

**AQUATIC NUISANCE
CONTROL PERMIT
APPLICATION - HERBICIDE**

Joe's Pond

West Danville, Vermont

May 2025

APPLICANT:

Joe's Pond Association

Address:

P.O. Box 147

West Danville, Vermont 05873

LETTERS OF SUPPORT:

Town of Danville Selectboard Chair

Danville Conservation Commission

Town of Cabot Selectboard Chair

Cabot Conservation Committee

APPLICATOR:

SOLitude Lake Management

590 Lake Street

Shrewsbury, MA 01545



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Application for use of **Pesticides**
under an **Aquatic Nuisance Control Permit**
Per 10 V.S.A. Chapter 50, § 1455



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

For Aquatic Nuisance Control Permit Program Use Only

Application Number:

Submission of this application constitutes notice that the entities listed below intend to use pesticides in waters of the State to control aquatic nuisance plants, insects, or other aquatic life; and that the entities below have demonstrated that (1) there is no reasonable nonchemical alternative available; (2) there is acceptable risk to the nontarget environment; (3) there is negligible risk to public health; (4) a long-range management plan has been developed which incorporates a schedule of pesticide minimization; and (5) there is a public benefit to be achieved from the application of a pesticide or, in the case of a pond located entirely on a landowner's property, no undue adverse effect upon the public good. Submit a permit review fee of \$75 for a private pond or \$500 for all other waterbodies, made payable to the State of Vermont. All information required on this form must be provided, and the requisite fees must be submitted to be deemed complete.

A. Applicant Information

1. Entity's Name:

2a. Mailing Address:

2b. Municipality:

2c. State:

2d. Zip:

3. Phone:

4. Email:

B. Pesticide Applicator Information (Check box if same as above in Section A:)

1. Entity's Name:

2a. Mailing Address:

2b. Municipality:

2c. State:

2d. Zip:

3. Phone:

4. Email:

C. Application Preparer Information (Check box if same as above: Section A and/or B)

1. Preparer's Name:

2a. Mailing Address:

2b. Municipality:

2c. State:

2d. Zip:

3. Phone:

4. Email:

D. Waterbody Information

1. Name of waterbody:

2. Municipality:

3. Are there wetlands associated with the waterbody? Yes No

Contact the Vermont Wetland Program: (802) 828-1535 for additional information.

4. Are there rare, threatened or endangered species associated with the waterbody? Yes No

Contact the Vermont Fish & Wildlife Natural Heritage Inventory: (802) 241-3700 for additional information.

5a. Is this waterbody a private pond (per 10 V.S.A. 5210)? Yes No If No, skip to Question D6.

5b. Is this private pond totally contained on landowner's property? Yes No

5c. Does the private pond have an outlet? Yes No



If yes, what is the name of the receiving water from this outlet?

5d. Is the flow from this outlet controlled? Yes No

If yes, how and for how long?

6. List the uses of the waterbody – check all that apply:

Water supply Irrigation Boating Swimming Fishing Other:

E. Treatment Information	
1a. Proposed start date: August 2025	1b. Proposed end date (if known):
2. Aquatic nuisance(s) to be controlled: Plant/Algae/Animal: Eurasian watermilfoil <i>Submit additional information as needed.</i>	3. Pesticide(s) to be used ¹ : Florpyrauxifen-benzyl Trade Name: ProcellaCOR EC EPA Registration #: 67690-80 <i>Submit a copy of the Product Label & Material Safety Data Sheet.</i>
4. Provide a map of control activity area. <i>Provide location of (each) treatment area in waterbody.</i>	5. Application rate (ppm): 2-5 PDU/ac-ft; 3.9-9.6 ppb <i>Explain the above application rate & provide calculations.</i>
6. Attach a narrative description of the proposed project to include the following items: a) Reason(s) to control the aquatic nuisance; b) Brief history of the aquatic nuisance in the waterbody; c) Reason why no reasonable nonchemical alternatives are available; and, d) Description of the proposed control activity.	
7. If you answered "no" to D5b above, then a Long-range Management Plan ² (LMP) is required: a) Describe how control of the nuisance species will be conducted for the duration of the permit (must be at least a 5 year time span and incorporate a schedule of pesticide minimization); and, b) Explain how the LMP will be financed; include a budget and funding sources for each year.	
F. Adjoining Property Owner Certification (For additional information, please see the APO Notification Guidance)	
 I certify, by initialing to the left, that I have notified adjoining property owners of the proposed project using the DEC Adjoiner Form template letter that was sent by U.S. Mail. <u>5/9/25 by JPA</u>	
G. Applicant/Applicator Certification	
As APPLICANT, I hereby certify that the statements presented on this application are true and accurate; guarantee to hold the State of Vermont harmless from all suits, claims, or causes of action that arise from the permitted activity; and recognize that by signing this application, I agree to complete all aspects of the project as authorized. I understand that failure to comply with the foregoing may result in violation of the 10 VSA Chapter 50, § 1455, and the Vermont Agency of Natural Resources may bring an enforcement action for violations of the Act pursuant to 10 V.S.A. chapter 201.	
Applicant/Applicator Signature: <u>Albert Hebert</u>	Digitally signed by Albert Hebert Date: 2025.05.07 19:14:13 -04'00' Date: <u>5/7/2025</u>
H. Application Preparer Certification (if applicable)	
As APPLICATION PREPARER, I hereby certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	
Application Preparer Signature: 	<u>Marc Belland, South Lake</u> <u>Director of Technical Services</u> Date: <u>5/9/2025</u>
I. Application Fees	
Print Form	
Refund Policy: Permit Review Fees are non-refundable unless an application is withdrawn prior to administrative review.	<p style="text-align: center;">Submit this form and the \$75 or \$500 fee to:</p> <p style="text-align: center;">Vermont Department of Environmental Conservation Watershed Management Division Aquatic Nuisance Control Permit Program 1 National Life Drive, Davis 3 Montpelier, VT 05620-3522</p> <p style="text-align: right;">Municipalities are exempt and do not need to submit fee.</p>
Direct all correspondence or questions to the Aquatic Nuisance Control Permit Program at: ANR.WSMDShoreland@vermont.gov For additional information visit: https://dec.vermont.gov/	

¹ The application fee for the aquatic pesticide Aquashade[®] and copper compounds used as algacides is \$50 per application.

² Any landowner applying to use a pesticide for aquatic nuisance control on a pond located *entirely* on the landowner's property is exempt from the Long-range Management Plan requirement, as per 10 VSA §1455(e)

OFFICIAL NOTICE

Hello Neighbor,

This letter is to let you know that _____ plans to apply for permits from the Agency of Natural Resources, Department of Environmental Conservation (DEC). As your property borders where this activity will happen, Vermont law requires that you be informed about the application(s).

Once the application is accepted by the DEC, it will be posted on the DEC Environmental Notice Bulletin (ENB) website at ENB.VERMONT.GOV. You can sign up there to get updates as the application goes through the review process. Even if the application hasn't been sent in yet, you can still register for notifications in your area. Instructions can be found on the next page.

You may contact the property owner/applicant with questions about the activity. The contact information is listed below. The permit process includes a time for public comments and a chance to ask for a public meeting. This can be done through the ENB website once the applications are posted. Note that to appeal the final permit decision, you must submit a comment during the public comment period.

For more information, please visit DEC.VERMONT.GOV/PERMITS/ENB/GENERAL. If you have questions or need help signing up on the ENB, call the DEC at (802) 828-1556 with the information below.

PROPERTY OWNER(S)/APPLICANT(S) NAME

PROPERTY OWNER(S)/APPLICANT(S) CONTACT INFORMATION (MUST PROVIDE TELEPHONE NUMBER AND/OR EMAIL)

PROPOSED ACTIVITY STREET ADDRESS/ROUTE

PROPOSED TOWN(S)

PERMIT TYPE(S) (INDICATE FOR EACH PERMIT TYPE NEW OR RENEWAL)

DATE NOTICE GENERATED

Understanding when permit applications will be shown on the ENB

- Permit applications are posted on the ENB website after all necessary information is received by the DEC. This means it might take a few weeks for the noticed activity to show up on ENB. Nearby property owners should check the website again one or two weeks after getting a notice in the mail. You can also sign up on the ENB to get updates about new activities in your town.

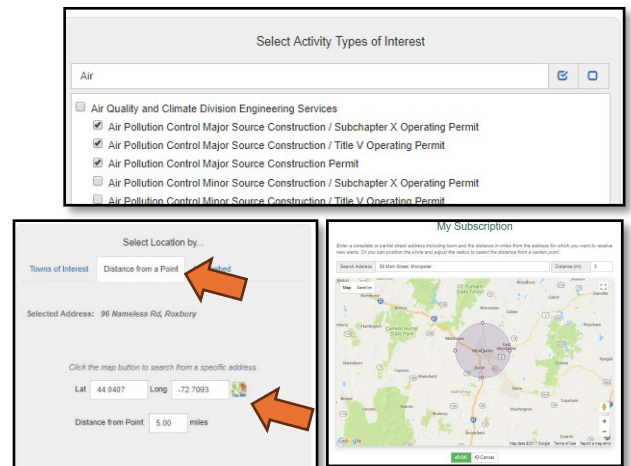
Register with the ENB

To register on the ENB and set up your subscription: please go through the following steps. There are illustrated instructions on Page 16 of [the ENB User Guide](#):

- Go to ENB.VERMONT.GOV
- Click **Register** on the upper right-hand side of the home page
- Enter the required information (name, email address and create password) and click **Register**
- You will receive an email confirmation for your email address. Once confirmed you will be able to log-in and set up your subscription.

Subscribe to ENB Notifications for New Activities in your Area

- Log into ENB and then click **My Subscription** at the top left-hand side of the home page
- Click **Modify Alerts** on the My Subscription page
- Click **Edit** for Alert #1
- Check the box next to the permits you are interested in receiving alerts for from the **Select Activity Types of Interest** list.
- Next, click the **Distance from a Point** tab under **Select Location by...** and click the **map** icon to set your location.
- Enter your own address in the **Search Address** field. Set the distance large enough to capture the project activity (1 mile, 5 miles, etc.)
- Click **OK** once the radius has been set
- Click **SAVE** on the next page, then Click **OK** to return the main subscription page.
- Once you receive an alert for an activity, you can choose to **Follow** the activity from your subscription page on the ENB



For additional instructions see the **User Guide** on ENB.VERMONT.GOV.

For help with registration please contact the ENB Administrator: ANR.ENBAdministrator@vermont.gov.

APPENDIX A

Detailed Project Description

EXECUTIVE SUMMARY

This application requests authorization for the first-time use of aquatic herbicide to manage *Myriophyllum spicatum* (Eurasian watermilfoil, "EWM") in Joe's Pond. EWM has recently established within the waterbody and is exhibiting signs of early population expansion. In 2024, the Joe's Pond Association (JPA) implemented non-chemical control measures including targeted hand-pulling and the strategic deployment of benthic barriers in areas of highest observed biomass. These efforts, while consistent with best management practices for early-stage infestations, have not resulted in eradication and are unlikely to prevent further spread given the plant's documented growth characteristics and high fragmentation potential.

Recent vegetation surveys conducted by both the Vermont Department of Environmental Conservation (DEC) and Arrowwood Environmental (AE) confirm the presence and distribution of EWM. DEC also conducted a comprehensive aquatic vegetation survey, including all native in August 2024. Another survey of the entire littoral zone is planned by AE in the spring of 2025 to document locations of EWM spread and establishment, and to guide management efforts.

Pending permit approval, the proposed treatment would utilize ProcellaCOR™ EC (active ingredient: florpyrauxifen-benzyl), a systemic auxin-mimic herbicide that exhibits high selectivity for *Myriophyllum* spp. and low toxicity to non-target aquatic flora and fauna. Treatment areas will be limited to locations where non-chemical management is infeasible or insufficient to achieve effective control. Application rates will range between 2.0 and 5.0 PDUs, based on site-specific factors including EWM biomass density, water depth, dilution potential, and proximity to sensitive resources. Final treatment boundaries will be refined in coordination with JPA and AE following the results of the spring 2025 survey.

The proposed herbicide treatment is a component of the broader integrated Joe's Pond Eurasian Watermilfoil Management Plan that was adopted by the JPA Board of Directors on February 19, 2025. JPA will continue physical control efforts through Diver-Assisted Suction Harvesting (DASH), SNUBA-aided hand harvesting, benthic barrier placement and hand-pulling, supplemented by volunteer-based monitoring and educational programming.

