

Draft Aquatic Nuisance Control Individual Permit

Under 10 V.S.A. § 1455



VERMONT DEPARTMENT OF
ENVIRONMENTAL CONSERVATION
WATERSHED
MANAGEMENT DIVISION
LAKES & PONDS PROGRAM

<p>Permittee(s): Lake Dunmore Fern Lake Association & Solitude Lake Management</p> <p>Control Activity: Pesticide (SePRO Renovate OTF® & Renovate 3®)</p>	<p>Permit Number: 2015-C07</p> <p>Waterbody: Lake Dunmore</p>
<p>Based upon the Findings contained in this permit, the Secretary of the Agency of Natural Resources has determined that the proposed aquatic nuisance control activity will comply with 10 V.S.A. § 1455, and is hereby approved under the following conditions and specifications.</p>	
<p>a. Specific Conditions</p> <ol style="list-style-type: none"> 1. <u>Pesticide Use.</u> The Permittee is authorized to apply the following pesticides in accordance with the Approved Application and the pesticides shall be registered with the U.S. Environmental Protection Agency (EPA) and the Vermont Agency of Agriculture, Food and Markets at the time of use and handled, applied, and disposed of in conformance with all state and federal regulations: <ol style="list-style-type: none"> A. SePRO Renovate OTF® (EPA Registration Number 67690-42), a flake formulation active ingredient 14% triclopyr (3, 5, 6-trichloro-2-pyridinyloxyacetic acid, triethylamine salt); and B. SePRO Renovate 3® (EPA Registration Number 62719-37-67690), a liquid formulation active ingredient 44.4% triclopyr (3, 5, 6-trichloro-2-pyridinyloxyacetic acid, triethylamine salt). 2. <u>Certified Applicator.</u> All applicators of the authorized pesticide shall be certified by the Vermont Agency of Agriculture, Food and Markets in Category Five – Aquatic Pest Control. 3. <u>Treatment Plan.</u> A final treatment plan shall be submitted to the Secretary for approval not less than two weeks prior to pesticide use. The treatment plan shall include the following: <ol style="list-style-type: none"> A. A map identifying all area(s) in which pesticide will be used; B. Approximate date(s) of pesticide use; C. Pesticide target concentration(s); D. Pesticide concentration monitoring locations; and, E. Pesticide application procedure. 4. <u>Target Concentration.</u> In accordance with the approved treatment plan, the authorized pesticides shall be applied in a manner to achieve and maintain a target concentration of no greater than 2.5 parts per million (ppm) of the active ingredient triclopyr, based upon the bottom 4 feet of the water column (or deeper as conditions warrant). 5. <u>Agency Notification.</u> Written notification to the Secretary shall be provided at least two weeks in advance of pesticide use. 6. <u>Public Informational Notification.</u> Prior to treatment, informational notifications shall be provided to the public of the water use advisories and recommendations as outlined below: <ol style="list-style-type: none"> A. The informational notification shall include: <ol style="list-style-type: none"> i. Date of the treatment; ii. Pesticide(s) to be used; iii. Summary of the use advisories and recommendations (per condition a.8. below); iv. Map of the waterbody and treatment areas; v. Statement that informational signs posted along shoreline properties and roadways will provide the exact treatment date/time and applicable use advisories and recommendations; vi. Statement that bottled water may be provided by the Permittee upon request to any person restricted from using their domestic water supply (taken directly from the lake or its effluent) for drinking or for food preparation; 	

