

Standard Operating Procedure #2:

Training and Safety for Field Personnel

Version 1.0

In Bat monitoring protocol for the Great Lakes Inventory and Monitoring Network: Version 1.0

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Revision History Log

The following table lists all edits and amendments to this document since the original publication date. Information entered in the log must be complete and concise. Users of this standard operating procedure will promptly notify the GLKN protocol lead and/or project coordinator about recommended and required changes. The protocol lead and/or project coordinator must review and incorporate all changes, complete the revision history log, and change the date and version number on the title page and in the header of the document file.

Previous Version #	Revision Date	Author (with title and affiliation)	Location in Document and Concise Description of Revision	Reason for Change	New Version #
Add rows as needed for each change or set of changes tied to an updated version number					

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Acknowledgements

The fieldwork safety portions of this standard operating procedure were largely adapted from the Great Lakes Network health and safety plan and SOP #2 of the Great Lakes Network’s protocol for monitoring mercury in larval dragonflies and fish (VanderMeulen 2018), which was in turn adapted from the Greater Yellowstone Network’s SOP on safety (O’Ney 2005).

1.0 Introduction

The Great Lakes Inventory and Monitoring Network (GLKN) is implementing a monitoring program to document changes in bat populations in national park units in the upper Midwest. We are using acoustic monitoring as an index for assessing long-term bat population trends in response to ecosystem changes including climate, habitat, and disease such as white-nose syndrome (WNS). The goals of this monitoring program are to assess probable presence and absence of bat species, and to determine relative activity levels of those species for each national park unit over time. This Standard Operating Procedure (SOP) describes the necessary skills and training required for field personnel to carry out the monitoring protocol and general safety guidelines to be followed. It also describes the proper procedures for safe collection and submission of bat carcasses for disease screening.

1.1 Training for Field Personnel

In order to successfully carry out the bat acoustic monitoring program, each member of the field crew must be familiar with the methodology and required equipment. Field technicians will be trained by the Natural Resources staff at the park where they are stationed, in combination with the GLKN bat project protocol lead. Training will occur in-person where possible, supplemented by phone and email conversations. The GLKN protocol lead will provide protocols and other training materials via email and a shared online drive.

Field technicians must read and understand the entire project protocol prior to initiating field work. Ideally, technicians will begin working approximately two weeks before the sampling season begins, to allow adequate time to learn protocols and familiarize themselves with the equipment.

In addition to understanding the project protocol, field technicians must be proficient in the following technical skills:

1. Use of a handheld GPS device (e.g., Garmin) for navigating to a specified location and marking a new waypoint.
2. Reading a map to locate and navigate to sample sites; sketching a map to document sample sites.
3. Use of a compass for identifying a specified bearing, to properly orient microphone and to capture directional site photos.
4. Use of Wildlife Acoustics Song Meter SM3BAT and SM4BAT acoustic detectors and accessories. This includes:
 - a. Replacing batteries and SD cards
 - b. Updating firmware
 - c. Installing set files, viewing recording schedule, and exporting program file

- d. Programming date, time, latitude/longitude, and site prefix
 - e. Calibrating microphones
 - f. Checking status of batteries, SD cards, and microphones once installed
 - g. Using GPS attachment to obtain latitude/longitude
 - h. Starting and stopping the recording program
5. Transferring photos or other files from the camera, SD card, or external hard drive to the computer's hard drive and vice versa.

Field technicians will be focused on field data collection and will not typically be required to enter data into the bat monitoring database. For any personnel who are involved in the data entry process, detailed procedures are outlined in SOP # 7.

1.2 Safety Procedures for Field Work

Safety of personnel should always be the first concern in conducting a monitoring program and in the selection of sampling sites. General safety considerations for work in the office, field, and laboratory, as well as a discussion of other issues such as prevention of accidents and injuries and communication procedures are described in the GLKN's Health and Safety Plan (Gostomski and Route 2017). Park-specific safety information will be provided to technicians by the supervisors at the parks where they are stationed. As a general rule, park-specific safety guidelines will supersede GLKN guidelines if there are differences. If available, all technicians should attend a basic first aid and CPR/AED training course prior to the field season.

