



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

**Norman Baldwin
City of Burlington**

Dept of Public Works, 645 Pine Street, Suite A
P.O. Box 849, Burlington, VT 05402
802-865-5826, nbaldwin@ci.burlington.vt.us, gbenvironmental@earthlink.net,

2. Permit Period

Effective Date: 10/17/2012
Expiration Date: 11/30/2022
Authorization # EH-2012-25
Amendment # 0

3. Principal Officer: Miro Weinberger

4. Subpermittee(s): Art Gilman and staff of Gilman & Briggs Environmental Inc.

5. Authorized Species: Marsh horsetail (*Equisetum palustre*)

6. Authorized Activity: Public infrastructure repairs and the placement of large boulders and other fill materials.

7. Location Where Authorized Activity May Be Conducted: Lake Champlain shoreline west of North Shore Dr, Burlington, VT.

8. Findings

- A.** The Permittee seeks an Endangered and Threatened Species Takings Permit under 10 V.S.A. § 5408 to lessen economic hardship related to public infrastructure repairs.
- B.** The Permittee has retained the services of Gilman & Briggs Environmental Inc, botanists with expertise in the management and restoration of rare plants.
- C.** The Permittee reports that proposed activity is necessary to maintain public infrastructure in such a manner to avoid further damage to stormwater and municipal sewer lines, and a public recreation path. A previous repair has failed, and the entire slope is at great risk of incremental or potentially catastrophic failure at the site where the listed Marsh horsetail is found.
- D.** The infrastructure repair plan includes placement of large boulder rip-rap at the base of the slope. Most boulders will be at least 20" in least dimension. The base course will begin at 4' below grade. The boulders are expected to absorb wave energy to reduce future erosion and anchor the upslope repairs. A layer of gravel will underlie the upslope repairs, which will consist of smaller stone rip-rap than the base course.
- E.** The infrastructure repairs base course will directly impact an estimated 204 sq. ft. of marsh horsetail. Access and travel to the repair site will impact another 435 sq. ft. of marsh horsetail. The underground parts of the plants in the travel area of the worksite will be protected with blasting mats or wooden mats that will allow machinery to travel along the toe of slope.
- F.** Alternative repair strategies have been considered but were deemed infeasible within the public right of way. The alternative of moving the entire set of infrastructure inland, away from the failure area, is considered prohibitively expensive due to land acquisition costs and large excavation requirements. The cost of the proposed repair is approximately \$350,000. If the slope fails and the stormwater and sewer pipes are breached the repair costs will be at least \$850,000 plus the costs of fines for discharging sewage into the lake.
- G.** On 9/3/2012, 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 has requested an Endangered and Threatened Species Taking Permit for the following purpose: Hardship.
- 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.
- D. The state of Vermont recognizes the need for protection and preservation of these plants, fish and wildlife in their natural environment.
- E. The General Assembly intends to allow for the orderly development of the state without undue economic hardship being caused by the provisions of this act providing for the power of issuances variances. *Id* at § 1(c).
- F. 10 V.S.A. § 5408(a) authorizes the Secretary to permit the taking of a listed species to lessen economic hardship.
- G. In this case, to determine whether there is sufficient "economic hardship," the Secretary examined the nature and size of hardship, whether the economic activity associated with the Project has a public benefit and the impact of the taking on the state's population of the species listed in Section 5.
- H. The Permittee has placed into escrow until January 7, 2013 the permit application fee of \$25,000. If by or before this date the Permittee and the Secretary agree upon a mitigation project in-lieu of the monetary permit fee, as allowed under 10 V.S.A. § 5408 (f)(l)(B), then the Permittee may withdraw the funds from escrow. If a mitigation project is not agreed upon by this date or if the parties elect to forgo mitigation then the escrowed funds shall be transmitted to VT Agency of Natural Resources on January 8, 2013.
- I. 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. Searches, flagging, transplantation, monitoring, management and other activities directly impacting marsh horsetail shall be conducted by an experienced botanist and/or plant restoration specialist approved by the Vermont Fish & Wildlife Department (VFWD) prior to project commencement. Permittee and subpermittees shall consult with the VFWD botanist as needed.
- B. All marsh horsetail plants (133) from within the impact area shall be moved to either of two shoreline locations identified in the Permittee's plan. Specimens shall be transplanted to similar areas among boulders if possible, at locations that are above the mean water level but below ordinary high water of Lake Champlain, and where permanently saturated soils occur.
- C. Marsh horsetail stems within the impact area that will not be transplanted but may be impacted, for example by travel to and from the impact and within the impact site, shall be protected by protective mats of appropriate number and size. Mats shall not be installed prior to October 1st unless a killing frost occurs prior to this date. The one very large sized log shall be removed first so as to provide better protection of the plants.
- D. Transplantation shall occur at a time when the plants are recognizable in the field and prior to any killing frost. All transplanted specimens shall be watered throughout the first year following transplantation a minimum of once per week until such time as a killing frost occurs. Watering need not occur during any week in which natural rainfall exceeds 1.5 inches.
- E. Management to support Marsh horsetail survival and recruitment shall occur yearly for the 10-years following completion of transplantation and shall include the following:
 - i. Removal of all invasive plants, if any, located within or nearby the original and transplanted marsh horsetail populations.
 - ii. Removal of driftwood and other debris as necessary.
- F. Monitoring to map and document survival, recruitment and management shall occur yearly for the 10-years following completion of transplantation and shall include the following:
 - i. Documentation of the number of transplants surviving at both locations as well as any evidence of recruitment into either population.
 - ii. Documentation of numbers of plants at the original site with special attention given to survival of those individuals residing beneath the temporary access route (i.e., those covered by mats during construction.)
- G. After five-years of monitoring, the Permittee may petition the Secretary to amend this monitoring condition for the remainder of the permit period.

12. Reporting Requirements

- A. Any mortality of the species listed in Section 5 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. Annual report, due by January 30th following each year of permit term unless an extension is specifically requested and granted shall be submitted to the Permit Specialist (electronic format preferred). At a minimum, the report shall summarize project activities, including those specified in conditions 11.E. and 11.F. and other management activities performed during the reporting period, the dates of all activities and the names of the person(s) performing each activity. Reports shall include a map of sufficient detail to enable ANR to find each location.
- 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: Deb Markowitz Date: 10/18/2012
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).