species presence, so consider adding genetic sampling activities to your Recovery Permit as well. If you are not sure which to add, contact the Regional Recovery Coordinator for more information.

- Virginia big-eared and Ozark big-eared bat applications should include experience with other species or subspecies of big-eared bats.

Include the number of gray, Indiana, northern long-eared, Ozark big-eared, tricolored, Virginia big-eared bats, as well as morphologically similar species that the applicant has identified under the supervision of a permitted biologist. Include when and where identifications took place; or for those with extensive experience, provide the number of years of experience as well as the typical number of bats captured and/or identified per year by species. Experience at multiple locations is highly preferred. There is no set minimum number of identifications, but applicants that have handled and identified fewer than 5 individuals of the species requested typically do not have sufficient experience unless they have worked with a limited number of individuals of the requested species and have abundant experience identifying all the other species with which the requested species could be confused. This experience should have been gained under similar conditions and/or using similar techniques to those the applicant is requesting to be permitted for (e.g., experience identifying bats captured through mist nets may not be sufficient to also identify bats roosting at a distance in caves). Handling and identifying bats in a demonstration or workshop setting alone does not constitute sufficient experience.

2. **Collecting Measurements** - Experience collecting morphometric measurements and determining age, sex, and reproductive status of listed bats. Applicant should describe the traits they examine to determine age and the reproductive status of bats. Description of the geographic area and # of sites where the applicant personally collected non-intrusive measurements for listed species requested in the application should also be provided.
3. **Mist Netting** – Describe methods for site selection and assessing habitat suitability for each species. Also describe setting/operating mist-nets, removing bats from nets, and the applicant’s procedure for bats that are accidentally injured. Include experience using US National White-nose Syndrome Decontamination Protocol.
4. **Harp Trapping** – Demonstrate applicant’s ability to 1) set harp trap properly; 2) safely remove bats from harp trap; 3) supervise others that are handling/processing bats. Include examples of harp trapping project plans or survey reports that applicant prepared. In addition to describing when and where, provide:
 - Number of bats (by species) captured.
 - Locations where applicant harp trapped. Include number of nights of trapping at each site and how many bats were captured each night.
 - Applicant role – number of bats the applicant personally removed from the harp trap and processed, technique used to process captured bats including how applicant addressed field conditions to ensure all bats were processed within the permitted time frame (no individual bat can be held for more than 30 minutes, 10 minutes for big-eared bats), and the number of bats the applicant independently identified to species.

- The name and permit number of the permitted individual who was responsible for harp trapping at each site.
 - Applicant's procedure for dealing with bats accidentally injured and for dealing with large numbers of bats in the harp trap (e.g., how to ensure that total holding time does not exceed the permitted limit for any individual bat)
5. **Banding** – Provide details on applicant's experience and protocols for band attachment (include experience with banding pliers), and removal if a band is applied improperly or must be removed. Include information on experience applying appropriate band size for each species (e.g., use of 2.4 vs 2.9 mm bands). Include the number of bats of each species that have been banded. Banding experience does not have to be specific to the bat species for which permit coverage is being sought.
6. **Radio-transmitter Attachment** – Describe experience and protocols for preparing bats for transmitter attachment. Include applicant's experience attaching transmitters including the number of bats of each species transmittered and describe what the applicant would do if they accidentally injured a bat or improperly attached a transmitter. Radio-transmitter attachment experience does not have to be specific to the bat species for which permit coverage is being sought, but experience attaching transmitters to live bats is required.
7. **Radio Tracking** – Describe applicant's experience (a) tracking bats to roosts and conducting emergence surveys, (b) tracking bats to study foraging behavior, and (c) any additional radio tracking the applicant has completed. Describe the number of bats of each species tracked, and the locations and habitat conditions where the tracking occurred. Radio-tracking experience does not have to be specific to the bat species for which permit coverage is being sought.
8. **PIT Tagging**– Describe experience and protocols for preparing bats for pit tagging. Include applicant's experience with pit tagging, including the number of bats of each species pit tagged and describe what the applicant would do if they accidentally injured a bat or improperly inserted a pit tag. Pit tagging experience does not have to be specific to the bat species for which permit coverage is being sought, but experience with pit tagging live bats is required.
9. **Hibernacula Surveys** (must be requested as an activity if applicant is leading/conducting hibernacula surveys and reporting results) – An applicant should apply for coverage when they have a specific hibernacula survey planned, and then document their need for this permit coverage in their application (e.g., provide copy of hibernacula survey plan and/or contract to conduct hibernacula survey). Describe where and when applicant expects to lead hibernacula surveys. Also describe applicant's experience with the following:
- Identifying targeted bats to species in caves/mines/etc. without handling
 - Planning and/or leading surveys

- Applying hibernacula survey guidance
- Knowledge of National WNS decontamination procedures
- Limiting disturbance while conducting surveys

Please also submit any hibernacula survey plans that the applicant prepared, or previously concluded survey reports that outline the applicant's experience with hibernacula surveys.

For tricolored bats specifically, there is no set minimum number of identifications in a hibernaculum, but generally applicants that have not identified at least 10 individuals do not have sufficient experience -- the majority of people that apply for permits far exceed this and have surveyed many hibernacula that also contain species that could be mistaken for the tricolored bat (e.g., a dew covered little brown bat).

If there are specific sites for which the applicant needs authorization, please list those sites in the application. Provide the name and an estimate of the number of bats at the site (or specify that it is not known if there are bats occupying the site). It may be easier to receive approval for specific sites, particularly sites with relatively small bat populations compared to authorization for conducting hibernacula surveys at sites with large populations.

- 10. Summer Roost Surveys** – Surveys of known summer roost should generally be conducted through methods that minimize disturbance to roosting bats (e.g., emergence surveys, harp trapping, thermal infra-red, night vision video, or acoustic detectors). Provide the same information for the technique requested as described herein (e.g., 7. Harp trapping; 8. Hibernacula surveys; 10. Entering caves for research or monitoring).

Cave/mine/culvert/other roost structure entry during the summer roosting season may be permitted under very limited circumstances. Entry into roosts during the breeding season is unlikely to be authorized if other methods may be used to achieve the research objective. If applicants propose to enter summer roosts for these species, please provide the same information as requested under 10. Entering caves for research or monitoring.

- 11. Samples from Live Bats (swab, guano, hair, blood, and wing tissue samples)** – Provide a copy of the research proposal for which the sample is being collected (should clearly describe the need for the sample and how it will be analyzed). If not described in the proposal, for swab, hair, and tissue samples describe where (on the bat) the sample will be collected, how it will be collected, and the size of the sample (in terms of surface area on the bat). Describe experience collecting swab, guano, hair, or wing tissue samples. If taking swabs from hibernating bats, describe the steps that will be taken to minimize disturbance.

- 12. Other Marking or Research Techniques to be Used (e.g., light tagging)** – Detail experience using the technique.