April 2023

Virgin Lake Property Owner or Occupant Oneida County, WI

Re: Proposed Management for Eurasian Watermilfoil on Virgin Lake.

Dear Virgin Lake Property Owner or Occupant:

The Three Lakes Waterfront Association (the Association) with support from Onterra, LLC and Clarke Aquatic Services, Inc., a SOLitude Lake Management Company, proposes to manage approximately 12 acres on Virgin Lake to control the excessive growth of the exotic invasive aquatic plant, Eurasian Watermilfoil. The Association proposes this site be managed with the aquatic herbicide, ProcellaCOR EC (florpyrauxifen-benzyl), and the application will be carried out by Clarke.

We anticipate the application to occur sometime in late spring (June), 2023 and will proceed only after the Association obtains a permit for the project from the WDNR.

Notification of the exact date of application and water use restrictions will be provided by the posting of shoreline in and adjacent to application areas, and public access points.

THERE ARE NO RESTRICTIONS ON SWIMMING, FISHING, OR OTHER RECREATIONAL ACTIVITIES. DO NOT USE TREATED WATER FOR IRRIGATION OF ORNAMENTAL FLOWERS AND CROPS FOR 3 DAYS (IMMEDIATE IRRIGATION OF TURF IS FINE).

Additional details regarding the proposed management including a copy of the permit application and the WDNR aquatic herbicide fact sheet on florpyrauxifen-benzyl can be found at: http://tlwa.org/.

If you do not have internet access, would like a hard copy, or have additional questions about the proposed management, please contact:

Fred Knoch, President Three Lakes Waterfront Association longlake@newnorth.net (715) 479-4158

106 (Title) day 36.46 seat of government of said county, and that an advertisement of March 8. 2023 representative of the Vilas County News-Review and The Three Lakes News, a weekly newspaper published at Eagle River, the which the annexed is a true copy, taken from said paper, was Kurt & Knucyer being duly sworn, deposes and says that he (sherds an authorized 37.4 2024 Seas Notary Public, Vilas County, Wisconsin My Commission expires Phreedaler Water Inon acception Office Fee \$___ Total \$___ 43 lines, one insertion @ .84 78 per line \$ _ per line \$. TE Dewr R MORE She Subscribed and sworn to before me this _ insertion @ Wareh published therein on lines, (Signed) _ of SS. MINIMUM DI DI ANTINI (Seal)

STATE OF WISCONSIN)

Vilas County

growth of the exotic invasive aquatic plant eursian watermitolic IEWM), clarke Aquat-le Services, Inc., a SOLtude Lake Manage-ment Company (Clarke) will conduct an application of the quetic hericide, Procel-laCOR EC, targeting the EWM for control. It is anticipated that the application will occur sometime in late spring or early after the Association obtains a permit for the treatment from the Wisconsin Depart-The Three Lakes Waterfront Association (the Association) proposes to manage approximately 12 acres of Virgin Lake with There are no swimming, fishing or other ecreational restrictions. Do not use water from application area for non-turf irrigation urposes for 3 days, turf can be irrigated The Association will hold a public nformational meeting on the proposed of government request one in and to Wisconsin Department of Natural Resources. 107 Stuffir Avenue. Rhineland-er. Wi 54501 within 5 days after the public notice is published. herbicide to control excessive writing. The person or entity requesting the meeting shall state a specific agenda of ment of Natural Resources. The water use restriction for Procella COR EC are as follows: atment if five or more individuals, orga topics including problems and alternative to be discussed. The request for a publi informational meeting must be sent i writing to Three Lakes. Waterfront Assoc ataion. PO BOX 145. Three Lakes. WI 5456 special units of governm (One Week, 3/8/23) PUBLIC NOTICE an aquatic ocal units

Aquatic Plant Management

NOTE: Missing or incomplete fields are highlighted at the bottom of each page. You may save, close and return to your draft permit as often as necessary to complete your application. If there are no updates in 90 days, your draft is deleted