Given the invasive potential of EWM and the risk of rapid proliferation, particularly in areas not yet documented but potentially colonized, prompt and strategic intervention is warranted. The proposed herbicide use is limited, targeted, and consistent with DEC guidance for early detection and rapid response scenarios. The treatment aims to support long-term aquatic ecosystem balance, reduce propagule pressure, and minimize future management burdens.

Furthermore, the early use of herbicides as part of JPA's Eurasian Watermilfoil Management Plan meets the statutory criteria of the five findings under 10 V.S.A. § 1455(d) as was outlined in a letter transmitted by JPA to Secretary Moore on March 31, 2025, summarized below :

1. 10 V.S.A. § 1455(d)(1) There is no reasonable non-chemical alternative available

Non-chemical management efforts alone have not proven to effectively contain or control EWM infestations at other Vermont Lakes. Herbicides are then utilized once the EWM has spread, resulting in more herbicide being used and a greater chance of non-target impacts

2. 10 V.S.A. § 1455(d)(2) There is acceptable risk to the nontarget environment.

ProcellaCOR EC herbicide has been used at multiple lakes in Vermont since being registered in 2019. It has proven to be highly selective for non-target, native flora and fauna. This has been documented in multiple surveys and reports by DEC available at:

<https://dec.vermont.gov/watershed/lakes-ponds/permit/aquatic-nuisance-control>

3. 10 V.S.A. § 1455(d)(3) There is negligible risk to public health.

ProcellaCOR EC herbicide was reviewed by the Vermont Department of Health and determined to have negligible risk to public health.

<https://dec.vermont.gov/watershed/lakes-ponds/permit/aquatic-nuisance-control>

4. 10 V.S.A. § 1455(d)(4) A long-range management plan has been developed which incorporates a schedule of pesticide minimization.

JPA adopted a Eurasian Watermilfoil Management Plan on February 19, 2025:

<https://www.joespondvermont.com/management-plan.html>

Using ProcellaCOR EC early in the management program will be the most effective way to insure pesticide minimization over time.

5. 10 V.S.A. § 1455(d)(5) There is a public benefit to be achieved from the application of a pesticide.

EWM is considered an invasive species in Vermont. Rapid response management efforts targeting containment, control and ultimately eradication will provide a public benefit by preserving native conditions at Joe's Pond and preventing Joe's Pond from becoming a potential vector of spread to other waterbodies in Vermont.

INTRODUCTION

Joe's Pond, a 396-acre waterbody in Danville and Cabot, Vermont, has an estimated 145-acre littoral zone that supports the majority of the pond's aquatic plant and animal life. In 2024, EWM, a fast-growing, non-native invasive aquatic plant, was first documented in the pond through a survey conducted by AE in mid-August 2024. Non-chemical intervention measures were initiated in September 2024 after receipt of an ANC General Permit Rapid Response Control Activity approval (#4375) and continued into October 2024. SNUBA-aided hand harvesting and placement of benthic barriers occurred.

EWM is a highly competitive submerged species known for its rapid vegetative growth and ability to propagate through fragmentation. It can form dense surface-reaching mats that outcompete native aquatic plants, alter nutrient dynamics, degrade fish and macroinvertebrate habitat, impede recreational access, and increase the potential for algal blooms due to reduced water circulation. Once established, EWM is extremely difficult to eradicate and often requires long-term, multi-modal management strategies.

The presence of EWM at Joe's Pond in the late summer and fall of 2024, despite the rapid-response physical management that was initiated, raises concerns about the plant's ability to establish new colonies beyond currently mapped areas. Its spread can be facilitated by recreational activity and water movement, and even small fragments can colonize new sites. Given these traits, EWM represents a substantial ecological and recreational threat to Joe's Pond and the greater watershed if not addressed early and decisively.

This application proposes the first use of aquatic herbicide in Joe's Pond as part of a science-based, integrated response plan. The overarching management goal is eradication of EWM before the infestation becomes widespread and unmanageable. The proposed program will combine limited, targeted application of the systemic herbicide ProcellaCOR™ EC with ongoing physical removal (hand-pulling and Diver-Assisted Suction Harvesting), volunteer-based monitoring, and lake user education. This strategy reflects an Early Detection, Rapid Response (EDRR) approach, prioritizing the protection of native biodiversity, the preservation of recreational use, and the long-term ecological health of Joe's Pond.

CURRENT CONDITIONS

Figure 1. Joe's Pond 2024 Comprehensive Plant Survey Results (Provided by DEC)

Common Species Name	Scientific Name	Average Depth (Feet)	Average Abundance	Number of Total Sites	Frequency of Occurrence (n = 338)
Filamentous Algae	<i>Unknown Species</i>	9.33	1.00	3	0.89
Water Marigold	<i>Bidens beckii</i>	5.50	1.17	6	1.78
Muskgrass	<i>Chara sp.</i>	3.70	1.00	10	2.96
Slender Spikerush	<i>Eleocharis acicularis</i>	2.00	1.00	2	0.59
Common Waterweed	<i>Elodea canadensis</i>	5.91	1.06	34	10.06
Nuttall's Waterweed	<i>Elodea nuttallii</i>	7.80	1.20	5	1.48
Alternate-flowered Watermilfoil	<i>Myriophyllum alterniflorum</i>	2.75	1.33	6	1.78
Slender Naiad	<i>Najas flexilis</i>	3.05	1.00	0	0.00
Stonewort	<i>Nitella sp.</i>	6.58	1.20	66	19.53
Yellow Waterlily	<i>Nuphar variegata</i>	4.20	1.00	5	1.48
White Waterlily	<i>Nymphaea odorata</i>	1.94	1.63	8	2.37
Alpine Pondweed	<i>Potamogeton alpinus</i>	5.00	1.00	1	0.30
Large-leaf Pondweed	<i>Potamogeton amplifolius</i>	3.94	1.13	8	2.37
Variable Pondweed	<i>Potamogeton gramineus</i>	5.42	1.00	6	1.78
Blunt-leaved Pondweed	<i>Potamogeton obtusifolius</i>	7.50	1.00	2	0.59
White-stemmed Pondweed	<i>Potamogeton praelongus</i>	4.88	1.00	4	1.18
Small Pondweed	<i>Potamogeton pusillus</i>	8.00	1.00	1	0.30
Richard's Pondweed	<i>Potamogeton richardsonii</i>	7.00	1.25	8	2.37
Robbin's Pondweed	<i>Potamogeton robbinsii</i>	4.90	1.12	25	7.40
Flat-stemmed Pondweed	<i>Potamogeton zosteriformis</i>	6.00	1.00	1	0.30

Common Species Name	Scientific Name	Average Depth (Feet)	Average Abundance	Number of Total Sites	Frequency of Occurrence (n = 338)
Softstem Bulrush	<i>Schoenoplectus tabernaemontani</i>	4.08	1.50	6	1.78
Bur-reed sp.	<i>Sparganium angustifolium</i>	2.17	1.00	6	1.78
Flat-leaved Bladderwort	<i>Utricularia intermedia</i>	8.33	1.00	3	0.89
Common Bladderwort	<i>Utricularia macrorhiza</i>	3.38	1.13	16	4.73
Lesser Bladderwort	<i>Utricularia minor</i>	3.00	1.00	3	0.89
Tapegrass	<i>Vallisneria americana</i>	6.20	1.21	33	9.76

Aquatic vegetation within Joe's Pond reflects a diverse and balanced littoral plant community, currently supporting a total of 26 documented species based on DEC vegetation survey data (Figure 1). The plant community exhibits a high level of ecological integrity, as indicated by a Simpson's Diversity Index of 0.89 and an evenness value of 0.81—metrics that together suggest a well-distributed and compositionally rich aquatic flora. This level of diversity is typical of stable, minimally disturbed systems, where native species maintain functional roles in habitat provisioning, sediment stabilization, nutrient cycling, and competition dynamics that resist non-native invasion.

Despite this, EWM was first documented in Joe's Pond in 2024. Surveys conducted by AE in 2024 identified five discrete areas of EWM presence along the upper western shoreline of the pond, all within the littoral zone at depths shallower than six feet. This bathymetric pattern aligns with EWM's ecological niche, as it typically establishes in areas of moderate light penetration and soft, nutrient-rich sediments. Specifically and referring to the AE report, Area A contained a single EWM plant, Area B included three plants, Area C had twelve individuals, and Area E had seven plants. Area D, however, represents a significant outlier with dense growth covering an estimated 75–100% of the benthic substrate in that localized zone. This distribution suggests early-stage colonization in most sites, with Area D indicating potential for expansion and fragment-mediated dispersal if not rapidly managed. In fact, the hand-harvesting operations conducted only weeks after the AE survey by VT ANR and JPA found several hundred EWM plants, and they were not able to remove all of the EWM plants that were seen.

EWM's presence in such shallow, nearshore habitats is ecologically concerning due to its allelopathic tendencies, competitive superiority in phosphorus-enriched environments, and asexual reproduction strategy via fragmentation—factors that allow it to outcompete native

vegetation and alter structural habitat complexity. If left unmanaged, even small infestations like those currently documented have the potential to spread rapidly across the littoral zone, particularly given Joe's Pond's sediment and depth profiles, which are well suited to EWM proliferation.

Importantly, DEC data confirm the presence of several sensitive native species within Joe's Pond, including *Myriophyllum alterniflorum* (alternate-flowered watermilfoil), *Nuphar variegata* (yellow waterlily), and *Nymphaea odorata* and other *Nymphaea* species (white waterlilies). *M. alterniflorum*, a native milfoil with high conservation value due to its sensitivity to environmental disturbance and chemical exposure, has been observed in approximately six discrete locations along the northwest, northeast, and eastern shorelines. Notably, these populations are spatially separated from the documented EWM infestations and are not within the proposed treatment areas. Similarly, *Nuphar* and *Nymphaea* species are located predominantly along the north and far eastern shorelines, often within wetland delineation zones that will be explicitly excluded from chemical treatment in accordance with best management practices and regulatory requirements.

The spatial segregation between sensitive native flora and proposed EWM treatment areas is ecologically favorable and allows for targeted intervention without compromising the integrity of sensitive or wetland-associated plant communities. Furthermore, the high species richness, diversity, and evenness metrics suggest that native competition is still functioning in much of the littoral zone. However, the localized dense EWM in Area D presents a plausible risk of tipping local community structure toward monoculture, especially if fragments disperse into otherwise undisturbed areas.

In sum, while the overall plant community in Joe's Pond remains diverse and largely undisturbed, the early establishment and rapid localized expansion of EWM signal an urgent need for targeted, selective management. Given the species' invasive biology and ability to rapidly alter ecological equilibrium, strategic intervention in the current season will be essential to protect native species, prevent further spread, and maintain the pond's ecological health and recreational value.

OBJECTIVES/GOALS

Aligned with other Vermont waterbody permit applications, the primary objectives of the JPA are to achieve sustainable, long-term control of EWM while preserving a diverse native plant community, enhancing fish and wildlife habitat, promoting recreational use, and minimizing the risk of other invasive species establishing in the lake.

JPA drafted and adopted the Joe's Pond Eurasian Watermilfoil Management Plan on February 19, 2025 (<https://www.joespondvermont.com/management-plan.html>). A copy of the management plan is provided below:

Joe's Pond Eurasian Watermilfoil Management Plan

The establishment of an invasive aquatic plant known as Eurasian Watermilfoil (EWM) was discovered and confirmed in Joe's Pond in August, 2024.

In response to this discovery, the Joe's Pond Association (JPA) Board of Directors has committed to containing and limiting the spread of EWM and, if possible, accomplish eradication.

This document shall constitute the JPA Eurasian Watermilfoil Management Plan to assist in guiding the JPA response to this serious threat to the lake.

Plan Objective

The EWM Management Plan shall serve to guide JPA actions and decisions regarding efforts to contain, control and possibly eradicate EWM from the lake and to help the JPA enact and implement such actions as deemed necessary to achieve containment and/or eradication in the most efficient, timely, and effective manner.

EWM Management Priorities

1. Reduce EWM plant population in known established areas by hand pulling, diver assisted suction harvesting (DASH), and placement of benthic barriers as authorized under the Rapid Response Control Permit issued to the JPA and within the three year period of its authorization expiring on 09/23/27.