Numerous safety issues and concerns are associated with implementing a monitoring program such as this one that includes extensive field work and sampling. Field personnel may be exposed to risks related to weather conditions, difficult terrain, and potentially hazardous plants and animals. Field work requires an awareness of potential hazards (i.e., situational awareness) and knowledge of basic safety procedures. Advanced planning can reduce or eliminate many safety hazards. The following is a discussion of steps that should be taken to prepare for working safely and minimizing risks.

Crew Size

The minimum recommended crew size for field work is two people. Working alone in the field is inherently more risky. However, working alone may be allowed in certain situations if authorized in advance by the supervisor.

Communication

All field personnel, whether working alone or in a group, should provide a supervisor and/or co-workers with their work and travel plans prior to departure. While in the field, communicate periodically with supervisor, co-workers, or radio dispatch about travel routes and times of departure and return, especially if plans change. At the end of the day, check in with a supervisor and/or co-workers to inform them that the crew is safely out of the field.

Field personnel should carry at least two methods of communication. The most effective methods of communication will be decided upon in consultation with the park supervisor. The methods will vary by park and situation, but the most common will be portable two-way park radios and cell phones. Supervisors are required to provide hands-on training for field crew members on how to use their communication devices.

Clothing and Equipment

Technicians should be prepared for working outside by wearing appropriate clothing and footwear. Check weather forecasts prior to work and be aware of changing weather conditions and the potential for storms. As needed, pack rain gear and extra layers in case of potential adverse weather. Bring sufficient food and water (or water treatment method) for the day to maintain energy and stay hydrated. Be aware of potential hazards at a monitoring site. Crews should carry basic safety equipment, such as a first aid kit, flashlight/headlamp, matches or lighter, anti-bacterial soap or hand

cleaner, sunscreen, and insect repellent. In addition, bring any required personal protective equipment (PPE), such as life jackets when boating.

Travel to Field Sites

Only authorized personnel should operate government vehicles or boats. Avoid distracted driving and do not use a cell phone while operating a vehicle. Keep general safety information in each vehicle or boat, including basic first aid protocols, phone numbers for emergency contacts, location of nearest hospital, and maps of the park and surrounding area. Ensure vehicles are well-maintained and in good operating condition. Regularly check gas level, tire pressure, and basic functionality (i.e., check to make sure that there is no noticeable damage such as leaking radiator fluid).

Technicians may be required to hike on and off trail to reach field sites. Avoid slips, trips, and falls by being aware of footing at all times. Be cautious in wet or muddy areas, on uneven ground, on steep slopes, and in thick vegetation.

Incident Reporting

If an accident or injury occurs, seeking medical treatment for the affected individual(s) should be the top priority. Then alert the park supervisor as soon as practicable, following proper incident reporting procedures. Procedures and forms will vary depending on if the technician is a NPS employee or an employee of a cooperating partner.

1.3 Safety Procedures for Handling Bats

GLKN and its associated parks are interested in tracking the spread and impact of white-nose syndrome (WNS), a lethal fungal disease of hibernating bats that has been confirmed in Michigan, Indiana, Wisconsin, and Minnesota, as well as surrounding states. It is presumed that park and network staff, in the course of their normal duties, may encounter sick, injured, or dead bats. Dead bats may be collected for the purposes of disease screening and/or elucidating large mortality events. Of specific concern are dead bats found in April and May, when diagnostic testing for WNS is most feasible. As such, park and network staff are requested to collect dead bats found during this specific time window for sample submission. Dead bats found outside this time window can be collected as well but further consideration should be given regarding their submission for diagnostics. Please consult with GLKN or the NPS Wildlife Health Branch prior to submitting samples collected outside of April and May.

Detailed procedures for handling and collecting bats and submitting samples can be found in the “Guidance for Safely Handling Bats” document published by the NPS Biological Resources Division Wildlife Health Branch (2018). This document is attached in Appendix A and should be referred to before attempting to handle or collect any bats.

In addition, all personnel who may handle bats or other wildlife should read and become familiar with the guidelines in the NPS Occupational Safety and Health Program manual, RM50B Section 4.15, Safe Work Practices for Employees Handling Wildlife. This information is also summarized in the NPS Field Guide “Safe Practices to Avoid Zoonotic Disease from Wildlife”. These documents will be provided to all field staff and web links are provided in Section 1.5.