This Application has been Signed and Submitted by: i:0#.f|wamsmembership|amykay82 signed on 2023-04-04T07:34:38

Site or Project Name:	Virgin Lake The permit application will be saved automatically with this name	
Activity:	Chemical Control Application	
	Does the waterbody have:	
	 More than one property owner? 	\odot Yes \bigcirc No
Eligibility: (All questions must be no for it to		○ Yes ● No
be considered a private pond.)	Public access?	\odot Yes \bigcirc No

3200-004 Chemical Aquatic Control Application

NOTE: To be considered a private pond, a waterbody must meet all of the following requirements:

- 1. Confined to one property owner.
- 2. The pond has no uncontrolled surface water discharge.
- 3. No public access.

Upon submittal of your permit application, a **non-refundable \$20 permit processing fee will be charged**. Additional acreage fees will be refunded if the permit request is denied or if no treatment occurs.

3200-004 Chemical Aquatic Plant Control Application

- Annually complete all pages on Form 3200-004 for chemical plant management applications. Complete form 3200-004a for large scale treatments(exceeds 10.0 acres in size or 10% of the area of the water body that is 10 feet or less in depth) as required by NR107.04(3).
 - Form 3200-004 is competed electronically through this system.
 - Form 3200-004a must be completed outside the system and uploaded to the attachments section. Please refer to this link for a copy of this form: <u>http://dnr.wi.gov/files/pdf/forms/3200/3200-004A.pdf</u>
- Attach a map that shows the treatment location(s), treatment dimensions and riparian landowners. If requesting WPDES coverage, attach a water body map that shows surface outflow and receiving waters.
- For a large-scale treatment, attach evidence that a public notice has been published in a regional / local newspaper and if required that a public informational meeting has been conducted as defined in NR107.04(3).
- Pay fee online.
- Sign and Submit form.
- A signed permit application certifies to the Department that a copy of the application has been provided to any affected property owner's association/district and to landowners adjacent to treatment area.

Contact Information	
Applicant Information	
Organization	Three Lakes Waterfront Association
Last Name:	Knoch
First Name:	Fred
Mailing Address:	PO Box 145
City:	Three Lakes
State:	<u>WI</u>
Zip Code:	54562
Email:	
Phone Number:	
(xxx-xxx-xxxx) Alternative Phone Number:	
(xxx-xxx-xxxx)	
Waterbody Address	
Last Name:	
First Name:	
Street Address:	Safar Road
City:	Three Lakes
State:	<u>WI</u>
Zip Code:	54562
Email:	
Phone Number:	
(xxx-xxx-xxxx) Alternative Phone Number:	
(xxx-xxx-xxxx)	
Applicator	
	SOLitude Lake Management
	315594, 288191, 312329
Business Location License #:	93-028484-019614
Restricted Use Pesticide #:	
Address:	w173n21440 Northwest Passage
City:	Jackson
State:	
Zip:	53037
	amy.kay@solitudelake.com
Phone Number: (xxx-xxx-xxxx)	715-891-6798

Adjacent Riparian	Property Own	ers					
NOTE: Phone and ema	il address will not	be public	y viewable.				
Uploaded riparian	owners to attachn	nent tab					
Nam	e		Address	S	Phone		Email Address
Site Information	n - Complete						
Waterbody Con	taining Contr	ol Area	(s)				
	body Property			Fred Knoch			
or V	Vaterbody Dist	rict Repr	esentative :	None			
		Water E	Body Name:	Virgin Lake			
		Prim	ary County:	Oneida			
			Latitude:	45.785453			
			Longitude:	-89.087443			
			Section:	10			
			Township:	38			
			Range:	11			
			Direction:	● E ○ W			
	Wate	erbody Su	urface Area:	261	acres		
Estima	ted Surface are	ea that is	10ft or less	85	acres		
Proposed Contr	ol Area(s)						
Area(s) Proposed f	or Control:						
Site Name	Trea	atment	Treatment	Width	Estimated Acreage	Average Depth	Calculated Volume