- Selection of treatment option(s) will be dependent upon extent of EWM propagation, density and maturity of plants, and availability of contractor services.
- In particularly dense areas of EWM establishment, benthic, or bottom barriers, may be placed following hand harvesting or DASH treatment.
- Closely monitor treated infestation areas for regeneration of EWM and re-establishment of native aquatic species.
- Follow up on any reported re-establishment of EWM in treated areas immediately, if possible, with hand harvesting by JPA resources.
- Document and report all treatment activities to the JPA Mapping Specialist for entry on the JPA EWM Management Map.

2. Perform comprehensive on-going surveys of the entire littoral zone to identify any new areas of EWM propagation.

- Establish a JPA Stewardship Program focused on member-conducted monitoring and patrolling of the littoral zone.
- Provide training to JPA members in EWM identification, marker buoy placement, and geolocation techniques so that location data can be transmitted to the JPA EWM Management Map.

- Designate volunteer Lakeshore Section Coordinators to recruit surveyors, confirm EWM identification, provide marker buoys, ensure the assigned lakeshore and littoral zone is surveyed thoroughly and regularly, and transmit geolocation data of EWM found and spatial monitoring coverage to the Mapping Specialist.
 - Engage professional consultant services to conduct a full survey of the littoral zone on a yearly basis to determine all locations of EWM establishment. This level of survey and monitoring should continue until 5 continuous years are achieved with no EWM found.
 - The full survey addressed above may include a native aquatic plant inventory to provide baseline data and in support of future Aquatic Nuisance Control permit applications.
3. Form and equip a JPA dive team (SCUBA, SNUBA, and snorkelers) that can perform hand harvesting operations, benthic barrier placement and provide support for contracted hand harvesting, benthic barrier placement and DASH projects.
- Dive team will also be tasked with responding to reported discovery of new EWM infestations and hand harvesting such areas as quickly as possible.
 - Dive team may also perform focused littoral zone surveys in support of the Stewardship Program monitoring activities.
 - JPA shall invest in equipment that will most efficiently and effectively support EWM monitoring and harvesting by JPA resources.
4. Implement actions to reduce the possibility of EWM spread.
- Place marker buoys wherever new patches of EWM are found.
 - Place signage at the fishing access alerting boaters of presence of EWM and to avoid buoyed areas.
 - Communicate to and engage the JPA membership via website, email, newsletter, Joes Pond Blog or other available means to educate, alert, mobilize, recruit or otherwise keep the members informed of planned or on-going EWM management activities and volunteer needs.
 - Keep the JPA EWM Management Map up to date with depiction of all new established EWM locations.
5. Develop a digital mapping platform upon which layers of information can be entered and viewed that will assist in temporally and spatially tracking all EWM management actions. JPA EWM Management Map data entry will be performed by the JPA Mapping Specialist.
6. Pursue all financial assistance for EWM management activities from state, municipal, and other available funding sources.
7. Work with the Federation of VT Lakes and Ponds and VT Agency of Natural Resources to ensure all effective EWM management and treatment options are available to the JPA during the Rapid Response phase (3 years from date of first discovery).
- Consider all EWM management options during both the Rapid Response phase and long term; to potentially include herbicide treatment.

- A decision to pursue approval by VT ANR, and implementation of herbicide treatment, if approved, shall be made only following full engagement of the JPA membership and participation in such decision.

8. Form a JPA EWM Management Committee to implement the elements of this JPA EWM Management Plan. Areas of focus by the Committee shall include:

- EWM Plan
- Education
- Grants/Funding
- Regulatory
- Mapping
- EWM Surveys
- EWM Treatments and Management Options
- Materials and Equipment Acquisition and Inventory

9. Support and sustain the JPA Greeter Program.

- Investigate opportunities to enhance Greeter Program capabilities including a boat wash station.
- Broaden the recruiting effort to enable more comprehensive temporal coverage.

10. Maintain lines of communication with the wider Joe's Pond Community to include but be not limited to the Towns of Danville, Cabot, and Walden, the Danville and Cabot Conservation Commissions, the LVRT, and the West Danville Community Club.

Adopted 2/19/2025

For the Joe's Pond Association Board of Directors

Joe Hebert

Joe Hebert, President

PROCELLACOR™ EC HERBICIDE TREATMENT PLAN

ProcellaCOR™ EC (active ingredient: florpyrauxifen-benzyl) was granted full registration by the U.S. Environmental Protection Agency in February 2018 and has since emerged as a highly effective and environmentally responsible tool for controlling EWM across the United States. Its adoption has grown rapidly among lake managers, including those in all six New England states, due to its unique combination of high efficacy, target specificity, rapid environmental dissipation, and low toxicity to non-target organisms.

In Vermont, ProcellaCOR™ EC has replaced legacy herbicides such as fluridone (Sonar) and triclopyr (Renovate) in EWM control programs, owing to its exceptional selectivity and consistent multi-year control outcomes. It is currently the only herbicide approved by the Vermont DEC for EWM treatment and has demonstrated outstanding success across several Vermont lakes. In

these systems, ProcellaCOR™ EC treatments have resulted in greater than 95% reductions in EWM biomass within the treatment year, with minimal to no observed impact on native aquatic plant communities.

ProcellaCOR™ EC is a systemic herbicide classified as a synthetic auxin. It disrupts hormonal processes essential for the growth of susceptible species like EWM by mimicking natural plant growth hormones, triggering uncontrolled cell elongation, and ultimately leading to the collapse of plant tissues. Its mechanism of action is highly specific to dicotyledonous species like EWM, and numerous controlled studies and field monitoring efforts have shown that monocot native plants and sensitive submerged vegetation such as pondweeds (*Potamogeton* spp.) and tapegrass (*Vallisneria americana*) are largely unaffected, preserving critical habitat functions. Certain native aquatic plant species, such as coontail (*Ceratophyllum demersum*), white and yellow waterlilies (*Nymphaea odorata* and *Nuphar variegata*), and watershield (*Brasenia schreberi*), are considered more sensitive to ProcellaCOR™ EC and may exhibit signs of temporary injury following treatment. However, based on extensive field experience across Vermont and the broader New England region, these species have demonstrated the ability to recover over time, often reestablishing within the same season or in subsequent years. Treatment areas are carefully delineated to minimize exposure in locations where these sensitive species or wetland habitats are abundant, ensuring that ecological integrity and native plant diversity are preserved throughout the management process.

Another key advantage of ProcellaCOR™ EC is its favorable environmental fate. The compound has a photolytic half-life of approximately 1.68 hours, meaning it rapidly degrades in the presence of sunlight, significantly limiting off-target persistence and reducing risks to aquatic invertebrates, fish, and wildlife. The EPA has categorized it as a low-risk herbicide, and its minimal application volumes (measured in parts per billion) further reduce environmental load. In addition, no restrictions are required for drinking water, irrigation, or recreation following treatment, making it a practical and safe component of an integrated aquatic plant management program.

In accordance with the DEC regulations, active management activities—including herbicide treatment, Diver-Assisted Suction Harvesting (DASH), and benthic barrier installation—are limited to no more than 40% of the vegetated littoral zone in a given year to preserve ecological integrity and maintain sufficient native vegetation for fish and wildlife habitat. This proposed plan aligns fully with that framework.

For Joe's Pond, a 396-acre waterbody with an estimated 145-acre littoral zone, the use of ProcellaCOR™ EC will be strategically targeted to dense, well-established EWM beds primarily located along the western shoreline, where physical control methods in the fall of 2024 proved to be insufficient. In 2023 and 2024, JPA and agency surveys confirmed expanding EWM distribution despite substantial effort through SNUBA-aided hand harvesting and benthic barrier deployment. Under this plan, herbicide treatment will complement but not replace these physical methods. SCUBA and SNUBA-aided hand harvesting, DASH, hand pulling and benthic

barriers will continue to be deployed in lower-density or scattered areas where these techniques are more effective.

Application rates will follow the EPA-approved ProcellaCOR™ EC label and will be adjusted based on site-specific factors such as water exchange potential, treatment area size, and the presence of sensitive or state-protected native species. Only one treatment per year will be proposed, and total area treated will remain within regulatory thresholds. This adaptive approach is expected to yield multi-year EWM control in treated areas, based on observed results in other Vermont lakes managed with similar protocols.

Nevertheless, long-term success will depend on continued vigilance. The potential for EWM reintroduction via fragmentation remains high, necessitating sustained physical removal efforts, monitoring, and prevention outreach. The Joe's Pond Association has already established a strong foundation in public education and volunteer engagement, which will remain essential components of this integrated management strategy.

In summary, ProcellaCOR™ EC represents the most advanced, effective, and environmentally responsible herbicide option available for managing EWM in Vermont's lakes. Its inclusion in Joe's Pond's management plan will provide targeted control where needed, bolster non-chemical efforts, and support the long-term ecological integrity of the lake.

The treatment program is expected to follow the following timeline and protocol:

Date	Task
May - July	<ul style="list-style-type: none"> ● Early season comprehensive survey to assess the plant community and develop a final treatment map. ● Submission of map and specific treatment plans to DEC for review and approval. ● Perform required pre-treatment notifications.
August	<ul style="list-style-type: none"> ● Schedule and conduct ProcellaCOR™ EC herbicide treatment
August– September	<ul style="list-style-type: none"> ● Surveys / inspections and FastEST sampling
September	<ul style="list-style-type: none"> ● Comprehensive macrophyte survey
November	<ul style="list-style-type: none"> ● Submission of annual report identifying preliminary plans for upcoming year
December / January	<ul style="list-style-type: none"> ● Project review and meeting with DEC, as necessary

Based on the recent treatment experiences with ProcellaCOR™ EC herbicide at other New England lakes and from SePRO Corporation manufacturer input, the following protocols are recommended for the proposed ProcellaCOR EC treatment at Joe's Pond in 2025:

1. Formulation – ProcellaCOR™ EC aquatic herbicide, liquid formulation.
2. Application – A solution of ProcellaCOR™ EC diluted with lake water would be prepared in a mixing tank onboard the treatment boat and the solution will be evenly injected throughout the designated treatment areas using trailing drop hoses and a calibrated pumping system. This is a sub-surface injection.
3. Timing – Treatment would be scheduled for anytime before late August (temperature dependent), when there is sufficient EWM growth to maximize herbicide uptake.
4. Rate – The recommended application rate (dose) is based on the percentage of the waterbody being treated and the susceptibility of the target plant. EWM has proven to be especially susceptible to ProcellaCOR™ EC allowing for low application rates to be used. The EPA label allows for application of 25 Prescription Dose Units (PDUs) per acre-foot of water being treated. Based on the high susceptibility of EWM, the standard recommended application rate for Joe's Pond is 2-5 PDUs per acre-foot. The 3 PDU application rate is only 12% of the EPA's maximum allowable application rate listed on the product label. Should smaller-scale maintenance treatments be required, the application rates may increase to 4-5 PDU's to overcome the effects of dilution, but rates higher than 5 PDU per acre foot will not be proposed to ensure selectivity.

This treatment strategy has been employed at other Vermont lakes in recent years. All of the aforementioned projects were conducted in the same way that the Joe's Pond project is proposed under this application.

Herbicide	<p>ProcellaCOR™ EC</p> <p>Liquid formulation</p> <p><u>EPA Reg. No.:</u> 67690-80</p> <p><u>Active Ingredient:</u> florpyrauxifen-benzyl 2.7%</p> <p>1 PDU is equal to 3.2 fl. oz.</p>
Application Rate	Up to 5 PDU per acre-foot
Treatment Area	<p>Up to 40% of the littoral zone per year</p> <p><i>* Actual acreage to be finalized based on the results of late and early season surveys.</i></p>
Target Concentration	<p>1 PDU of ProcellaCOR™ EC (3.2 fl. oz) achieves 1.93 ppb/acre foot</p> <p>The proposed standard application rates of 2-3 PDU/ac-ft will result in concentrations of 3.86-5.79 ppb within the treated areas. The maximum proposed use rate of 5 PDU/ac-ft equals 9.65 ppb.</p>
Treatment Timing	<p>Before late August</p> <p>Delay treatment until there is sufficient active EWM growth to maximize herbicide uptake, while treating as early as possible to allow time for non-target native plants to recover following treatment.</p>
Method of Application	<p>The liquid formulation will be diluted with lake water and evenly applied throughout the designated treatment areas using a calibrated pumping system and trailing drop hoses.</p> <p>GPS systems with WAAS or differential accuracy will be used to provide real-time navigation and to ensure that the herbicide is evenly applied throughout the designated treatment areas.</p>

IMPACTS TO NATIVE PLANT COMMUNITY AND WILDLIFE

ProcellaCOR™ EC treatments conducted in Vermont and throughout the Northeast have consistently demonstrated strong species selectivity, with minimal impacts to non-target native aquatic vegetation. In Joe's Pond, certain native macrophytes may exhibit mild, transient effects following herbicide application, specifically yellow waterlily (*Nuphar variegata*), white waterlily (*Nymphaea odorata* and related *Nymphaea* species), and, to a lesser extent, watershield (*Brasenia schreberi*), though the latter has not been consistently documented in all survey years.