- vii. Contact name(s), address(es), and telephone number(s) for all Permittees; and,
 - viii. Statement informing all property owners that if their property is leased, rented, or used at any time during treatment and/or while the use advisories are in effect, the property owner is responsible for properly informing all transient users.
- B. The informational notification shall be provided to all abutting property owners (including commercial camps) to Lake Dunmore and within one mile of the effluent at least two weeks prior to the scheduled treatment date by one of the following:
- i. Hand-delivery;
 - ii. Confirmation receipt electronic mail;
 - iii. Stamped, return postcard to indicate receipt;
 - iv. Sent USPS Certified Mail™ or via [Certificate of Mailing \(PS Form 3817\)](#); or,
 - v. Other methods that provide proof of notification.
- C. The informational signs shall be/posted:
- i. In locations visible to vehicle traffic, shoreline property owners, and potential lake users;
 - ii. Weather resistant and at least 8½ inches in width by 11 inches in height;
 - iii. At least two days prior to the scheduled treatment date;
 - iv. Along all public roadways approximately 1,000 feet in the vicinity of the shoreline;
 - v. At all public and private campgrounds, hotels, inns, beaches, and access points;
 - vi. At the municipal office(s);
 - vii. Updated immediately when water use advisories or treatment plans change; and,
 - viii. May be removed no sooner than 30 days after treatment, when only the irrigation advisories remain.
- D. Copies of the aforementioned notification and signs shall be provided to the Secretary at the same time as they are made available to the public.
- E. Treatments should occur only on a Monday, Tuesday, Wednesday, or Thursday to minimize unnecessary pesticide exposure to the public over a weekend.
7. Pesticide Concentration Monitoring. Triclopyr concentrations shall be monitored as follows and in conformance with an approved treatment plan as identified in a.3.:
- A. At least two weeks prior to treatment, the Permittee shall submit to the Secretary a map of proposed sample locations for review and written approval.
 - B. The Permittee shall collect water samples or arrange for samples to be collected for the analysis of triclopyr.
 - C. Samples shall be collected within the bottom four feet of water (or deeper as conditions warrant) at each sample site using appropriate equipment and techniques to collect samples at this depth.
 - D. Sampling shall proceed as follows and continue until all sample results demonstrate triclopyr is at or below 75 ppb, at which point sampling may be discontinued:
 - i. Sampling shall proceed as follows for when Renovate 3® is used:
 - a. Twenty-four hours after the initial application of Renovate 3®, representative samples of the treated waterbody and its outlet stream(s) (within one-quarter mile of the effluent) shall be chemically tested to determine if triclopyr is present at less than or equal to 75 parts per billion (ppb). Sampling locations shall be identified as described under a.3.D.
 - b. If triclopyr is confirmed to be at or below 75 ppb, full use of the treated waterbody, its waters and outlet stream(s), including all domestic uses may resume. However, if triclopyr is detected in representative samples from these waters above 75 ppb, an additional 24 hour waiting period shall occur during which time the treated waterbody and its outlet stream(s) (within one mile downstream of the effluent) shall again not be used for drinking water or in the preparation of food or drink. At the end of this second 24 hour waiting period, representative samples of the treated waterbody and its outlet stream(s) (within one-quarter mile downstream of the effluent) shall again be taken and chemically analyzed for triclopyr. This process shall be repeated until representative sampling indicates that the level of triclopyr in

the treated waterbody and outlet stream(s) is at or below 75 ppb. This process also applies to any and all booster applications.

- c. Only once residues of triclopyr are confirmed to be below 75 ppb shall full use of the treated waterbody and/or its outlet stream(s) resume.
- ii. Sampling shall proceed as follows for when Renovate OTF® is used:
 - a. Forty-eight hours after the initial application of Renovate OTF®, representative samples of the treated waterbody and its outlet stream(s) (within one-quarter mile of the effluent) shall be chemically tested to determine if triclopyr is present at less than or equal to 75 ppb. Sampling locations shall be identified as described under a.3.D.
 - b. If triclopyr is confirmed to be at or below 75 ppb, full use of the treated waterbody, its waters and outlet stream(s), including all domestic uses shall resume. However, if triclopyr is detected in representative samples from these waters above 75 ppb, an additional 24 hour waiting period shall occur during which time the treated waterbody and its outlet stream(s) (within one mile downstream of the effluent) shall again not be used for drinking water or in the preparation of food or drink. At the end of this second 24 hour waiting period, representative samples of the treated waterbody and its outlet stream(s) (within one-quarter mile downstream of the effluent) shall again be taken and chemically analyzed for triclopyr. This process should be repeated until representative sampling indicates that the level of triclopyr in the treated waterbody and outlet stream(s) is at or below 75 ppb. This process also applies to any and all booster applications.
 - c. Only once residues of triclopyr are confirmed to be below 75 ppb shall full use of the treated waterbody and/or its outlet stream(s) resume.
- E. Additional samples and sample locations, including but not limited to lake sediments and adjacent water supply wells may be required as determined by the Secretary.
- F. Samples shall be analyzed at the SePRO Corporation laboratory (or another qualified laboratory) to analyze triclopyr by the FastEST method (or approved equivalent) with a detection limit of 1 ppb for triclopyr.
- G. Laboratory results shall be submitted to the Secretary within 24 hours of completion.
- H. Sampling and laboratory analysis may be discontinued with written approval from the Secretary.