(Optional)	Leng 0	<u>th</u> ft. x	0	÷ 43,560 ft. ²	=	11.70	ас	6 ft	₌ 70	.20	ac-ft
			t.	Estimated Acreage Grand Total			11.70 _{ac}	Calculat Volume Gra Tc	ed 70 nd otal).20	ac-ft
the area with in or adjacent	to a sensitiv	e area c	lesignated	by the Department	of	Natural Res	ources. M	ore Information	<u>ו</u>		

🔿 Yes 🖲 No

If the estimated acreage is greater than 10 acres, or is greater than 10 percent of the estimated area 10 feet or less in depth in Section II, complete and attach Form 3200-004A, Large-Scale Treatment Worksheet.

Chemical Aquatic Plant Control Information - Form 3200-004 (R 2/17)

Notice: Use of this form is required by the Department for any application filed pursuant to s. 281.17(2), Wis. Stats., and Chapters NR 107, 200 and 205, Wis. Adm. Code. This permit application is required to request coverage for pollutant discharge into waters of the state. Personally identifiable information on this form may be provided to requesters to the extent required by Wisconsin's Open Records Law [ss. 19.31-19.39, Wis. Stats.].

Treatment Type:

 \bullet Lake \bigcirc Pond \bigcirc Wetland \bigcirc Marina \bigcirc Other

Has a Lake Management plan been provided to the DNR? • Yes • No • Don't Know	If Yes, date approved of most current copy 5/1/2023	Link to Approved Plan:
		✓ Uploaded Plan copy as an Attachment

Does the proposed plant removal agree with the approved plan? Ves Ves No If NO, explain, Attach additional sheets if necessary.

Goal of Aquatic Plant Control:

- Maintain navigation channel
- Maintain boat landing and carry in access
- Improve fish habitat
- ☐ Maintain swimming area
- Control of invasive exotics
- Other

Nuisance Caused By:

🗌 Algae

- Emergent water plants (majority of leaves & stems growing above water surface, e.g. cattail, bulrushes)
- □ Floating water plants (majority of leaves floating on water surface, e.g., water lilies, duckweed)
- ☑ Submerged water plants (leaves & stems below surface, flowering parts may be exposed: milfoil, coontail)
- Other

Algae	Flowering Rush	Purple Loosestrife	
Common/Glossy Buckthorn	Hybrid Cattail	Reed Canary Grass	
Coontail	Hybrid Watermilfoil	Reed Manna Grass	
Curly-Leaf Pondweed	🔲 Japanese Knotweed	Starry Stonewort	
Duckweed	🗌 Naiad	Yellow Floating Heart	
🗌 Elodea	Narrow-Leaf Cattail	Yellow Iris	
Eurasian Watermilfoil	Phragmites	Pondweed	
Other Target Plants:			

Note: Different plants require different chemicals for effective treatment. Do not purchase chemical before identifying plants.