Waterlilies, which are generally more sensitive to systemic herbicides, may display minor symptoms such as chlorosis, leaf curling, or temporary reduction in leaf production at elevated application rates. However, these responses have historically been temporary, with populations typically recovering to baseline densities within the same growing season. The proposed treatment areas at Joe's Pond have been delineated to avoid known concentrations of these species, particularly in wetland-associated zones where sensitive native flora are most likely to

occur. Application rates will be carefully managed to minimize off-target movement and reduce exposure to these taxa.

Alternate-flowered watermilfoil (*Myriophyllum alterniflorum*), a native congener of the target species, is present in Joe's Pond and may also exhibit localized effects depending on treatment proximity and herbicide concentration. Nonetheless, past observations indicate that *M. alterniflorum* populations tend to recover robustly in low-dose application scenarios, particularly in untreated or buffer areas.

Because the proposed treatment encompasses a small, localized portion of the littoral zone and is not anticipated to result in large-scale biomass decomposition, any associated nutrient release is expected to be minimal and insufficient to stimulate phytoplankton or algal blooms. Furthermore, ecotoxicological testing of ProcellaCOR™ EC has consistently shown no toxicity to fish, birds, amphibians, or aquatic invertebrates at or above permitted application concentrations. This combination of strong species selectivity, rapid environmental degradation, and a well-defined application footprint supports the safe use of ProcellaCOR™ EC as part of an ecologically sound invasive plant management strategy for Joe's Pond.

WATER USE RESTRICTIONS AND NOTIFICATIONS

Water Use Restrictions – The only water use restrictions listed on the current ProcellaCOR™ EC label are all centered around the use of ProcellaCOR™ EC treated water for irrigation purposes. There are no restrictions on using ProcellaCOR™ EC treated water for drinking water, swimming or fishing.

However, it is anticipated that the DEC will condition the permit similarly to others issued for ProcellaCOR™ EC use in 2019-2023; on the day of treatment and out of an abundance of caution, no use of the treated waterbody and associated outlet stream up to one mile downstream is recommended for any purpose, including swimming, boating, fishing, irrigation, and all domestic uses. Additional advisories and recommendations related to irrigation and the use of treated waters are to follow what is listed on the ProcellaCOR™ EC label.

Irrigation restrictions vary depending on what is being irrigated. Turf may be irrigated immediately after treatment without restriction. Irrigation of landscape vegetation and other non-agricultural plants can occur once ProcellaCOR™ EC concentrations are determined to be less than 2 ppb or by following a waiting period that is 7 days for the use rates being proposed.

Based on sample results of prior ProcellaCOR™ EC applications in Vermont, it is not anticipated that this product will travel downstream through the outlet.

Based on prior ProcellaCOR EC application review in Vermont, the Vermont Department of Health had issued a favorable drinking water review for this product, which states application

according to the label would pose a negligible risk to public health. It is anticipated the agency's review for this application for Joe's Pond will be similar.

Written Notification – In accordance with the DEC permit conditions, all direct waterfront abutters of the treated waterbody and up to one mile downstream will be notified in writing by USPS mail. This will include notification of permit application submission and prior to any herbicide treatment, which will occur two weeks in advance of the date of treatment.

Posting – In accordance with the DEC permit requirements, the adjacent shorelines and access points to the lake will be posted with signage warning of the pending herbicide application and water use recommendations to be imposed. The signs will include language specified by VT DEC for this purpose. The signage will be the source of information for the specific treatment areas and water use restrictions and will include the website(s) where additional treatment information can be accessed.

SURVEYS AND MONITORING

Consistent with other Five-Year Integrated Management Plans for Vermont waterbodies and existing efforts undertaken by the JPA, the organization proposes to continue the comprehensive late season aquatic plant survey as conditioned in the permit. By conducting annual survey efforts, changes in EWM and native aquatic plant species distributions and densities can be tracked effectively to align management efforts for the following season. In addition, an interim, one month post-treatment survey will be conducted to assess ProcellaCOR™ EC efficacy.

NON-CHEMICAL CONTROL PROGRAM

JPA remains committed to continuing with non-chemical control techniques as being the first line of defense as part of this integrated EWM management program. Non-chemical techniques to be considered and used as required include the following:

- SCUBA and SNUBA-aided hand harvesting
- Bottom (benthic) barriers
- DASH / diver assisted suction harvesting
- Snorkel hand-pulling (volunteer)
- Volunteer cleanup of EWM fragments with designated drop-off areas
- Volunteer monitoring
- Education outreach efforts
- Boat ramp monitoring

The JPA also remains committed to responsible and practical watershed management protection measures.

Use of herbicides are intended to supplement the JPA's proposed EWM management program that relies on SNUBA-aided hand-harvesting and the use of benthic barriers, in addition to diligent, ongoing monitoring efforts. Herbicide treatments will be used as the last choice to target areas of moderate to dense EWM growth, while the non-chemical techniques will be utilized on smaller and more widely scattered patches. The overall program objective is to limit the distribution and abundance of EWM, preserve the native plant community and to minimize herbicide use.

5-YEAR EURASIAN WATERMILFOIL MANAGEMENT PROGRAM BUDGET ESTIMATES

Project cost estimates for the Five-Year Eurasian Watermilfoil Management Program being proposed at Joe's Pond is provided in the following table. Please note that these are estimates and are subject to the availability of funds.

Estimated Program Costs – 2025 dollars*	Year 1	Year 2	Year 3	Year 4	Year 5
Description	2025	2026	2027	2028	2029
Herbicide treatment	\$30,000	\$30,000	\$35,000	\$35,000	\$40,000
Suction harvesting	\$10,000	\$10,000	\$11,500	\$11,500	\$12,000
Permitting	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
Monitoring	\$6,500	\$6,500	\$7,000	\$7,000	\$7,500
Notification (mailings, signs, etc.)	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500
JPA projected expenses for various tasks (e.g., salaries, taxes, supplies, equipment, storage)	\$5,000	\$5,000	\$5,500	\$5,500	\$6,000
Totals	\$54,000	\$54,000	\$ 61,500	\$ 61,500	\$ 68,000

* For budgeting purposes only

APPENDIX B

Maps

Figure 1. 2025 Potential Eurasian Watermilfoil Management

Joe's Pond



Site Information

Joe's Pond
West Danville, Vermont

Center: 71°38'38"W 44°N
Scale: 1:20,140,751

0 500 1,000
US Feet



Key

Littoral Zone (145.5 acres)

2025 Potential Treatment Area (3.3 acres)

Waterbody: 396 acres

Littoral Zone: 145.5 acres

Tentative Treatment: 2.27 % of the littoral zone

Target Species

Eurasian Watermilfoil
(*Myriophyllum spicatum*)



Map Details

Survey Date: August 13-14, 2024

Conducted by Arrowwood Environmental

Map Date: April 22, 2025

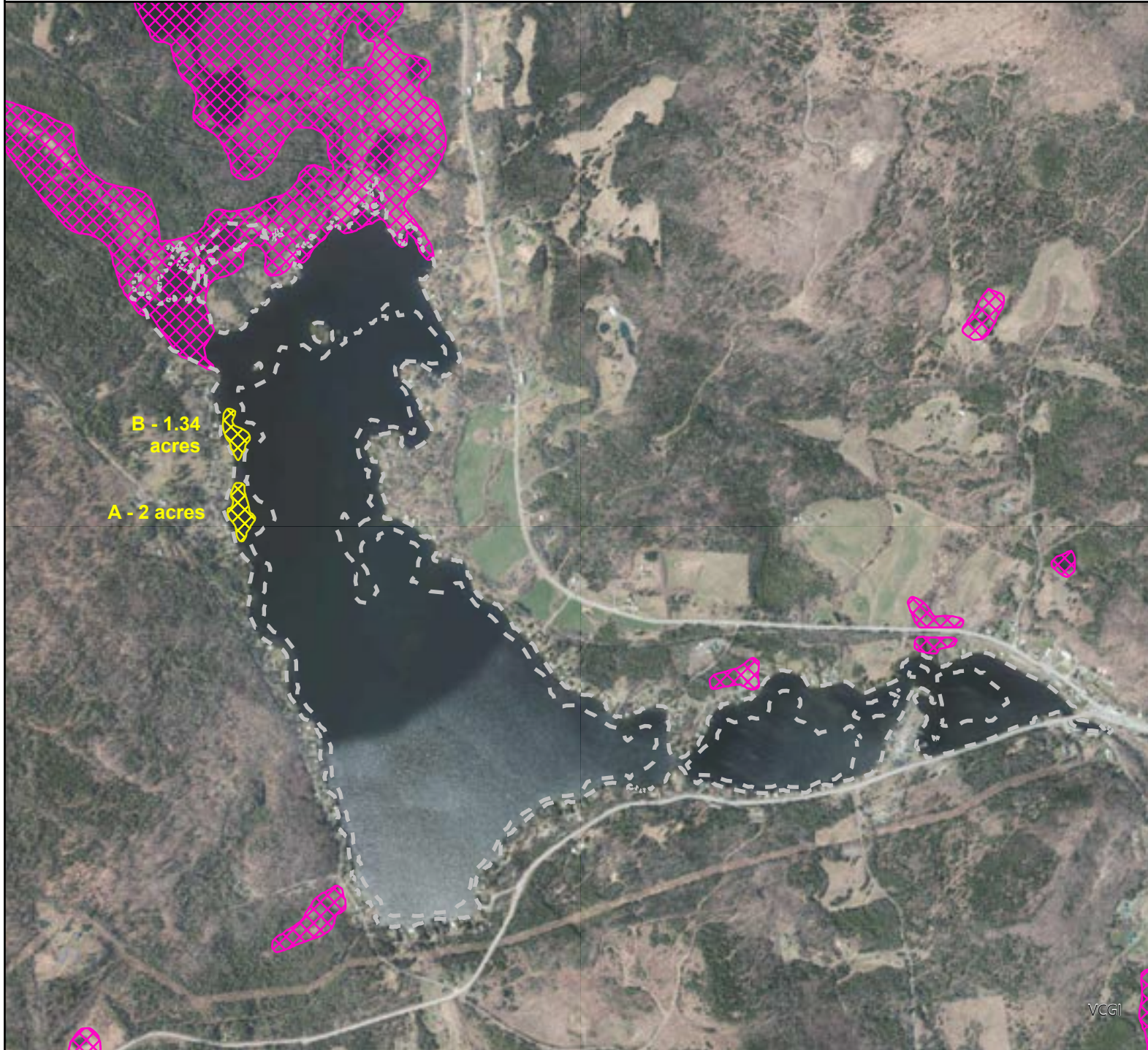
Prepared For: Joe's Pond Association

Map Author: E. Vulgamore

Office: Massachusetts

Figure 2. 2025 Potential Eurasian Watermilfoil Management and Wetland Delineation

Joe's Pond



Site Information

Joe's Pond
West Danville, Vermont

Center: 71°38'38"W 44°N
Scale: 1:20,140,751

0 500 1,000
US Feet



Key

Littoral Zone (145.5 acres)

VSWI Wetlands

2025 Potential Treatment Area (3.3 acres)

Waterbody: 396 acres

Littoral Zone: 145.5 acres

Tentative Treatment: 2.27 % of the littoral zone

Target Species

Eurasian Watermilfoil
(*Myriophyllum spicatum*)