8. Water Use Advisories & Recommendations. To minimize unnecessary exposure, the following water use advisories and recommendations apply:

- A. For the use of Renovate 3®, the public uses of the waterbody shall proceed as follows:
 - i. No use of the treated waterbody and its associated outlet stream(s) (for one mile downstream of the effluent) for any purpose (including recreational uses such as boating and fishing) shall occur on the day of application.
 - ii. Boating, fishing, and toilet flushing shall resume at the beginning of the day following application.
 - iii. Swimming and domestic use other than drinking and using to prepare food or drink, shall resume 24 hours after application.
 - iv. Drinking and using such waters to prepare food or drink shall not resume until sampling conditions identified under a.7.D. have been met.
- B. For the use of Renovate OTF®, the public uses of the waterbody shall proceed as follows:
 - i. No use of the treated waterbody and its associated outlet stream(s) (for one mile downstream of the effluent) for any purpose (including recreational uses such as boating, fishing and swimming and all domestic uses including toilet flushing) shall occur on the day of application and the entire day thereafter.
 - ii. Recreational uses such as boating, fishing, and swimming shall resume at the beginning of the second day following application.
 - iii. Domestic use other than drinking and using such waters to prepare food or drink, shall resume at the beginning of the second day following application.

- iv. Drinking and using such waters to prepare food or drink shall not resume until sampling conditions identified under a.7.D. have been met.
 - C. The treated waterbody and associated outlet stream for one mile downstream for irrigation purposes, such as watering lawns, trees, shrubs or plants, for 120 days after the day of treatment or until the Secretary provides notification to the Permittee that this restriction has been lifted.
 - D. Until full use of the waterbody can be resumed, bottled water shall be supplied by the Permittee to those who may depend upon the treated waterbody and/or its outlet stream(s) (within one mile of the effluent) for their domestic drinking water or food and drink preparation water supply.
- 9.** Treatment Report. A treatment report shall be submitted to the Secretary within one week following the date of the treatment to include the following:
- A. Date, time, and duration of treatment;
 - B. Pesticide manufacturer, trade name, and formulation used;
 - C. Total amount of pesticide applied;
 - D. Total surface area of pesticide treatment;
 - E. Target pesticide concentration and related calculations;
 - F. Pesticide treatment technique and equipment used;
 - G. Weather and lake conditions at time of pesticide treatment; and,
 - H. Description of any problems encountered during treatment.
- 10.** Plant Surveys. A quantitative aquatic plant survey (pre-treatment) shall be conducted prior to any pesticide use. A post-treatment plant survey shall be conducted during the same year of treatment and two consecutive years thereafter. All aquatic plant surveys shall include the following:
- A. Date of survey;
 - B. Herbicide effectiveness on target plants;
 - C. Herbicide impact on nontarget plants;
 - D. Map depicting survey areas;
 - E. Description of all plant species present and their relative abundance, and;
 - F. Survey data shall be reported in a similar format to prior years.
- 11.** Annual Report. An annual report shall be submitted, on the year of treatment and the following year thereafter, to the Secretary by December 31st of each year and shall include the following:
- A. Summary of all pesticide concentration monitoring;
 - B. Qualitative assessment of the status of Eurasian watermilfoil (EWM), *Myriophyllum spicatum*, growth and its distribution;
 - C. Map of the final pesticide treatment areas with EWM growth distribution and density depicted;
 - D. Description of other nuisance control activity (if any);
 - E. Status of aquatic plant re-growth in treatment areas;
 - F. Other observations and actions taken; and,
 - G. Recommendations (if any).
- 12.** Annual Meeting. The Permittee shall organize a meeting with the Secretary on the year of treatment and two years thereafter to discuss the plant surveys, annual reports, level of EWM control achieved, long-term management plans, and other pertinent issues.
- 13.** Approved Application. The project shall be completed as shown on the application, plans, and support documents as submitted by the Permittee, and approved by this permit.
- 14.** Non-target Impact Mitigation.
- A. Aquatic Plants: All Operators shall be capable of identifying narrow-leaved water-weed (*Elodea nuttallii*) and humped bladderwort (*Utricularia gibba*). Any observations shall be reported as identified under b.5.
 - B. Other Aquatic Organisms: All control activity shall not result in injured or killed nontarget aquatic organisms.