Chemical Control			
Full Trade Name of Propose	ed Chemical(s)		
🗌 Agristar 2,4-D Amine	🗌 Clipper	🗌 К-Теа	SCI-62
🗌 Algimycin PWF	🗌 Clipper SC	🗌 Littora	🗌 Sculpin G
🗌 Alligare 2,4-D	🗌 Current	Milestone	SeClear
Alligare Argos	Cutrine-Plus	🗌 Nautique	🗌 SeClear G
🗌 Alligare Diquat	🗌 Cutrine-Plus Granular	🗌 Navigate	Shoreklear-Plus
🗌 Alligare Ecomazapyr	Cutrine-Ultra	🗌 Navitrol	🗌 Shredder Amine
Alligare Glyphosate 5.4	🗌 DMA 4 IVM	Navitrol DPF	🗌 Sonar AS
🗌 Aqua Neat	🗌 Earthtec	🗌 Phycomycin SCP	🗌 Sonar Genesis
🗌 Aqua Star	🗌 Element 3A	Polaris	🗌 Sonar H4C
🗌 AquaPro	🗌 Flumioxazin 51% WDG	Polaris AC	🗌 Sonar PR
🗌 Aquashade	🗌 Formula F-30	🗌 Pond-Klear	🗌 Sonar Q
🗌 Aquashadow	🗌 Garlon 3A	ProcellaCOR EC	🗌 Sonar RTU
🗌 Aquastrike	🗌 Green Clean	🗌 Refuge	🗌 Sonar SRP
🗌 Aquathol K	🗌 Habitat	🗌 Renovate 3	SonarOne
🗌 Aquathol Super K	🗌 Harpoon	🗌 Renovate LZR	🗌 Stingray
Avast! SC	Harvester	🗌 Renovate LZR Max	🗌 Symmetry NXG
🗌 Captain	🗌 Havoc Amine	🗌 Renovate Max G	🗌 Touchdown Pro
🗌 Captain XTR	🗌 Hydrothol 191	🗌 Renovate OTF	🗌 Tribune
🗌 Chinook	🗌 Hydrothol Granular	Reward	🗌 Trycera
🗌 Clearcast	🗌 Komeen	🗌 Rodeo	🗌 Weedar 64
🗌 Clearigate	Komeen Crystal	🗌 Roundup Custom	🗌 Weedestroy AM-40
Other Proposed Chemical(s):			

Have the proposed chemicals been permitted in a prior year on the proposed site? \bigcirc *All* \bigcirc *Some* \bigcirc *None*

What were the results of the treatment?

Method of Application: Injection

Other Method of Application

NOTE: Chemical fact sheets for aquatic pesticides used in Wisconsin are available from the Department of Natural Resources upon request.

Alternatives to Chemical Control:	Feasible?	If No, Why Not?
1. Mechanical harvesting	🔾 Yes 🖲 No	fragmentation leads to spread of AIS
2. Manual removal	🔾 Yes 🖲 No	area too large
3. Sediment screens/covers	🔾 Yes 🖲 No	prevents beneficial plant growth
4. Dredging	🔾 Yes 🖲 No	too expensive
5. Waterbody drawdown	🔾 Yes 🖲 No	not site specific
6. Nutrient controls in watershed	🔾 Yes 🖲 No	not site specific
7. Other:	\bigcirc Yes \bigcirc No	

Note: If proposed treatment involves multiple properties, consider feasibility of EACH alternative for EACH property owner.

Will surface water outflow and/or overflow be controlled to prevent chemical loss?

○ Yes ● No

Is the treatment area greater than 5% of surface area? ○ Yes ● No

WPDES Permit Request

Is WPDES coverage being requested? Refer to http://dnr.wi.gov/topic/wastewater/aquaticpesticides.html for more information

○ Yes - complete section VII with signature.

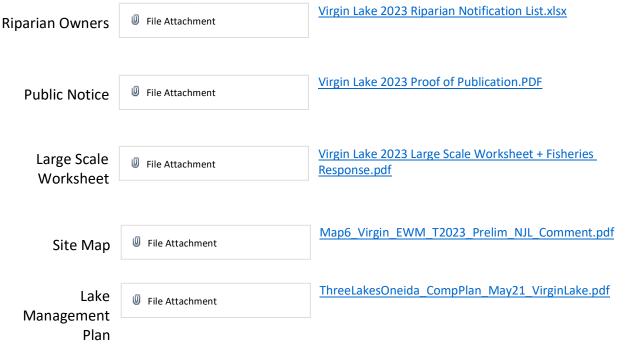
• No

- Already have WPDES
- \bigcirc WPDES coverage not needed

Upload Required Attachments (15 MB per file limit) - Help reduce file size and trouble shoot file uploads

* indicates completion of this item is required

Note: To add additional attachments using the down arrow icon. To replace an existing file, use the 'Click here to attach file ' link. To remove additional items, select the item and press CNTRL Delete.