Map Details

Survey Date: August 13-14, 2024

Conducted by Arrowwood Environmental

Map Date: April 22, 2025

Prepared For: Joe's Pond Association

Map Author: E. Vulgamore

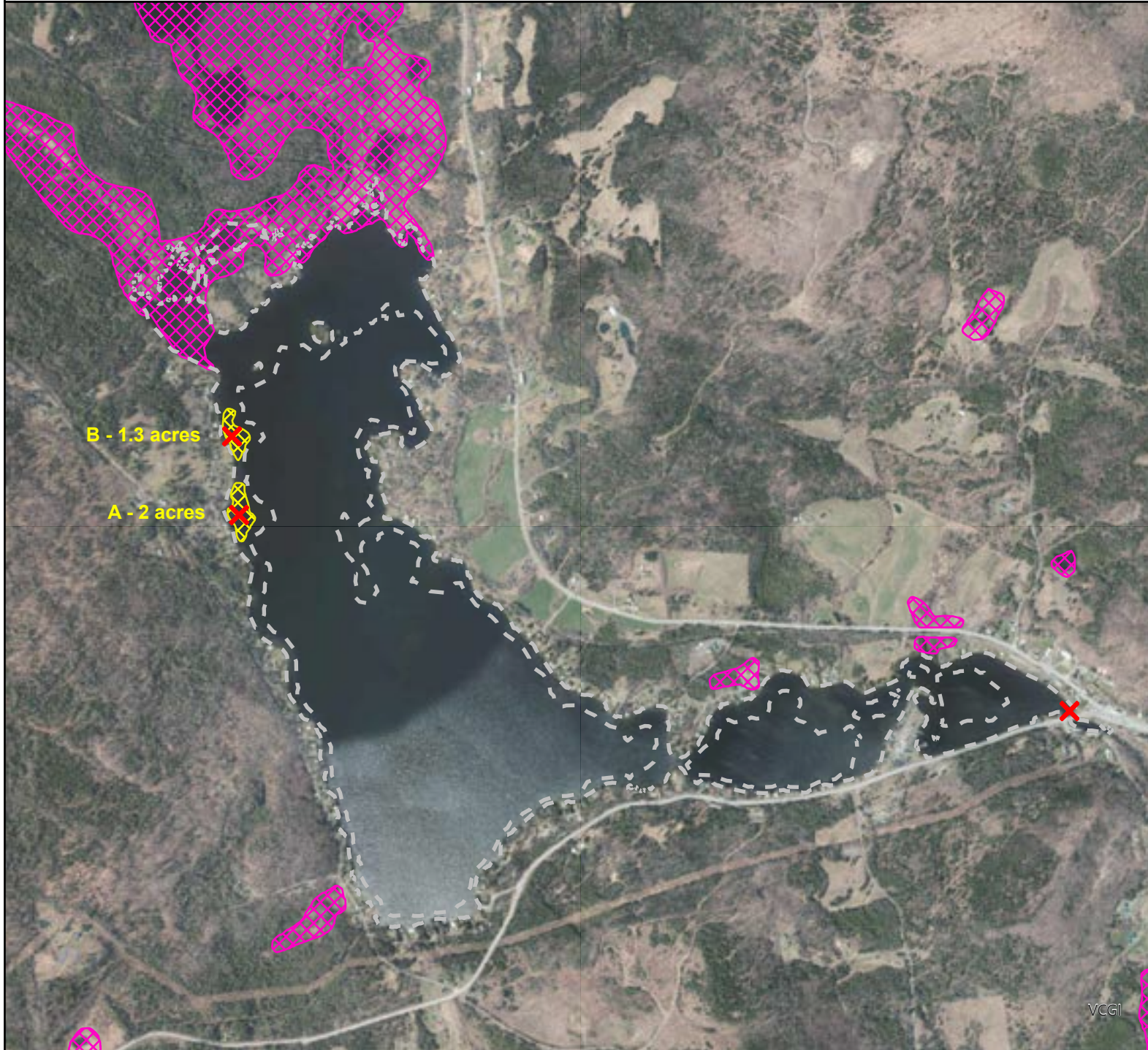
Office: Massachusetts

VCGI

SOLITUDE
LAKE MANAGEMENT
888.480.5253
solitudelakemanagement.com

Figure 3. 2025 Potential Eurasian Watermilfoil Management and FasTEST Sample Locations

Joe's Pond



Site Information

Joe's Pond
West Danville, Vermont

Center: 71°38'38"W 44°N
Scale: 1:20,140,751

0 500 1,000
US Feet



Key

Littoral Zone (145.5 acres)

VSWI Wetlands

2025 Potential Treatment Area (3.3 acres)

FasTEST Sample Sites

Waterbody: 396 acres

Littoral Zone: 145.5 acres

Tentative Treatment: 2.27 % of the littoral zone

Target Species

Eurasian Watermilfoil
(*Myriophyllum spicatum*)



Map Details

Survey Date: August 13-14, 2024

Conducted by Arrowwood Environmental

Map Date: April 22, 2025

Prepared For: Joe's Pond Association

Map Author: E. Vulgamore

Office: Massachusetts

VCGI

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APPENDIX C

Letters of Support

Cabot Conservation Committee

P.O. Box 36

Cabot, VT 05647

April 17, 2025

Re: Joe's Pond Association Aquatic Nuisance Control Permit Application

To: VT Agency of Natural Resources and Department of Environmental Conservation

Joe's Pond is an important natural resource to the Town of Cabot. Despite dense development it has many special wetland natural communities and is a valuable recreational and economic resource. The Joes Pond Association (JPA) efforts to prevent invasive aquatic species from entering the lake over the years is commendable. Unfortunately, Eurasian Watermilfoil (EWM) has found its way into the lake and swift and effective action must be taken.

The Cabot Conservation Committee has met with Joes Pond Association to discuss their options for eradication and control of EWM. We strongly support the efforts of the Joe's Pond Association (JPA) to contain, and if possible, eradicate the recent infestation by EWM, including treatment with the herbicide ProcettaCOR, if chosen as an EWM treatment option by the JPA.

Therefore, we support JPA's application to the Agency for chemical treatment of EWM, and we urge timely approval to allow for treatment this summer season to promote effective control, while the problem is still manageable, and eradication is still possible.

Sincerely,



Gary Gulka

Cabot Conservation Committee Chair

Michael J. Hogan, Chair, Select Board
Jennifer Miner, Vice Chair Select Board
Peggy Miller, Clerk
Fred Ducharme, Select Board
Walter Bothfeld, Jr, Select Board

TOWN OF CABOT

PO Box 36
Cabot, Vermont 05647

Office (802) 563-2279
Fax (802) 563-2423

April 22, 2025

Re: Joe's Pond Association Aquatic Nuisance Control Permit Application

To: VT Agency of Natural Resources and Department of Environmental Conservation

Joe's Pond is considered by the Cabot Select Board to be an extremely valuable social, economic, recreational, and ecological resource. As such, its protection from the degrading influences of aquatic invasive species such as Eurasian Watermilfoil (EWM) is of utmost importance to the Cabot community and visitors to our area and this beautiful lake.

The Cabot Selectboard fully supports the efforts of the Joe's Pond Association (JPA) to contain, and if possible, eradicate the recent infestation by EWM, including treatment with the herbicide ProcellaCOR, if chosen as an EWM treatment option by the JPA.

We urge the VT ANR to provide the JPA application a favorable and timely review such that the proposed treatment can be accomplished this season thereby maximizing the potential for complete eradication and significantly reducing or eliminating the need for future herbicide control operations.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael Hogan", followed by a horizontal line extending to the right.

Michael Hogan
Chair, Cabot Selectboard



Town of Danville
Office of Selectboard
PO Box 183 - 36 Route 2 West
Danville, VT 05828
Tel: 802-684-3426
Fax: 802-684-9606

April 17, 2025

VT Agency of Natural Resources
Department of Environmental Conservation
1 National Life Drive
Montpelier, VT 05602

Re: Joe's Pond Association Aquatic Nuisance Control Permit Application

Dear VT Agency of Natural Resources and Department of Environmental Conservation:

Joe's Pond is considered by the Danville Selectboard as an extremely valuable social, economic, recreational, and ecological resource. As such, its protection from the degrading influences of aquatic invasive species such as Eurasian Watermilfoil (EWM) is of utmost importance to the Danville community and visitors to our area and this beautiful lake.

The Danville Selectboard fully supports the efforts of the Joe's Pond Association (JPA) to contain, and if possible, eradicate, the recent infestation by EWM, including treatment with the herbicide ProcellaCOR, if chosen as an EWM treatment option by the JPA.

We urge the VT ANR to provide the JPA application a favorable and timely review such that the proposed treatment can be accomplished this season thereby maximizing the potential for complete eradication and significantly reducing or eliminating the need for future herbicide control operations.

Sincerely,

Janice Ouellette
Selectboard Chair

Danville Conservation Commission

PO Box 183 - 36 Route 2 West

Danville, VT 05828

Tel: 603-498-6445

4/14/25

Re: Joe's Pond Association Aquatic Nuisance Control Permit Application

To the VT Agency of Natural Resources and Department of Environmental Conservation:

Joe's Pond is considered by the Danville Conservation Commission as an extremely valuable social, economic, recreational, and ecological resource. As such, its protection from the degrading influences of aquatic invasive species such as Eurasian Watermilfoil (EWM) is of utmost importance to the Danville community and visitors to our area. It is also important to control as it is a potential contagion for surrounding lake communities.

The Danville Conservation Commission fully supports the efforts of the Joe's Pond Association (JPA) to contain, and if possible eradicate, the recent infestation by EWM, including treatment with the herbicide ProcettaCOR, if chosen as an EWM treatment option by the JPA.

We urge the VT ANR to provide the JPA application a favorable and timely review such that the proposed treatment can be accomplished this season thereby maximizing the potential for complete eradication and significantly reducing or eliminating the need for future herbicide control operations.

Sincerely,

A handwritten signature in cursive script, appearing to read "Evangelyn Morse".

Evangelyn Morse
Chairman of the Board

APPENDIX D

ProcellaCOR™ EC Product Label & SDS

SPECIMEN LABEL

ProcellaCOR™ EC

A selective systemic herbicide for management of freshwater aquatic vegetation in slow-moving/quiescent waters with little or no continuous outflow: ponds, lakes, reservoirs, freshwater marshes, wetlands, bayous, drainage ditches, and non-irrigation canals, including shoreline and riparian areas in or adjacent to these sites. Also for management of invasive freshwater aquatic vegetation in slow-moving/quiescent areas of rivers (coves, oxbows or similar sites).

FLORPYRAUXIFEN-BENZYL GROUP 4 HERBICIDE

Produced for:

SePRO Corporation
11550 North Meridian Street, Suite 600
Carmel, IN 46032, U.S.A.

ProcellaCOR, Prescription Dose Unit, and PDU are trademarks of SePRO Corporation



EPA Reg. No. 67690-80
FPL20180226

Active Ingredient:

Florpyrauxifen-benzyl: 2-pyridinecarboxylic acid, 4-amino-3-chloro-6-(4-chloro-2-fluoro-3-methoxy-phenyl)-5-fluoro-, phenyl methyl ester 2.7%

Other Ingredients: 97.3%

TOTAL: 100.0%

Contains 0.0052 lb florpyrauxifen-benzyl per Prescription Dose Unit™ (PDU™) or 0.21 lb florpyrauxifen-benzyl/gallon. 1 PDU is equal to 3.2 fl. oz. of product.

Keep Out of Reach of Children

CAUTION

Refer to the inside of label booklet for additional precautionary information including directions for use.

Notice: Read the entire label before using. Use only according to label directions. **Before buying or using this product, read Warranty Disclaimer and Misuse statements inside label booklet. If terms are not acceptable, return at once unopened.**

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION. Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants;
- Shoes plus socks;
- Protective eyewear; and
- Waterproof gloves.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Controls: When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(5)], the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

FIRST AID

If in eyes	<ul style="list-style-type: none">• Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.• Remove contact lenses, if present, after the first 5 minutes; then continue rinsing eye.• Call a poison control center or doctor for treatment advice.
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HOTLINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. In case of emergency endangering health or the environment involving this product, call **INFOTRAC** at **1-800-535-5053**.

Environmental Hazards

Under certain conditions, treatment of aquatic weeds can result in oxygen depletion or loss due to decomposition of dead plants, which may cause fish suffocation. Water bodies containing very high plant density should be treated in sections to prevent the potential suffocation of fish. Consult with the State agency for fish and game before applying to public waters to determine if a permit is needed.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. Read all Directions for Use carefully before applying.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

Shake well before using.

PRODUCT INFORMATION

ProcellaCOR EC is a selective systemic herbicide for management of freshwater aquatic vegetation in slow-moving/quiescent waters with little or no continuous outflow: ponds, lakes, reservoirs, freshwater marshes, wetlands, bayous, drainage ditches, and non-irrigation canals, including shoreline and riparian areas in or adjacent to these sites. Also for management of invasive freshwater aquatic vegetation in slow-moving/quiescent areas of rivers (coves, oxbows or similar sites).