b. Standard Conditions

1. **Reporting & Correspondence.** All aforementioned, requisite correspondence directed to the Secretary pertaining to this permit, including notifications, surveys and reports, shall be (preferably) submitted via email to ANR.WSMDShoreland@vermont.gov or mailed to the following address:

Lake & Shoreland Permitting
Watershed Management Division
1 National Life Drive, Main 2
Montpelier, VT 05620-3522
2. **Aquatic Invasive Species Spread Prevention.** Prior to any control activity occurring, all equipment, including but not limited to boats, trailers, vehicle, and gear, that has been in or on any other waterbody, shall be decontaminated in accordance with the [Voluntary Guidelines to Prevent the Spread of Aquatic Invasive Species through Recreational Activities](#), Aquatic Nuisance Species Task Force, November 2013, or its replacement.
3. **Decision-makers & Operators as Permittees.** A Permittee is defined to mean any person associated with aquatic nuisance control activities (activity) (1) who performs the activity or who has day-to-day control of the activity; or, (2) any person with control over the decision to perform the activity including the ability to modify those decisions. Permittees identified as (1) are referred to in this permit as Operators while Permittees identified as (2) are referred to in this permit as Decision-makers. More than one Operator may be responsible for complying with this permit. Permittees are defined as a Decision-maker, as an Operator, or as both. When a Permittee is both a Decision-maker and an Operator, the Permittee must comply with all applicable requirements.
4. **Authorization Modification or Amendment.** This permit may be modified or amended upon request by the Permittee or by the Secretary. Any modification under this condition shall be performed in accordance with the [Public Review and Comment Procedures for Aquatic Nuisance Control Permit Applications and General Permits](#), January 30, 2003, or its replacement.
5. **Rare, Threatened or Endangered Species.** Encounters with any rare, threatened, or endangered species shall be reported to the Secretary immediately. If determined necessary by the Secretary, an Endangered & Threatened Species Taking Permit, per 10 V.S.A. § 5408, shall be obtained prior to commencement or continuance of activity.
6. **Compliance with Other Regulations.** This permit does not relieve the Permittee from obtaining all other approvals and permits prior to commencement of activity, or the responsibility to comply with any other applicable federal, state, and local laws or regulations.
7. **Access to Property.** By acceptance of this permit, the Permittee agrees to allow representatives of the state of Vermont access to the property covered by the permit, at reasonable times, for the purpose of ascertaining compliance with Vermont's statutes, regulations, and permit conditions.
8. **Legal Responsibilities for Damages.** The Secretary, by issuing this individual permit, accepts no legal responsibility for any damage direct or indirect of whatever nature and by whoever suffered arising out of the approved activity.
9. **Rights & Privileges.** This permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.
10. **Duty to Comply & Enforcement.** The Permittee shall comply with all terms and conditions of this permit. Any permit noncompliance shall constitute a violation of 10 V.S.A. § 1455 and may be cause for any enforcement action and revocation, modification, or suspension of the permit. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of this permit.
11. **Duty to Reapply.** If the authorized activity is anticipated to continue after the expiration date of this permit, the Permittee shall reapply for coverage under a new permit sixty (60) days prior to the expiration date of this permit.