Fee Calculation

Chemical Control Application

1. s. NR 107.11(1), Wis. Adm. Code, lists the conditions under which the permit fee is limited to the \$20 minimum charge.

2. s. NR 107.11(4), Wis. Adm. Code, lists the uses that are exempt from permit requirements.

3. s. NR 107.04(2), Wis. Adm. Code, provides for a refund of acreage fees if the permit is denied or if no treatment occurs.

If Proposed treatment is over 0.25, calculate acreage fee: (round up to nearest whole acre, to maximum of 50 acres)	11.70
acres X \$25 per acre = \$ If proposed treatment is less than 0.25 acre, acreage fee is \$0	\$300.00
Basic Permit Fee (non-refundable)	\$20.00
Total Fee	\$320

Payment Information

Invoice Number: WP-00040174

Payment Confirmation Number: WS2WT3009900838

Amount Paid: \$320

Applicant Responsibilities and Certification

- 1. The applicant has prepared a detailed map which shows the length, width and average depth of each area proposed for the control of rooted vegetation and the surface area in acres or square feet for each proposed algae treatment.
- 2. The applicant understands that the Department of Natural Resources may require supervision of any aquatic plant management project involving chemicals. Under s.NR 107.07 Wis. Adm. Code, supervision may include inspection of the proposed treatment area, chemicals and application equipment before, during or after treatment. The applicant is required to notify the regional office 4 working days in advance of each anticipated treatment with the date, time, location and size of treatment unless the Department waives this requirement. Do you request the Department to waive the advance notification requirement?

🔾 Yes 🔍 No

- 3. The applicant agrees to comply with all terms or conditions of this permit, if issued, as well as all provisions of Chapter NR 107, Wis. Adm. Code. The required application fee is attached.
- 4. The applicant will provide a copy of the current application to any affected property owners' association inland Lake District and, in the case of chemical applications for rooted aquatic plants, to all owners of property riparian or adjacent to the treatment area. The applicant has also provided a copy of the current chemical fact sheet for the chemicals proposed for use to any affected property owner's association or inland Lake District.
- 5. Conditions related to invasive species movement. The applicant and operator agree to the following methods required under s.NR 109.05(2), Wis. Adm. Code for controlling, transporting and disposing of aquatic plants and animals, and moving water:
 - Aquatic plants and animals shall be removed and water drained from all equipment as required by s.30.07, Wis. Stats., and ss. NR 19.055 and 40.07, Wis. Adm. Code.
 - Operator shall comply with the most recent Department-approved 'Boat, Gear, and Equipment Decontamination and Disinfection Protocol', Manual Code #9183.1, available at http://dnr.wi.gov/topic/invasives/disinfection.html

All portions of this permit, map and accompanying cover letter must be in possession of the chemical applicator at the time of treatment. During treatment all provisions of Chapter NR 107 107.07 and NR 107.08, Wis. Adm. Code, must be complied with, as well as the specific conditions contained in the permit cover letter.

I hereby certify that that the above information is true and correct and that copies of the application shall be provided to all affected property owners promptly and that the conditions of the permit will be adhered to. All portions of this permit, map and accompanying cover letter must be in possession of the applicant or their agent at time of plant removal. During plant removal activities, all provisions of applicable Wisconsin Administrative Rules must be complied with, as well as the specific conditions contained in the permit cover letter.

Steps to Complete the signature process

IMPORTANT: All email correspondence will be sent to the address associated with your WAMS ID).

- 1. Read and Accept the Responsibilities and Certification
- 2. Press the Initiate Signature Process button
- 3. Open the confirmation email for a one time confirmation code and instructions to complete the signature process.