Essential Precautions

- Do not handle live bats! Only trained personnel who are vaccinated against rabies should handle live bats. Unless you are vaccinated and have received specific training, you should never touch, move, or handle live bats.
- If any human contact with a bat has occurred, contact the park safety manager, regional public health consultant, or NPS Wildlife Health personnel for instructions. Human contact includes a bat flying into or landing on a person, a person waking up in a room with a bat, or a direct bat bite or scratch. The affected person(s) should seek medical care as soon as possible.
- If a bat needs to be collected for disease testing or other reasons, first verify that the animal is in fact dead (rather than immobile, sick, or resting) before attempting to pick it up. If it is not dead, do not handle the bat!
- Personal protective equipment (PPE) must be worn by all personnel handling dead bats. At a minimum, PPE should include latex or other impermeable gloves. If gloves are not available, an impermeable plastic bag can be worn over the hand. Always thoroughly wash hands with soap and water after removing gloves. Hand sanitizers are not as effective as soap and water.

- If a bat carcass is collected, it should be double-bagged and securely sealed. The exterior bag must be clearly labeled with date, time, and location of collection; the name of the collector; the contents of the bag; and any other pertinent information.
- Carcasses collected for disease testing should be kept cool (not frozen) and submitted to the NPS diagnostics lab within 1–2 days. Follow NPS Wildlife Health Branch instructions for sample submission.

1.4 Authority and Permitting for Handling Bats

A U.S. Fish and Wildlife Service (USFWS) permit or other USFWS approval is required for any individual who is handling or collecting live federally threatened or endangered (T&E) species, including bats. In most cases, NPS staff do not hold the appropriate permits and should not handle these species.

However, NPS biologists are authorized by the U.S. Fish and Wildlife Service to collect dead bats without a permit, including species that are listed as federally threatened or endangered (see Appendix B). Dead bats of T&E species can be salvaged and submitted for analyses or may be disposed of, as long as accurate records of carcass disposition are maintained. In all cases, notify USFWS of the disposition of the animal.

Some bat species are also protected under state laws and may require additional permits or approval from the state prior to handling or collection.

1.5 Additional Resources

Contact information for key NPS personnel who can assist with questions or concerns about wildlife health, safe wildlife handling, disease testing, and sample submission:

Dr. Michelle Verant, DVM, MPH, PhD

NPS Wildlife Veterinarian, Wildlife Health Branch

Email: michelle_verant@nps.gov

Phone: 970-225-3541

Dr. Danielle Buttke, DVM, PhD, MPH

NPS Epidemiologist and One Health Coordinator, Wildlife Health Branch

Email: danielle_buttke@nps.gov

Phone: 970-267-2118

Links to wildlife health information and safe wildlife handling information, provided by the NPS and the U.S. Geological Survey:

NPS Biological Resources Division – Wildlife Health Branch

- Public webpage www.nps.gov/orgs/1103/whb.htm
- List of personnel www.nps.gov/orgs/1103/contactus.htm

USGS National Wildlife Health Center

- Public webpage www.usgs.gov/centers/nwhc
- Mortality Reporting and Sample Submission Information (specimens may be submitted to the USGS lab in lieu of the NPS lab) www.usgs.gov/centers/nwhc/science/report-mortality-events-and-submit-specimens?qt-science_center_objects=0#qt-science_center_objects

Links to safe wildlife handling information, provided by the NPS:

- **NPS Occupational Safety and Health Program Manual RM50B**
Refer to Section 4.15, Safe Work Practices for Employees Handling Wildlife
www.nps.gov/policy/RM50Bdoclist.htm
- **NPS Field Guide “Safe Practices to Avoid Zoonotic Disease from Wildlife”**

Links to general information on white-nose syndrome (WNS):

- **National Park Service WNS webpage**
www.nps.gov/subjects/bats/white-nose-syndrome.htm
- **USGS National Wildlife Health Center WNS webpage**
www.usgs.gov/centers/nwhc/science/white-nose-syndrome?qt-science_center_objects=0#qt-science_center_objects
- **State, Federal, University and Non-governmental Coordinated WNS Response webpage**
www.whitenosesyndrome.org/