12. Twenty-four Hour Non-compliance Reporting. Unless provided otherwise by this permit, the Permittee shall report any noncompliance which may endanger public health or the environment. Any such information shall be provided within 24 hours from the time the Permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance, its cause; the period of noncompliance including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; as well as steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.
13. Official Duties. This permit shall not restrict law enforcement of emergency operations or the performance of official duties by a government agency.
14. Public Access Area. In accordance with Fish and Wildlife Board Rule 641, pursuant to 10 V.S.A. § 4145(a), Vermont Department of Fish & Wildlife Access Areas shall not be used for this activity without proper authorization.
15. Reopener. If after granting this permit the Secretary determines, at his or her discretion, that there is evidence indicating that an authorized activity does not comply with the requirements of 10 V.S.A. Chapter 50, the Secretary may reopen and modify this permit to include different limitations and requirements.
16. Appeals. Pursuant to 10 V.S.A. Chapter 220, any appeal of this decision must be filed with the clerk of the Environmental Division of the Superior Court within 30 days of the date of the decision. 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 Division; and must be signed by the appellant or the appellant's 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 Vermont Rules for Environmental Court Proceedings. For further information, see the Vermont Rules for Environmental Court Proceedings available at www.vermontjudiciary.org. The address for the Environmental Division is: 32 Cherry Street; 2nd Floor, Suite 303; Burlington, VT 05401 Telephone: 802-951-1740.

c. Findings

1. Jurisdiction - 10 V.S.A. § 1455(a): Within waters of the state, no person may use pesticides, chemicals other than pesticides, biological controls, bottom barriers, structural barriers, structural controls, or powered mechanical devices to control nuisance aquatic plants, insects, or other aquatic nuisances, including lamprey, unless that person has been issued a permit by the secretary. The project, as described in permit application #2015-C07, involves the use of a pesticide to control Eurasian watermilfoil (EWM), *Myriophyllum spicatum*, within Lake Dunmore in Salisbury and Leicester. Therefore, the Department has jurisdiction under 10 V.S.A. Chapter 50.
2. Application Receipt & Review: An application, prepared and submitted by the Lake Dunmore Fern Lake Association (LDFLA), and Solitude Lake Management (SLM), was received on December 29, 2015 for an Aquatic Nuisance Control (ANC) permit for the use of SePRO Renovate OTF® and Renovate 3® under 10 V.S.A. 1455(d). It was reviewed in accordance with the Department of Environmental Conservation's *Permit Application Review Procedure*, adopted May 22, 1996.
3. Background; Aquatic Nuisance Control Permit History: The LDFLA and shoreline property owners have used numerous control methods for EWM, including bottom barriers, diver assisted suction harvesting, mechanical harvesting, and the use of a biological control. ANC permits #2010-B01, #2014-B02, and #2015-B02 permitted the use of a bottom barrier. ANC permit #2010-H03 permitted diver assisted suction harvesting. ANC permit #1996-H01 permitted the use of a mechanical harvester. ANC permit #2012-W01 permitted the use of a biological control (*Eurychiopsis lecontei*). All of the above mentioned ANC permits were issued for the control of the aquatic invasive plant EWM.
4. No Reasonable Nonchemical Alternative Available – 10 V.S.A. 1455(d)(1): Based on the current extent of EWM coverage, spot-treatment with Renovate OTF® and Renovate 3® is a reasonable alternative to

minimize further establishment of EWM, to avoid additional displacement of native species, and to restore navigation access and other recreational uses. Additional details of the proposed herbicide treatment program are provided in the Approved Application. Non-chemical alternatives, such as bottom barriers, mechanically powered devices, biological controls, diver assisted suction harvesting, and hand-pulling have been employed on Lake Dunmore previously. However, dense growth of EWM in specific locations as identified on the Approved Application are better suited to be controlled by an herbicide spot-treatment program in addition to the aforementioned non-chemical control methods.

The Secretary has determined that there is no reasonable nonchemical alternative available.