Apply ProcellaCOR EC directly into water or spray onto emergent foliage of aquatic plants. Depending upon method of application and target plant, ProcellaCOR EC is absorbed by aquatic vascular plants through emergent or floating leaves and from water through submersed plant shoots and leaves. In-water treatments are effective in spot and partial treatment designs with relatively short exposure times (hours to several days). Species susceptibility to ProcellaCOR EC may vary depending upon time of year, stage of growth, and water movement. For best results, apply to actively growing plants. However, effective control can be achieved over a broad range of growth stages and environmental conditions. Application to mature target plants may require higher application rates and longer exposure periods to achieve control.

Resistance Management

ProcellaCOR EC is classified as a WSSA Group 4 Herbicide (HRAC Group O). Weed populations may contain or develop biotypes that are resistant to ProcellaCOR EC and other Group 4 herbicides. If herbicides with the same mode of action are used repeatedly at the same site, resistant biotypes may eventually dominate the weed population and may not be controlled by these products. Unless ProcellaCOR EC is used as part of an eradication program or in a plant management system where weed escapes are aggressively controlled, do not use ProcellaCOR EC alone in the same treatment area for submersed and emergent plant control for more than 2 consecutive years, unless used in combination or rotated with an herbicide with an alternate mode of action.

To further delay herbicide resistance consider taking one or more of the following steps:

- Use tank mixtures with herbicides from a different group if such use is permitted; Consult your local extension service or SePRO Corporation if you are unsure as to which active ingredient is currently less prone to resistance.
- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide use, and that considers other management practices.
- Scout after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by using an alternative herbicide from a different group or by a mechanical method that minimizes plant fragmentation.
- If a weed pest population continues to progress after treatment with this product, switch to another management strategy or herbicide with a different mode of action, if available.
- Contact your local extension specialist or SePRO Corporation for additional pesticide resistance-management and/or integrated weed-management recommendations for specific weed biotypes.

Stewardship Guidelines For Use

Apply this product in compliance with Best Management Practices (BMP) that include site assessment, prescription, and implementation. BMP have been developed to ensure accurate applications, minimize risk of resistance development, and monitor concentrations in water to document levels needed for optimal performance and manage potential irrigation use. SePRO Corporation will work with applicators and resource managers to implement BMP for application and monitoring to meet management objectives and ensure compatibility with potential water uses.

Use Precautions

- There are no restrictions for recreational purposes, including swimming and fishing.

Use Restrictions

- **Obtain Required Permits:** Consult with appropriate state or local water authorities before applying this product to public waters. State or local public agencies may require permits.
- **Chemigation:** Do not apply this product through any type of irrigation system.
- For in-water applications, the maximum single application rate is 25.0 Prescription Dose Units (PDU) per acre-foot of water with a limit of three applications per year.
- For aquatic foliar applications, do not exceed 10.0 PDU per acre for a single application, and do not apply more than 20.0 PDU total per acre per year.
- To minimize potential exposure in compost, do not allow livestock to drink treated water.
- Do not compost any plant material from treated area.
- Allow 14 days or greater between applications.
- Do not use water containing this product for hydroponic farming.
- Do not use treated water for any form of irrigation, except as described in the Application to *Water Used for Irrigation on Turf and Landscape Vegetation* section.
- Do not use for greenhouse or nursery irrigation.
- Make applications in a minimum of 10 gallons per acre (GPA) for ground and a minimum of 15 gallons per acre (GPA) for aerial applications.
- Do not apply to salt/brackish water.
- Do not apply ProcellaCOR EC directly to, or otherwise permit ProcellaCOR EC to come into contact during an application, with carrots, soybeans, grapes, tobacco, vegetable crops, flowers, ornamental shrubs or trees, or other desirable broadleaf plants, as serious injury may occur. Do not permit spray mists containing ProcellaCOR EC to drift onto desirable broadleaf plants. Further information on spray drift management is provided in the *Spray Drift Management* section of this label.
- For treatments out of water, do not permit spray mists containing this product to drift onto desirable broadleaf plants as injury may occur. Further information on spray drift management is provided in the *Spray Drift Management* section of this label.
- Do not allow tank mixes of ProcellaCOR EC to sit overnight. See additional tank mix restrictions below.
- Do not use organosilicone surfactants in spray mixtures of this product.
- Do not tank mix this product with malathion or methyl parathion.
- Do not make an application of malathion or methyl parathion within 7 days of an application of this product. See additional tank mix restrictions below.

Application to Water Used for Irrigation on Turf and Landscape Vegetation

To reduce the potential for injury to sensitive vegetation, follow the waiting periods (between application and irrigation) and restrictions below, and inform those who irrigate with water from the treated area. Follow local and state requirements for informing those who irrigate.

When monitoring ProcellaCOR EC concentrations, analyze water samples using an appropriate analytical method for both the active ingredient and the acid form. Use of HPLC (High-Performance Liquid Chromatography), which is also referenced as FasTEST®, is recommended.

Applications to invasive freshwater aquatic vegetation in slow-moving/quiescent areas of rivers (coves, oxbows or similar sites).

- Users must be aware of relevant downstream use of water for irrigation that may be affected by the treatment and must ensure all label restrictions are followed. All potential downstream water intakes with irrigation practices that may be affected by the treatment must be documented and affected irrigation users notified of the restrictions associated with such treatment.

Residential and other Non-Agricultural Irrigation (such as shoreline property use including irrigation of residential landscape plants and homeowner gardens, golf course irrigation, and non-residential property irrigation around business or industrial properties. Excludes greenhouse or nursery irrigation).

- Turf Irrigation: Turf may be irrigated immediately after treatment.
- For irrigation of landscape vegetation or other forms of non-agricultural irrigation not excluded above, conduct one of the following:
 - o analytically verify that water contains less than 2 ppb (SePRO recommends use of FasTEST); or
 - o if treated area(s) have the potential to dilute with untreated water, follow the precautionary waiting periods described in the tables 1 and 2 below for in-water or foliar application.

TABLE 1: Non-agricultural irrigation following in-water application

Waiting Period (Days) for Irrigation at Specific Target Treatment Rates (PDU per acre-foot)						
Percent Area of Waterbody Treated*	1-3 PDU	>3-5 PDU	>5.0 to 10.0 PDU	>10.0 to 15.0 PDU	>15.0 to 20.0 PDU	>20.0 to 25.0 PDU
2% or less	6 hours	1 day	1 day	2 days	2 days	3 days
3 - 10%	1 day	3 days	5 days	7 days	10 days	14 days
11 - 20%	3 days	7 days	10 days	10 days	14 days	21 days
21 - 30%	5 days	10 days	14 days	21 days	28 days	35 days
>30%	7 days	14 days	21 days	28 days	35 days	35 days

* Assumes treated area(s) have the potential to dilute with untreated water. If the treated area is not projected to dilute rapidly (example: confined cove area), utilize FasTEST to confirm below 2 ppb or verify vegetation tolerance before irrigation use. Consult a SePRO Aquatic Specialist for additional site-specific recommendations.

TABLE 2: Non-agricultural irrigation following foliar application

Waiting Period (days) for Irrigation at Specific Target Treatment Rates		
Percent Area of Waterbody Treated*	5.0 PDU / acre	>5.0 to 10.0 PDU / acre
10% or less	0.5 day	1 day
11 - 20%	1 day	2 days
>20%	2 days	3 days

* Assumes treated area(s) have the potential to dilute with untreated water. If the treated area is not projected to dilute rapidly (example: confined cove area), utilize FasTEST to confirm below 2 ppb or verify vegetation tolerance before irrigation use. Consult a SePRO Aquatic Specialist for additional site-specific recommendations.

Susceptible Plants

Do not apply where spray drift may occur to food, forage, or other plantings that might be damaged. Spray drift may damage or render crops unfit for sale, use or consumption. Small amounts of spray drift that may not be visible may injure susceptible broadleaf plants. **Before making a foliar or surface spray application, please refer to your state's sensitive crop registry (if available) to identify any commercial specialty or certified organic crops that may be located nearby. At the time of a foliar or surface spray application, the wind cannot be blowing toward adjacent cotton, carrots, soybeans, corn, grain sorghum, wheat, grapes, tobacco, vegetable crops, flowers, ornamental shrubs or trees, or other desirable broadleaf plants.**

Spray Drift Management

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment- and weather-related factors determines the potential for spray drift. The applicator is responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to limit off-target drift movement from aerial applications:

Aerial Application:

- Aerial applicators must use a minimum finished spray volume of 15 gallons per acre.
- Drift potential is lowest between wind speeds of 2 to 10 mph. Do not apply below 2 mph due to variable wind direction and high potential for temperature inversion. Do not apply in wind speeds greater than 10 mph.
- To minimize spray drift from aerial application, apply with a nozzle class that ensures coarse or coarser spray (according to ASABE S572) at spray boom pressure no greater than 30 psi.
- The distance of the outer most operating nozzles on the boom must not exceed 70% of wingspan or 80% of rotor diameter.
- Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.
- Do not apply under conditions of a low-level air temperature inversion.
- The maximum release height must be 10 feet from the top of the weed canopy, unless a greater application height is required for pilot safety.

Evaluate spray pattern and droplet size distribution by applying sprays containing a water-soluble dye marker or appropriate drift control agents over a paper tape (adding machine tape). Mechanical flagging devices may also be used. Do not apply under conditions of a low-level air temperature inversion. A temperature inversion is characterized by little or no wind and lower air temperature near the ground than at higher levels. The behavior of smoke generated by an aircraft-mounted device or continuous smoke column released at or near site of application will indicate the direction and velocity of air movement. A temperature inversion is indicated by layering of smoke at some level above the ground and little or no lateral movement.

Ground Application

- Ground applicators must use a minimum finished spray volume of 10 gallons per acre.
- To minimize spray drift from ground application, apply with a nozzle class that ensures coarse or coarser spray (according to ASABE S572).
- For boom spraying, the maximum release height is 36 inches from the soil for ground applications.
- Where states have more stringent regulations, they must be observed.

The applicator should be familiar with, and take into account the information covered in the following Aerial Drift Reduction Advisory (this information is advisory in nature and does not supersede mandatory label requirements.)

Aerial Drift Reduction Advisory

Information on Droplet Size: The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversions).

Controlling Droplet Size:

- **Volume** - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** - Do not exceed the nozzle manufacturer's specified pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- **Number of Nozzles** - Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle Orientation** - Orienting nozzles so that the spray is released parallel to the air stream produces larger droplets than other orientations. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- **Nozzle Type** - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

Boom Length: To further reduce drift without reducing swath width, boom must not exceed 70% of wingspan or 80% of rotor diameter.

Application Height: Do not make applications at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

Swath Adjustment: When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller drops, etc.).

Wind: Drift potential is lowest between wind speeds of 2 to 10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Do not make applications below 2 mph due to variable wind direction and high inversion potential. Do not apply in wind speeds greater than 10 mph. Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

Temperature and Humidity: When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions: Do not apply during a local, low level temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of the smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

USE DIRECTIONS

ProcellaCOR EC performance and selectivity may depend on dosage, time of year, stage of growth, method of application, and water movement.

Aquatic Plants Controlled: In-Water Application

Table 3 lists the expected susceptible species under favorable treatment conditions for aquatic plant control. Use of lower rates will increase selectivity on some species listed. Consultation with SePRO Corporation is recommended before applying ProcellaCOR EC to determine best in-water treatment protocols for given target vegetation.

TABLE 3. Vascular aquatic plant control with in-water application

Vascular Aquatic Plants Controlled: In-Water Application	
Common name	Scientific name
Floating Plants	
Mosquito fern	<i>Azolla</i> spp.
Water hyacinth	<i>Eichhornia crassipes</i>
Emerged Plants	
Alligatorweed	<i>Alternanthera philoxeroides</i>
American lotus	<i>Nelumbo lutea</i>
Floating heart	<i>Nymphoides</i> spp.
Water pennywort	<i>Hydrocotyle umbellata</i>
Water primrose	<i>Ludwigia</i> spp.
Watershield	<i>Brasenia schreberi</i>
Submersed Plants	
Bacopa	<i>Bacopa</i> spp.
Coontail ¹	<i>Ceratophyllum demersum</i>
Hydrilla ¹	<i>Hydrilla verticillata</i>
Parrotfeather	<i>Myriophyllum aquaticum</i>
Water chestnut	<i>Trapa</i> spp.
Watermilfoil, Eurasian	<i>Myriophyllum spicatum</i>
Watermilfoil, Hybrid Eurasian	<i>Myriophyllum spicatum</i> X <i>M.</i> spp.
Watermilfoil, Variable	<i>Myriophyllum heterophyllum</i>

¹ Higher-rate applications within the specified range may be required to control less-sensitive weeds.