Literature Cited

- Gostomski, T., and B. Route. 2017. Great Lakes Network health and safety plan, version 2.0. Unpublished National Park Service document, Ashland, Wisconsin.
- O’Ney, S. E. 2005. Standard operating procedure #3: Safety and health, version 1.0. *In* Regulatory water quality monitoring protocol, version 1.0, Appendix E. National Park Service, Greater Yellowstone Network, Bozeman, Montana.
- VanderMeulen, D. D. 2018. Standard operating procedure #2: Training and safety, version 1.0. *In* D. D. VanderMeulen, B. Route, J. Wiener, R. Haro, K. Rolfhus, M. Sandheinrich, B. Route, S. J. Nelson, A. Klemmer, C. Eagles-Smith, and J. Willacker. 2018. Protocol for monitoring mercury in larval dragonflies and fish (version 1.0). National Park Service, Great Lakes Inventory and Monitoring Network, Natural Resource Report NPS/GLKN/NRR—2018/1726. National Park Service, Fort Collins, Colorado.

Appendix A. NPS Guidance for Safely Handling Bats

Sick or injured bats found within NPS units may need to be collected and euthanized for disease surveillance or to protect public and NPS personnel health. A bat found outdoors that cannot fly or makes no attempt to escape when approached is most likely ill. Keep in mind that a cold but healthy bat roosting on a building or elsewhere may respond slowly if stimulated before it arouses from its torpid state. In most instances it will be difficult to determine in the field whether a bat is sick from rabies or from other causes. For this reason, **any bat should be handled as if it were infected with rabies**. Any bat that flies into or lands on a human, is found in the room where a person has been sleeping, or bites or scratches a human must be reported to public health officials and tested for rabies.

White-nose syndrome (WNS) is a disease that affects hibernating bats and can cause abnormal activity of bats during winter, such as day-flights and increased activity during hibernation. This behavior may result in increased risk for human-bat encounters and often results in death of the bat. Signs suggestive of WNS include:

- Visible white fungal growth on skin of hibernating bats, often only in hibernacula
- Severe wing damage within the first couple weeks after spring emergence. These lesions often heal by mid-summer if the bat survives
- Orange-yellow fluorescent areas of the wing membrane under long-wave ultraviolet light (366–385 nm), during hibernation or within a few weeks post- emergence.

There is no known human health risk from WNS. More information about WNS including a current distribution map is available on the NPS WNS website: (*currently unavailable, April 2020*)

All NPS personnel should recognize the potential for bats to be seen in unusual places and at unusual times, and personnel from all park Divisions must report such activity to the proper park representative. In addition, NPS personnel may submit bats for disease testing to appropriate laboratories. **If human contact with a bat has occurred** (human contact would include a bat flying into or landing on a person, a person waking up in a room with a bat, or a direct bat bite or scratch) contact the park safety manager, regional public health consultant, or an NPS epidemiologist, Dr. Danielle Buttke (970-267-2118 or 970-631-5084) or Dr. Maria Said (205-513-7151) for specific instructions. Where freezer space is available, dead bats may be collected (double bagged and labeled with date, location and person that collected the bat) and saved in an archive so they are available for future analyses. This should be a dedicated freezer that does not contain food for human or animal consumption.

Key Points

1. Only trained personnel should collect dead, sick, or live bats. Personnel handling bats should be vaccinated against rabies.

2. Personal protective equipment (PPE) must be worn by all personnel handling dead or live bats. Refer to table 1A, scenario 4 and 8 of the “Safe Practices to Avoid Zoonotic Disease from Wildlife” field guide for additional information (see below). At a minimum, PPE should include:
 - a. Latex or other impermeable gloves should be worn for all handling and should be changed between bats if live bats are being handled. If gloves are not available, an impermeable plastic bag can be worn over the hand for collection of a dead bat.
 - b. Leather gloves should be worn under latex gloves for all live bat handling.
 - c. For live bats, wear long sleeves, pants, closed toed shoes, and a hat with a brim if possible. This is intended to minimize potential direct skin contact if a bat attempts to land on the person attempting the capture.
 - d. Always thoroughly wash hands with soap and water after removing gloves. Hand sanitizers are not as effective as soap and water.

All personnel handling bats should also read and become familiar with the guidelines in RM50B-section 4.15, which are also summarized in the “Safe Practices to Avoid Zoonotic Disease from Wildlife” field guide.

Contact Dr. Michelle Verant, NPS Wildlife Veterinarian, michelle_verant@nps.gov or (970) 225-3541, for additional guidance on bat-related issues.

Collecting a Bat

If the bat is immobile and appears dead, the bat should be gently poked or prodded with a stick or inanimate object to verify that the bat is indeed dead and not just sick or resting.