5. Nontarget Environment – 10 V.S.A. 1455(d)(2): One rare species, *Utricularia gibba* (S3), was observed as being present during a survey conducted in August 2014 as described in the Approved Application. Populations of *Utricularia gibba* in other bodies of water within Vermont have not been observed to significantly change following triclopyr treatments. One additional rare species, *Elodea nuttallii* (S3), was last observed in 1984 in Lake Dunmore. The Permittee will report any observation of rare, threatened, or endangered species in accordance with this permit.

To mitigate the risk of introduction or transport of non-native, aquatic invasive species proper spread prevention measures must be taken. Thus, prior to any control activity occurring, all equipment (such as a boat, trailer, vehicle, and gear) that has been in or on any other waterbody, will be decontaminated in accordance with the [Voluntary Guidelines to Prevent the Spread of Aquatic Invasive Species through Recreational Activities](#), Aquatic Nuisance Species Task Force, November 2013, or its replacement.

The Secretary has determined that there is acceptable risk to the nontarget environment.

6. Public Health – 10 V.S.A. 1455(d)(3): At the request of the Secretary, the Vermont Department of Health (VDH), Radiological and Toxicological Science Program has reviewed and provided recommendations pertaining to the risk of the proposed activity to public health, in which it examined potential concerns for public health that may be associated with exposure to Renovate OTF® and Renovate 3® as well as to any potential triclopyr metabolites. The recommended water use conditions are based upon review of current scientific information for potential health effects; half-life of the pesticide and inert compounds; complete dissolution rates; consideration of direct contact with treated waters and the manner in which it may occur; and, several health protective assumptions. The review also includes standard risk assessment procedures, knowledge of previous chemical control efforts, and the consideration that a combination of two products may be applied. Based upon the VDH's evaluation and recommendations, and the resulting permit conditions, it has been determined that human exposure is not likely to result in an increase in the level of concern for public health.

The Secretary has determined that there is negligible risk to public health.

7. Long-range Management Plan – 10 V.S.A. 1455(d)(4): A long-range management plan has been developed that incorporates a schedule of pesticide minimization that combines the initial use of a chemical treatment followed by non-chemical control methods to manage and prevent the spread of EWM. The goal of this plan is to reduce the abundance of EWM to below nuisance levels. By employing all of the components of the plan, and updating and revising it as appropriate, the LDFLA is seeking to control EWM in order to restore recreational uses as well as enhance the native aquatic plant community and habitat diversity. The LDFLA recognizes that eradication is not attainable, and EWM management is an ongoing undertaking. A diligent and sustained effort will be required to maintain EWM control below nuisance conditions.

The plan will achieve its goal provided that the chemical treatment is conducted in accordance with the conditions of this permit; the components of the plan are implemented and updated routinely; adequate, stable funding is maintained; and, a framework exists for continuing the ongoing management efforts indefinitely.

The Secretary has determined that a long-range management plan has been developed.

8. Public Benefit – 10 V.S.A. 1455(d)(5): Based upon findings c.4-7., the Secretary has determined that there is a public benefit to be achieved from the application of a pesticide.

9. Public Notification – 10 V.S.A. 1455(h): An opportunity for the public to review and comment on this application was provided in accordance with the Department of Environmental Conservation’s *Public Review and Comment Procedures for Aquatic Nuisance Control Permit Applications and General Permits*, adopted per 3 V.S.A. Chapter 25, on January 30, 2003.
10. References:
[SePRO Renovate OTF® Specimen Label](#)
[SePRO Renovate OTF® Material Safety Data Sheet](#)
[SePRO Renovate 3® Specimen Label](#)
[SePRO Renovate 3® Material Safety Data Sheet](#)

d. Authorization

By delegation from the Secretary, the Vermont Department of Environmental Conservation has made a determination that the above activity qualifies for an individual aquatic nuisance control permit. The Permittees are authorized per 10 V.S.A. § 1455(i) subject to the conditions herein specified.

This permit shall be effective on the day of signing, and expire five years thereafter.

Alyssa B. Schuren, Commissioner
Department of Environmental Conservation

By: _____
Perry Thomas, Manager
Lakes & Ponds Management and Protection Program
Watershed Management Division