



Agency of Natural Resources

103 South Main Street, Center Building
Waterbury, VT 05671-0301
802-241-3600

Endangered & Threatened Species Takings Permit

Statutory Authority: 10 VSA Section 5408

1. Permittee

Scott Darling
Vermont Fish & Wildlife Department
271 North Main Street, Rutland, VT 05701
802-786-3862, scott.darling@state.vt.us

2. Permit Period

Effective Date: 12/10/2012
Expiration Date: 6/1/2013
Authorization # ER-2012-30
Amendment # 0

3. Principal Officer: Patrick H. Berry

4. Subpermittee(s): Alyssa Bennett, Joel Flewelling, Dawn Decrease

5. Authorized Species: Little brown bat (*Myotis lucifugus*)

6. Authorized Activity: Collection, translocation, rehabilitation and euthanization of Little brown bat specimens as part of a study assessing the potential of White Nose Syndrome mitigation refugia.

7. Location Where Authorized Activity May Be Conducted: Aeolus Cave, and Arlington, Vermont.

8. Findings

- A. Surveys conducted prior to the onset of White Nose Syndrome document 250,000 to 300,000 little brown bats hibernating in Aeolus Cave. Since the onset of White Nose Syndrome in 2006 approximately the population has dropped by 90-95% and the remaining hibernating population at Aeolus Cave is estimated to be between 12,500 and 30,000 bats.
- B. The Permittee seeks an Endangered and Threatened Species Takings Permit under 10 V.S.A. § 5408 to authorize the collection translocation, rehabilitation and necropsies of 15 specimens of Little brown bat part of a study to determine if cave bats in northeastern US can successfully hibernate in military bunkers exhibiting appropriate temperature and humidity regimes, such as the cold-war era bunkers at the Aroostook National Wildlife Refuge in Limestone, Maine.
- C. Fifteen hibernating little brown bats (preference to males) will be collected from hibernacula at Aeolus Cave in December, 2012. Collected specimens will be tested for the presence of *Geomyces destructans* (*Gd*), the fungus identified as the causative agent of White-nose Syndrome, and morphometric data will be collected from each. Soil sample and photographs will also be taken.
- D. Each specimen will placed in an individual cheese cloth sock which will be hung from a wire at the top of a small refrigerator maintained at 4°C and immediately transported to the study site in Maine. The collection and translocation process will take no more than 24-hours.
- E. Upon arrival at the study site each bat will be offered water and then be placed on a prepared roost substrate in the bunker.
- F. The bunker will remain sealed until spring, except for one mid-winter entry where researchers will enter the bunker to evaluate hibernating conditions and the status of the bats. Any specimens found dead will be removed for testing.
- G. In April 2013, the bunker will be entered to collect and evaluate all remaining bats. One-half of the remaining Vermont bats will be immediately euthanized using isoflurane and necropsies performed to determine the fitness of each specimen. The remaining half will be transported to a Vermont rehabilitator to investigate the ability to rehabilitate bats into a releasable condition. After no more than 30 days of rehabilitation, the bats will be euthanized for necropsy to determine the fitness of each specimen.
- H. Said study will result in the euthanization of 15 Little brown bats.
- I. Said study has been determined to be non-de minimis in nature and can have the following benefits: improving the scientific knowledge of White-nose Syndrome and its effects on hibernating bats; helping evaluate the efficacy of artificial hibernacula as possible winter refugia from *Geomyces destructans*; and potentially increasing the overwinter survival of this endangered species.

- J. The Permittee is a bat biologist with expertise in the capture and handling of species listed in section 5.
- K. On 11/3/2012, the Secretary received and reviewed the advice of the Endangered Species Committee. That advice has been considered and incorporated, in large part, into this permit.

9. Statutory Determination

- A. 10 V.S.A. § 5408(a) provides: "[A]fter obtaining the advice of the Endangered Species Committee, the Secretary may permit, under such terms and conditions as the Secretary may prescribe by rule any act otherwise prohibited by this chapter done for any of the following purposes: scientific purposes; to enhance the propagation or survival of a species; economic hardship; zoological exhibition, educational purposes; or special purposes consistent with the purposes of the federal Endangered Species Act."
- B. The Permittee requests an Endangered & Threatened Species Takings Permit for the following purpose: Scientific
- C. The state of Vermont recognizes the value which plants, fish and wildlife in their natural environment have for public enjoyment, ecological balance, and scientific study. See 1981, No. 188 (Adj. Sess.), § 1(a).
- D. The state of Vermont recognizes the need for protection and preservation of these plants, fish and wildlife in their natural environment. *Id.*
- E. The General Assembly of Vermont intends that the species of wildlife and wild plants normally occurring within this state which may be found to be threatened or endangered within the state should be accorded protection as necessary to maintain and enhance their numbers. *Id.* at § 1(b).
- F. The General Assembly of Vermont intends that the state should assist in the protection of species of wildlife and wild plants which are determined to be threatened or endangered elsewhere pursuant to the federal Endangered Species Act. *Id.*
- G. Pursuant to 10 V.S.A. § 5408(a), the ANR Secretary hereby determines, based upon the findings detailed above and after receiving advice from the Endangered Species Committee, that the proposed activity is consistent the purposes of the 10 V.S.A. ch. 123. An Endangered and Threatened Species Takings Permit is authorized, as conditioned below.