If the bat is verified to be dead, pick the bat up with a gloved or plastic bag-covered hand and place the bat in a plastic bag or pull the inverted bag over the bat. Seal the plastic bag and put the bag into a second bag and seal. Label the bag with the date, time, and location of collection, and person collecting the bat so that follow-up can be made should additional details be needed or additional information be found. Skip to “Carcass disposition and sample submission” below.

If the bat is alive and responsive, a small box or other container can be used to cover the bat and a piece of cardboard or other thin material can be slid under the container to trap the bat inside. Secure the lid. If the bat is “cold” but healthy it may be slow to respond until it arouses from torpor. The bat (in the container) can be placed in a warm area for 15–20 minutes and re-assessed. Make sure to label the container if you leave it unattended during this time.



Euthanasia

Euthanasia should be considered when:

- Bats have obvious traumatic injuries (e.g., bone fractures, large wing tears, wounds) or are unable to fly or respond
- Sick or injured bats are likely to be encountered by the public or NPS personnel or partners and therefore constitute a public health risk;
- Sampling of sick or injured bats will help with an investigation of unusual mortality events
- **If human contact with the bat has occurred it must be euthanized, reported to public health officials and submitted for rabies testing.**

Euthanasia is the process of painlessly killing an animal that uses safe and humane methods administered by an experienced individual. Ideally, the person conducting euthanasia has received either a wildlife anesthesia training course or other relevant training under a veterinarian or qualified individual and is able to perform euthanasia according to approved protocols. If a bat must be killed (e.g., for rabies testing) and resources or trained personnel are not available to perform proper euthanasia, alternative methods may need to be used. Please contact the NPS Wildlife Health Branch if you have any questions regarding the methods described below, or regarding other methods.

Anyone conducting euthanasia should recognize that the visual impacts of witnessing the activity may be disturbing; therefore, an effort should be made to conduct euthanasia away from the public and non-essential personnel.

Recommended euthanasia protocol

Overdose of inhaled anesthetic, like isoflurane or carbon dioxide, is the recommended method of euthanasia for bats. If isoflurane is obtained through the NPS Wildlife Health Branch, administration of this drug or any other pharmaceuticals to wildlife must be conducted or overseen by the Park Practitioner, who is ultimately responsible to the veterinarian of record for drug use. Administration of inhalant anesthetics must be performed by qualified NPS staff according to approved protocols.

Alternative methods

Cervical dislocation may be used as the primary method of euthanasia if inhalant anesthetics are not available or feasible in the situation. This technique should be used by experienced personnel wearing proper PPE. Care should be taken to ensure immediate death of the bat and safety of the individual performing the technique (e.g., no bites, scratches in the process). Please contact the Wildlife Health Branch for information regarding this technique if you are unfamiliar with the procedure.

The following methods are not recommended for euthanasia because they do not reliably result in unconsciousness and a painless death for the animal. However, certain circumstances and lack of preparedness may dictate use as a last resort.

- Thoracic compression without anesthesia.
- Freezing, with or without anesthesia.
- Drowning, with or without anesthesia.
- Use of car exhaust or other unapproved gases.
- Blunt force trauma; may destroy the brain and make it unavailable for rabies testing, and may not cause immediate death.

Carcass Disposition and Sample Submission

If human contact with the bat has occurred (human contact would include a bat flying into or landing on a person, a person waking up in a room with a bat, or a direct bat bite or scratch), **the bat should be submitted to the closest public health laboratory for immediate testing and follow up.** Contact the park safety manager, regional public health consultant, or an NPS epidemiologist, Dr. Danielle Buttke (970-267-2118 or 970- 631- 5084) or Dr. Maria Said (205-513-7151) for specific instructions.

If the bat was found dead or euthanized simply for humane reasons (e.g., trauma) and there is no risk or interest in disease testing, the carcass can be double bagged and disposed of in a dumpster. Alternatively, the carcass may be buried deep enough to prevent scavenging. If freezer space is available, the carcass may be archived for future investigations and labeled with content, date, contact person and other pertinent information. It is helpful to establish a freezer inventory log if saving carcasses for future analyses.