Aquatic Plants Controlled: Foliar Application

Table 4 lists the expected susceptible species using labeled foliar rates (5.0 – 10.0 PDU per acre) under favorable treatment conditions for aquatic plant control. Use higher rates in the rate range on more established, dense vegetation. Consultation with SePRO Corporation is recommended before applying ProcellaCOR EC to determine best foliar treatment protocols for given target vegetation.

TABLE 4. Vascular aquatic plant control with foliar application

Vascular Aquatic Plants Controlled: Foliar Application	
Common name	Scientific name
Floating Plants	
Mosquito fern	<i>Azolla</i> spp.
Water hyacinth	<i>Eichhornia crassipes</i>
Emerald Plants	
Alligatorweed	<i>Alternanthera philoxeroides</i>
American lotus	<i>Nelumbo lutea</i>
Floating heart	<i>Nymphoides</i> spp.
Parrotfeather (emersed)	<i>Myriophyllum aquaticum</i>
Water pennywort	<i>Hydrocotyle umbellata</i>
Water primrose	<i>Ludwigia</i> spp.
Watershield	<i>Brasenia schreberi</i>

APPLICATION INFORMATION

Mixing Instructions

In-Water Application to Submersed or Floating Aquatic Weeds

ProcellaCOR EC can be applied undiluted or diluted with water for in-water applications. To dilute with water, it is recommended to fill the spray tank to one-half full with water. Start agitation. Add correct quantity of ProcellaCOR EC. Continue agitation while filling spray tank to required volume and during application.

Foliar Application to Floating and Emergent Weeds

Dilute ProcellaCOR EC with water to achieve proper coverage of treated plants. To dilute with water, it is recommended to fill spray tank to one-half full with water. Start agitation. A surfactant must be used with all post-emergent foliar applications. Use only surfactants that are approved or appropriate for aquatic use. For best performance, a methylated seed oil (MSO) surfactant is recommended. Read and follow all use directions and precautions on aquatic surfactant label. After adding ProcellaCOR EC and surfactant, continue agitation while filling spray tank to required volume and during application.

TANK-CLEANOUT INSTRUCTIONS

ProcellaCOR EC should be fully cleaned from application equipment prior to use for other applications. Contact a SePRO Aquatic Specialist for guidance on methods for thorough cleaning of application equipment after use of the product.

APPLICATION METHODS

In-Water Application to Submersed or Floating Aquatic Weeds

ProcellaCOR EC can be applied via trailing hose, by sub-surface injection, or surface spray as an in-water application to control weeds such as hydrilla, floating heart, water hyacinth, and other susceptible weed species. This product has relatively short exposure requirements for in-water treatments (hours to days), but treatments with high exchange and short exposure periods should be carefully planned to achieve best results. Where greater plant selectivity is desired - such as when controlling hydrilla or other more susceptible species, choose a lower dose in the specified range. A SePRO Aquatic Specialist can provide site-specific prescriptions for optimal control based on target weed, management objectives, and site conditions.

Apply ProcellaCOR EC to the treatment area at a prescription dose unit (PDU) to achieve appropriate concentrations. A PDU is a unit of measure that facilitates the calculation of the amount of product required to control target plants in 1 acre-foot of water or 1 acre for foliar applications. Per Table 5 below, 1-25 PDU are needed to treat 1 acre-foot of water, depending on target species and the percent of waterbody to be treated.

Use Table 5 to select the dose needed to treat 1 acre-foot of water.

TABLE 5: Prescription Dose Units (PDU) per acre-foot of water***

Percent Area of Waterbody Treated	Target Species			
	Eurasian Watermilfoil	Hybrid Watermilfoil	Variable Leaf Watermilfoil	Other
≤ 2%	3 - 4	4 - 5	3 - 5	3 - 25
>2 - 10%	2 - 3	3 - 5	3 - 4	3 - 20
>10 - 20%	1 - 3	3 - 4	2 - 4	3 - 15
>20 - 30%	1 - 2	2 - 3	2 - 3	2 - 10
>30%	1 - 2	2 - 3	1 - 2	1 - 5

* In all cases, user may apply up to the maximum of 25 PDU per acre-foot. Consult your SePRO Aquatics Specialist for site-specific recommendations.

** 1 PDU contains 3.17 fl. oz. of product.

To calculate the amount of product needed in fluid ounces, use the formula below:

$$\text{Number of acres} \times \text{average depth (feet)} \times \text{PDU} \times 3.17 = \text{fluid ounces}$$

*: from Table 5

Example Calculation:

To control hybrid watermilfoil in 2 acres of a 5-acre lake (>30% treated) with an average depth of 2 feet:
 $2 \text{ acres} \times 2 \text{ feet} \times 3 \text{ PDU} \times 3.17 = 38.04 \text{ fl. oz.}$

For in-water applications, the maximum single application is 25.0 PDU / acre-foot, with a limit of three applications per year. Allow 14 days or greater between applications. Product may be applied as a concentrate or diluted with water prior to or during the application process. Use an appropriate application method that ensures sufficiently uniform application to the treated area.

Foliar Application to Floating and Emergent Weeds

Apply ProcellaCOR EC as a foliar application to control weeds such as water hyacinth, water primrose, and other susceptible floating and emergent species. Use an application method that maximizes spray interception by target weeds while minimizing the amount of overspray that inadvertently enters the water.

For all foliar applications, apply ProcellaCOR EC at 5.0 to 10.0 PDU per acre. Use of a surfactant is required for all foliar applications of ProcellaCOR EC. Use only surfactants that are approved or appropriate for aquatic use. Methylated seed oil (MSO) is a recommended surfactant and is typically applied at 1.0% volume/volume. Refer to the surfactant label for use directions. For best results, apply to actively growing weeds. ProcellaCOR EC may be applied more than once per growing season to meet management objectives. Do not exceed 10.0 PDU per acre during any individual application or 20.0 PDU total per acre, per year from all combined treatments.

Foliar Spot Treatment

To prepare the spray solutions, thoroughly mix ProcellaCOR EC in water at a ratio of 5.0 to 10.0 PDU per 100 gallons (0.12 to 0.24% product) plus an adjuvant. For best results, a methylated seed oil at 1% volume/volume is the recommended spray adjuvant. When making spot application, ensure spray coverage is sufficient to wet the leaves of the target vegetation but not to the point of runoff.

Aerial Foliar Application to Floating and Emergent Weeds

Apply ProcellaCOR EC in a spray volume of 15 gallons per acre (GPA) or more when making a post-emergence application by air. Apply with coarse to coarser droplet category per S-572 ASABE standard; see NAAA, USDA or nozzle manufacturer guidelines. Follow guidelines and restrictions in the *Spray Drift Management and Aerial Drift Reduction Advisory* sections to minimize potential drift to off-target vegetation. Aircraft should be patterned per Operation Safe/PAASS program for calibration and uniformity to provide sufficient coverage and control.

Boat or Ground Foliar Application to Floating and Emergent Weeds

When applying ProcellaCOR EC by boat or with ground equipment to emergent or floating-leaved vegetation, use boom-type, backpack or hydraulic handgun equipment. Apply ProcellaCOR EC in a sufficient spray volume (e.g. 20 to 100 gpa) to provide accurate and uniform distribution of spray particles over the treated vegetation while minimizing runoff. Use higher spray volumes for medium to high density vegetation. For boom spraying, use coarse or coarser nozzle spray quality per S-572 ASABE standard; see USDA literature or nozzle manufacturer guidelines. Follow nozzle manufacturer's recommendations for nozzle pressure, spacing and boom height to provide a uniform spray pattern. Follow appropriate spray drift management information where drift potential is a concern.

TANK MIXES WITH OTHER AQUATIC HERBICIDES

DO NOT TANK MIX ANY PESTICIDE PRODUCT WITH THIS PRODUCT without first referring to the following website for the specific product: www.3206tankmix.com. This website contains a list of active ingredients that are currently prohibited from use in tank mixture with this product.

Only use products in tank mixture with this product that: 1) are registered for the intended use site, application method and timing; 2) are not prohibited for tank mixing by the label of the tank mix product; and 3) do not contain one of the prohibited active ingredients listed on www.3206tankmix.com website.

Applicators and other handlers (mixers) who plan to tank-mix must access the website within one week prior to application in order to comply with the most up-to-date information on tank mix partners.

Do not exceed specified application rates for respective products or maximum allowable application rates for any active ingredient in the tank mix.

Read carefully and follow all applicable use directions, precautions, and limitations on the respective product labels. It is the pesticide user's

responsibility to ensure that all products in the mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Always perform a (jar) test to ensure the compatibility of products to be used in tank mixture.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

Pesticide Storage: Store in original container only. Keep container closed when not in use. Do not store near food or feed. In case of spill or leak on floor or paved surfaces, soak up with vermiculite, earth, or synthetic absorbent.

Pesticide Disposal: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

Container Handling

Non-refillable Container. DO NOT reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying; then offer for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

Triple rinse containers small enough to shake (capacity ≤ 5 gallons) as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Triple rinse containers too large to shake (capacity > 5 gallons) as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank, or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Warranty Disclaimer: SePRO Corporation warrants that this product conforms to the chemical description on the product label. Testing and research have also determined that this product is reasonably fit for the uses described on the product label. To the extent consistent with applicable law, SePRO Corporation makes no other express or implied warranty of fitness or merchantability nor any other express or implied warranty and any such warranties are expressly disclaimed.

Misuse: Federal law prohibits the use of this product in a manner inconsistent with its label directions. To the extent consistent with applicable law, the buyer assumes responsibility for any adverse consequences if this product is not used according to its label directions. In no case shall SePRO Corporation be liable for any losses or damages resulting from the use, handling or application of this product in a manner inconsistent with its label.

For additional important labeling information regarding SePRO Corporation's Terms and Conditions of Use, Inherent Risks of Use and Limitation of Remedies, please visit <http://seprolabels.com/terms> or scan the image below.



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SAFETY DATA SHEET

ProcellaCOR EC

Section 1. Identification

GHS product identifier : ProcellaCOR EC

Recommended use of the chemical and restrictions on use

Identified uses : End use herbicide product

EPA Registration No. : 67690-80

Supplier's details : SePRO Corporation
11550 North Meridian Street
Suite 600
Carmel, IN 46032 U.S.A.
Tel: 317-580-8282
Toll free: 1-800-419-7779
Fax: 317-580-8290
Monday - Friday, 8am to 5pm [E.S.T.](http://www.sepro.com)
www.sepro.com

Emergency telephone number (with hours of operation) : **INFOTRAC - 24-hour service 1-800-535-5053**

The following recommendations for exposure controls and personal protection are intended for the manufacture, formulation and packaging of this product. For applications and/or use, consult the product label. The label directions supersede the text of this Safety Data Sheet for application and/or use.

Section 2. Hazards identification

Hazard classification: This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

Other hazards: No data available.

Section 3. Composition/information on ingredients

Chemical nature: This product is a mixture.

Component	CASRN	Concentration
Florpyrauxifen-benzyl	1390661-72-9	2.7%
Ethylhexanol	104-76-7	2.1%
Methanol	67-56-1	0.9%
Balance	Not available	94.3%

Section 4. First aid measures

Description of first aid measures

General advice:	If potential for exposure exists refer to Section 8 for specific personal protective equipment.
Inhalation:	Move person to fresh air. If person is not breathing, call an emergency responder or ambulance, then give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask etc). Call a poison control center or doctor for treatment advice.
Skin contact:	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
Eye contact:	Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Call a poison control center or doctor for treatment advice.
Ingestion:	No emergency medical treatment necessary.

Most important symptoms and effects, both acute and delayed:

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed

Notes to physician:	No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Have the Safety Data Sheet, and if available, the product container or label with you when calling a poison control center or doctor, or going for treatment.
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Section 5. Fire-fighting measures

Suitable extinguishing media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Do not use direct water stream. May spread fire. General purpose synthetic foams (including AFFF type) or protein foams are preferred if available. Alcohol resistant foams (ATC type) may function.

Unsuitable extinguishing media: No data available

Special hazards arising from the substance or mixture

Hazardous combustion products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Nitrogen oxides. Hydrogen fluoride. Hydrogen chloride. Carbon monoxide. Carbon dioxide.

Unusual Fire and Explosion Hazards: Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.