10. General Conditions & Authorizations

- A. General conditions set out in 10 V.S.A. ch. 123 are hereby made a part of this permit. All activities authorized herein must be carried out in accord with and for the purposes described in the application submitted. Continued validity or renewal of this permit is subject to complete and timely compliance with all applicable conditions, including the filing of all required information and reports.
- B. The validity of this permit is expressly conditioned upon compliance with all applicable federal and state laws, regulations and permits.
- C. This permit does not confer upon the Permittee the authority to conduct research without the acquiring necessary landowner permission including, but not limited to, state lands.
- D. By acceptance of this permit, the Permittee and its heirs, successors and assigns agree to provide the Agency of Natural Resources with unrestricted access, at reasonable times to the animal or plant specimens and/or animal or plant parts collected under this permit, and otherwise ensuring compliance with this permit.
- E. The Agency maintains continuing jurisdiction over this activity, and may, at any time, order the permittee to undertake remedial measures if necessary to ensure the protection and conservation of listed species.
- F. This permit is not valid for Federal and/or State endangered and threatened species not identified in section 5.
- G. The permit is valid for use by the named Permittee and subpermittees(s) only and may be revoked by the Secretary at any time for cause, or violations of any terms or conditions of this permit or state wildlife law.
- H. The Permittee and subpermittee(s) shall carry this permit whenever performing authorized activities.
- I. Pursuant 10 V.S.A. § 5410, the locations of listed species shall be kept confidential and the sharing of such information is a violation of this permit and the law.

11. Specific Conditions & Authorizations

- A. Authorized to collect, transport and rehabilitate up to 15 specimens (males preferred) of little brown bat for the research purposes described in the Permittee's application package. Because a specimen must be removed from the cave wall in order to determine its sex, and because of the importance of limiting the overall disturbance to hibernating bats in the colony, the Permittee shall make every effort to balance the male-only gender target while limiting disturbance. Therefore, if needed, up to five of the 15 specimens collected may be female.
- B. Permittee shall follow all procedures, protocols and precautions described in the Permittee application package throughout the study. Any changes/modifications shall be submitted in advance to the Secretary wherever possible for review and a determination. Where this is not possible a report shall be submitted to the Secretary (with a copy to the Permits Specialist) within 72-hours.
- C. Specimens held for rehabilitation purposes shall be isolated from any other bat specimens in the rehabilitation facility in order to reduce the potential for disease transmission.
- D. Specimens shall be euthanized and necropsies shall be performed to determine the condition of each at the conclusion of the study.
- E. The Permittee and any subpermittees handling bats shall be vaccinated for rabies and maintain adequate titer levels during the permit period.
- F. Individuals handling specimens shall have appropriate training in the handling and care of bats to avoid inflicting injuries.
- G. The Permittee shall have a protocol in place to provide for veterinary care should a specimen be collected alive but injured. Injured bats may receive on-site rehydration, either subcutaneously (preferred) or orally followed by monitoring.
- H. The granting of this permit does not exempt the Permittee from review of this project for animal care and use if such a requirement applies.

12. Reporting Requirements

- A. Any mortality/morbidity related to the activities authorized under this permit that was/were not specifically requested, anticipated and/or authorized shall be reported in writing to the Secretary of the Agency of Natural Resources (with a copy to the VFWD Permits Specialist) within 72 hours of each occurrence. Reports shall include the preserved specimens and a plan for reducing the likelihood of future occurrences.
- B. A report, due by August 1st 2013, unless an extension is specifically requested and granted, shall be submitted to the Secretary (with a copy to the Permit Specialist)—electronic format preferred. At a minimum, the report shall summarize project activities and species handled, study results, necropsy results, any unplanned or unanticipated mortality/morbidity, animal status, species' behavior, dates and locations of all activities.
- C. The Permittee shall accommodate requests by Department staff for additional information from collection activities (e.g., copies of original field sheets, computerized data in usable format). Reports of results of any subsequent analyses and copies of subsequent publications resulting from the collections made under this permit shall be forwarded to the Vermont Fish & Wildlife Department.

Issued by: _____ signed _____ Date: 12/10/2012
Deb Markowitz, Secretary
Agency of Natural Resources

Appeal

If you wish to appeal this determination, please contact the Vermont Environmental Court. Appeals to that Court must be filed within 30 days of the date of an appealable decision. The appellant must attach to the Notice of Appeal the entry fee of \$225.00, payable to the State of Vermont. The Notice of Appeal must specify the parties taking the appeal and the statutory provision under which each party claims party status; must designate the act or decision appealed from; must name the Environmental Court; and must be signed by the appellant or its attorney. The appeal must give the address or location and description of the property, project or facility with which the appeal is concerned and the name of the applicant or any permit involved in the appeal. The appellant must also serve a copy of the Notice of Appeal in accordance with Rule 5(b)(4)(B) of the Vermont Rules for Environmental Court Proceedings. For more information, see the Vermont Rules for Environmental Court Proceedings, available online at www.vermontjudiciary.org. The address for the Court is 2418 Airport Road, Suite 1, Barre, Vermont 05641 (Tel. 802-828-1660).