If there is a specific concern or interest in testing (e.g., WNS surveillance or unusual number of dead or sick bats) the carcass should be double bagged, labeled with content, date, contact person and other pertinent information. Keep the carcass cool and submit for testing within 1–2 days to the NPS Wildlife Health Branch or other diagnostic

laboratory. See the “Quick Reference Guide” below for instructions on how to create an online submission record and ship samples. If submission will be delayed more than a few days, the carcass should be placed into a freezer until shipment. Contact npsdiagnostics@nps.gov prior to submission and for any additional guidance on submission and diagnostic testing.

Human Safety

A Job Hazard Analysis (JHA) should be prepared and followed to address potential human health and safety issues. Specific items for attention include, but are not limited to, safe drug handling and disposition (if using isoflurane for euthanasia), safe animal handling, personal protective equipment, and safe work practices to avoid exposure to zoonotic pathogens in animals or biological samples.

Special Considerations

Handling and collection/euthanasia of live federally threatened or endangered (T&E) species requires a U.S. Fish and Wildlife Service (USFWS) permit or other USFWS approval. If it is anticipated that T&E species may require euthanasia, consult USFWS in advance to determine an appropriate course of action. Per the DOI solicitor’s office and USFWS permitting personnel, any dead T&E species can be salvaged and submitted for analyses or may be disposed of, as long as accurate records of carcass disposition are maintained. In all cases, notify USFWS of the disposition of the animal. Note that some bat species are also protected under state laws so you may want to consider special regulations for these species in surrounding or adjacent states.

Quick Reference Guide

Wildlife Health Branch Contacts

Michelle Verant, DVM, MPH, PhD, Wildlife Veterinarian, michelle_verant@nps.gov, (970) 225-3541

Public Health and Safety Concerns

Danielle Buttke, DVM, PhD, MPH, One Health Coordinator, danielle_buttke@nps.gov, (970) 267-2118

Maria Said, MD, MHS, Epidemiologist, maria_said@nps.gov, (202) 513-7151

Diagnostic Submissions

To submit samples to the Wildlife Health Branch for testing, create an online submission record by visiting <https://irma.nps.gov/WHMMO/> and clicking on 'Report an Observation or Create a Sample Submission'. If this is your first time accessing this site, you may need to get added to the system by emailing npsdiagnostics@nps.gov or calling 970-631- 5084 to request access. A user guide can be accessed by clicking on the HELP button on the top right of the main screen. Once you have completed the online submission fields and activated the record, press ‘print submission form’ to

include a hard copy in the box with the submission and follow the shipping instructions found on the website. Contact npsdiagnostics@nps.gov prior to submission

If you are submitting samples for testing to another diagnostic laboratory, please coordinate with an NPS Wildlife Veterinarian or contact npsdiagnostics@nps.gov prior to submission.

Shipping Instructions for animal carcasses and tissues can be found listed on page 24 of the “Safe Practices to Avoid Zoonotic Disease from Wildlife” field guide.

Appendix B. USFWS Permission to Collect Bat Specimens

Permission to collect dead bats of federally threatened and endangered species was expressed in the following letter from U.S. Fish and Wildlife Service representative to Pictured Rocks National Lakeshore biologist Cindy Heyd:

----- Forwarded message -----

From: **Hosler, Barbara** <barbara_hosler@fws.gov>

Date: Tue, May 26, 2015 at 2:00 PM

Subject: collecting NLEB

To: Cindy Heyd <cindy_heyd@nps.gov>

Hi Cindy,

Just in case it works out for you to ship that dead northern long-eared bat to the National Wildlife Health Center or NPS, I wanted to let you know that as part of a Federal land management agency, you can do that without a permit. Here it is, straight from the regs (with my highlights added):

§17.21 Prohibitions.

(3) Notwithstanding paragraph (c)(1) of this section, any employee or agent of the Service, **any other Federal land management agency**, the National Marine Fisheries Service, or a State conservation agency, who is designated by his agency for such purposes, may, when acting in the course of his official duties, take endangered wildlife without a permit if such action is necessary to:

- (i) Aid a sick, injured or orphaned specimen; or
- (ii) Dispose of a dead specimen; or
- (iii) **Salvage a dead specimen which may be useful for scientific study;**

This applies to threatened species as well as endangered. Please let me know if you send the bat somewhere.

Thanks,
Barb

Barbara Hosler
U.S. Fish and Wildlife Service
East Lansing Field Office
2651 Coolidge Road, Ste. 101
East Lansing, MI 48823
(517) 351-6326