Advice for firefighters
Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Consider feasibility of a controlled burn to minimize environment damage. Foam fire extinguishing system is preferred

because uncontrolled water can spread possible contamination. Do not use direct water stream. May spread fire. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this SDS.

Special protective equipment for firefighters:

Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to section 7, Handling, for additional precautionary measures. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions:

Spills or discharges to natural waterways are likely to kill aquatic organisms. Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up:

Contain spilled material if possible. Small spills: Absorb with materials such as: Clay. Dirt. Sand. Sweep up. Collect in suitable and properly labeled containers. Large spills: Contact SePRO Corporation for clean-up assistance. See Section 13, Disposal Considerations, for additional information.

Section 7. Handling and storage

Precautions for safe handling: Keep out of reach of children. Do not swallow. Avoid contact with eyes, skin, and clothing. Avoid breathing vapor or mist. Wash thoroughly after handling. Keep container closed. Use with adequate ventilation. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Conditions for safe storage: Store in a dry place. Store in original container. Keep container tightly closed when not in use. Do not store near food, foodstuffs, drugs or potable water supplies.

Section 8. Exposure controls/personal protection

Control parameters: Exposure limits are listed below, if they exist.

Component	Regulation	Type of Listing	Value/Notation
Ethylexanol	Dow IHG	TWA	2 ppm
	Dow IHG	TWA	SKIN
Methanol	ACGIH	TWA	200 ppm
	ACGIH	STEL	250 ppm
	OSHA Z-1	TWA	260 mg/m ³ 200 ppm
	ACGIH	TWA	SKIN, BEI

ACGIH	STEL	SKIN, BEI
CAL PEL	C	1,000 ppm
CAL PEL	PEL	260 mg/m ³ 200 ppm
CAL PEL	STEL	325 mg/m ³ 250 ppm

RECOMMENDATIONS IN THIS SECTION ARE FOR MANUFACTURING, COMMERCIAL BLENDING AND PACKAGING WORKERS. APPLICATORS AND HANDLERS SHOULD SEE THE PRODUCT LABEL FOR PROPER PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING.

Exposure controls

Engineering controls: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Individual protection measures

Eye/face protection: Use safety glasses (with side shields).

Skin protection

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Chlorinated polyethylene. Neoprene. Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl chloride ("PVC" or "vinyl"). Viton. Examples of acceptable glove barrier materials include: Butyl rubber. Natural rubber ("latex"). Nitrile/butadiene rubber ("nitrile" or "NBR"). **NOTICE:** The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Other protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator. The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

Section 9. Physical and chemical properties

Appearance

Physical State	Liquid
Color	Amber
Odor	Solvent
Odor Threshold	No data available
pH	4.24 (1% aqueous suspension)
Melting point/range	Not applicable to liquids
Freezing point	No data available
Boiling point (760 mmHg)	No data available
Flash point	> 100 °C (> 212 °F)
Evaporation Rate (Butyl Acetate =1)	No data available
Flammability (solid, gas)	Not applicable
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapor pressure	0.0000002 mmHg at 20°C (68°F)
Relative Vapor Density (air = 1)	No data available

Relative Density (water = 1)	0.93
Water solubility	0.015 mg/l at 20°C (68°F)
Partition coefficient:	
n-octanol/water	No data available
Auto-ignition temperature	260°C (500 °F)
Decomposition temperature	No data available
Dynamic Viscosity	15.4 mPa.s at 20°C (68°F) 8.90 mPa.s at 40°C (104°F)
Kinematic Viscosity	14.2 mm ² /s at 20°C (68°F) 7.91 mm ² /s at 40°C (104°F)
Explosive properties	Not explosive
Oxidizing properties	Not oxidizing
Liquid Density	0.9257 g/cm ³ at 20 °C (68 °F) <i>Digital density meter</i>
Molecular weight	No data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

Section 10. Stability and reactivity

Reactivity:	No dangerous reaction known under conditions of normal use.
Chemical stability:	Thermally stable at typical use temperatures.
Possibility of hazardous reactions:	Polymerization will not occur.
Conditions to avoid:	Exposure to elevated temperatures can cause product to decompose.
Incompatible materials:	None known.
Hazardous decomposition products:	Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Carbon monoxide. Carbon dioxide. Hydrogen chloride. Hydrogen fluoride. Nitrogen oxides.

Section 11. Toxicological information

Toxicological information appears in this section when such data is available.

Acute toxicity	
Acute oral toxicity	Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts. As product: LD50, Rat, female, > 5,000 mg/kg
Acute dermal toxicity	Prolonged skin contact is unlikely to result in absorption of harmful amounts. As product: LD50, Rat, male and female, > 5,000 mg/kg
Acute inhalation toxicity	No adverse effects are anticipated from single exposure to mist. Based on the available data, respiratory irritation was not observed. As product: LC50, Rat, male and female, 4 Hour, dust/mist, > 5.40 mg/l No deaths occurred at this concentration.
Skin corrosion/irritation	Brief contact may cause slight skin irritation with local redness.
Serious eye damage/ eye irritation	May cause slight eye irritation. Corneal injury is unlikely.
Sensitization	Did not cause allergic skin reactions when tested in guinea pigs. For respiratory sensitization: No relevant data found.

**Specific Target Organ
Systemic Toxicity
(Single Exposure)**

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**Specific Target Organ
Systemic Toxicity
(Repeated Exposure)**

For the active ingredient(s): Based on available data, repeated exposures are not anticipated to cause significant adverse effects.
For the major component(s): Based on available data, repeated exposures are not anticipated to cause significant adverse effects.
For the minor component(s): In animals, effects have been reported on the following organs: Blood, kidney, liver, and spleen.

Carcinogenicity

For the active ingredient(s): Did not cause cancer in laboratory animals.
For the major component(s): No relevant data found.

Teratogenicity

For the active ingredient(s): Did not cause birth defects or any other fetal effects in laboratory animals.
For the major component(s): No relevant data found.
For the minor component(s): Has caused birth defects in laboratory animals only at doses toxic to the mother. Has been toxic to the fetus in laboratory animals at doses toxic to the mother. These concentrations exceed relevant human dose levels.

Reproductive toxicity

For the active ingredient(s): In animal studies, did not interfere with reproduction.
For the major component(s): In animal studies, did not interfere with reproduction. In animal studies, did not interfere with fertility.

Mutagenicity

In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

Aspiration Hazard

Based on physical properties, not likely to be an aspiration hazard.
No aspiration toxicity classification

Section 12. Ecological information

Ecotoxicological information appears in this section when such data is available.

Toxicity

Acute toxicity to fish

Material is practically non-toxic to fish on an acute basis (LC50 > 100 mg/L).

EC50, *Cyprinus carpio* (Carp), static test, 96 Hour, > 120 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates

Material is slightly toxic to aquatic invertebrates on an acute basis (LC50/EC50 between 10 and 100 mg/L).

EC50, *Daphnia magna* (Water flea), 48 Hour, 49 mg/l, OECD Test Guideline 202

Acute toxicity to algae/aquatic plants

Material is very highly toxic to some aquatic vascular plant species.

ErC50, *Pseudokirchneriella subcapitata* (green algae), 72 Hour, > 5.4 mg/l, OECD Test Guideline 201

ErC50, *Myriophyllum spicatum*, 14 d, 0.000919 mg/l

NOEC, *Myriophyllum spicatum*, 14 d, 0.0000954 mg/l

Toxicity to Above Ground Organisms

Material is practically non-toxic to birds on an acute basis (LD50 > 2000 mg/kg).
oral LD50, *Colinus virginianus* (Bobwhite quail), > 2500mg/kg bodyweight.
oral LD50, *Apis mellifera* (bees), 48 Hour, > 212.2µg/bee
contact LD50, *Apis mellifera* (bees), 48 Hour, >200µg/bee

Toxicity to soil-dwelling organisms

LC50, *Eisenia fetida* (earthworms), 14 d, mortality, >2,500 mg/kg

Persistence and degradability

florpyrauxifen-benzyl

Biodegradability: Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.
10-day Window: Fail
Biodegradation: 14.6 %
Exposure time: 29 d
Method: OECD Test Guideline 301B

Stability in Water (1/2-life)

Hydrolysis, DT50, 913 d, pH 4, Half-life Temperature 25 °C
Hydrolysis, DT50, 111 d, pH 7, Half-life Temperature 25 °C
Hydrolysis, DT50, 1.3 d, pH 9, Half-life Temperature 25 °C

Ethylhexanol

Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Material is ultimately biodegradable (reaches > 70% mineralization in OECD test(s) for inherent biodegradability).
10-day Window: Not applicable
Biodegradation: > 95 %
Exposure time: 5 d
Method: OECD Test Guideline 302B or Equivalent
10-day Window: Pass
Biodegradation: 68 %
Exposure time: 17 d
Method: OECD Test Guideline 301B or Equivalent

Theoretical

Oxygen Demand: 2.95 mg/mg

Chemical

Oxygen Demand: 2.70 mg/mg

Biological oxygen demand (BOD)

Incubation Time	BOD
5 d	26-70 %
10 d	75-81 %
20 d	86-87 %

Photodegradation

Test Type: Half-life (indirect photolysis)
Sensitizer: OH radicals
Atmospheric half-life: 9.7 Hour
Method: Estimated.

Methanol

Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.
10-day Window: Pass
Biodegradation: 99%
Exposure time: 28 d
Method: OECD Test Guideline 301D or Equivalent

Theoretical Oxygen Demand: 1.50 mg/mg

Chemical Oxygen Demand: 1.49 mg/mg Dichromate

Biological oxygen demand (BOD)

Incubation Time	BOD
5 d	72 %
20 d	79 %

Photodegradation

Test Type: Half-life (indirect photolysis)
Sensitizer: OH radicals
Atmospheric half-life: 8-18 d
Method: Estimated.

Balance

Biodegradability: No relevant data found.

Bioaccumulative potential

Florpyrauxifen-benzyl

Bioaccumulation: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).
Partition coefficient:
n-octanol/water(log Pow): 5.5 at 20 °C
Bioconcentration factor (BCF): 356 *Lepomis macrochirus* (Bluegill sunfish) 30 d

Ethylhexanol

Bioaccumulation: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).
Partition coefficient:
n-octanol/water(log Pow): 3.1 Measured

Methanol

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient:
n-octanol/water(log Pow): -0.77 Measured
Bioconcentration factor (BCF): <10 Fish Measured

Balance

Bioaccumulation: No relevant data found.

Mobility in soil

Florpyrauxifen-benzyl

Expected to be relatively immobile in soil (Koc > 5000).

Partition coefficient (Koc): 34200

Ethylhexanol

Potential for mobility in soil is low (Koc between 500 and 2000).

Partition coefficient (Koc): 800 Estimated.

Methanol

Potential for mobility in soil is very high (Koc between 0 and 50).

Partition coefficient (Koc): 0.44 Estimated.

Balance

No relevant data found.

Section 13. Disposal considerations

Disposal methods:

If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

Section 14. Transport information

DOT Not regulated for transport

Classification for SEA transport (IMO-IMDG):

Proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (Florpyrauxifen-benzyl)
UN number	UN 3082
Class	9
Packing group	III
Marine pollutant	Florpyrauxifen-benzyl
Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code	Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (Florpyrauxifen-benzyl)
UN number	UN 3082
Class	9
Packing group	III

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

Section 15. Regulatory information

OSHA Hazard Communication Standard This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312 This product is not a hazardous chemical under 29CFR 1910.1200, and therefore is not covered by Title III of SARA.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313 This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Pennsylvania Worker and Community Right-To-Know Act: The following chemicals are listed because of the additional requirements of Pennsylvania law:

Components	CASRN
Ethylhexanol	104-76-7

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986) WARNING: This product contains a chemical(s) known to the State of California to cause birth defects or other reproductive harm.

United States TSCA Inventory (TSCA) This product contains chemical substance(s) exempt from U.S. EPA TSCA Inventory requirements. It is regulated as a pesticide subject to Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) requirements.

Section 16. Other information

**Hazard Rating System
National Fire Protection Association (U.S.A.)**

Health: 1 Flammability: 1 Instability: 0

Legend

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
C	Ceiling
CAL PEL	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
Dow IHG	Dow Industrial Hygiene Guideline
OSHA Z-1	USA. Occupational Exposure Limits (OSHA) – Table Z-1 Limits for Air Contaminants
PEL	Permissible exposure limit
SKIN	Absorbed via skin
SKIN, BEI	Absorbed via Skin, Biological Exposure Indice
STEL	Short term exposure limit
TWA	Time weighted average

History

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Version : 1.0

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.