You will receive a final acknowledgement email upon completing these steps .

Check if you are signing as Agent for Applicant.

i:0#.f|wamsmembership|amykay82 signed on 2023-

✓ I hereby certify that the above information is true and correct and that copies of this submittal shall be provided to the appropriate parties named in the contact section and that the conditions of the permit and pesticide use will be adhered to.

State of Wisconsin Department of Natural Resources

WORKSHEET FOR LARGE-SCALE CHEMICAL AQUATIC PLANT TREATMENT Form 3200-4A 3-89

2/

NOTE: Completion of this form is required by the Department, pursuant to s. 144.025(2)(i), Wis. Stats., and Chapter NR 107, Wis. Adm. Code, once every five years for proposed treatments that would cover more than 10 acres on one lake, or more than 10 percent of that portion of the lake that is 10 feet or less in depth.

The purpose of this form is to identify the: (1) recreational needs of the property owners and visitors;

- (2) value of the proposed treatment area to fish and wildlife;
- (3) cause(s) of the excess plant growth problem; and
- (4) short and long-term solutions to the problem.

Please furnish a detailed map(s) of the lake and its watershed. Indicate the watershed boundaries on the map. If you do not have a watershed map for the lake you wish to treat, your DNR lake management coordinator can help you locate or prepare one.

SECTION I. BACKGROUND
Name of Applicant THREE LAKES WATER FRONT ASSOCIATION INC. 03/30/2023
Name of Lake , ONEIDA COUNTY, THREE LAKES CHAIN
SECTION II. RECREATIONAL USES
Check those uses that apply and complete the information requested:
1. <u>SWIMMING:</u> Indicate on your lake map the portions of the proposed treatment area that are used for swimming. What distance from shore is needed to provide adequate swimming space? feet What is the average depth at this distance? feet ENTIRE TREATMENT AREA
2. FISHING: Indicate on your lake map any fishing areas that are within the proposed treatment area.
3. HUNTING: Indicate on your lake map any hunting areas that are within or adjacent to the proposed treatment area.
4. <u>BOATING/NAVIGATION</u> : Indicate on your lake map where the following boating activities take place within the proposed treatment area: Sailing Pleasure boating Jet skiing Other
5. <u>AESTHETIC:</u> Indicate on your lake map any wildlife or nature observation areas within the proposed treatment area.
Do you object to the aesthetic quality (appearance, odor) of the proposed treatment area? 🔀 Yes 🗌 No
6. <u>OTHER</u> : What other activities occur in the proposed treatment area? <u>SCUBA DIVING FOR HAND HARVESTING</u> OF E.W.M.
SECTION III. FISH AND WILDLIFE VALUE
 Fisheries: To maintain a quality fishery, a lake must provide good spawning, rearing and feeding habitat. Please indicate on your lake map the location of any quality fisheries habitat. (Contact your local DNR fish manager or your local fishing club for information about your lake's fishery.)
 Wildlife: Indicate on your lake map any portions of the proposed treatment area or adjacent shoreline that are considered to be good wildlife habitat. (Constact your local DNR wildlife manager or your local wildlife or hunting club for additional information about the wildlife around (and in) your lake.)
3. Which organization(s) or individual(s) did you contact for your information?
SECTION IV. CAUSES OF THE PROBLEM
What are perceived to be the local or regional causes of the problem? (Check all those that apply.)
A. Agricultural runoff (from barnyards or croplands) that contributes sediment, nutrients and/or bacteria to the lake.
B. Urban runoff (from stormwater) that contributes sediment, nutrients and other pollutants to the lake.
C. Sewage treatment or industrial discharges upstream of the lake.
D. Possible faulty septic systems in the area around the lake.
E. Runoff from fertilized lawns near the lake.
F. Sediments contaminated with nutrients from past pollution activities.
G. Naturally fertile - no known human sources of excessive sediment, nutrients or other pollutants.
H. Other:
Please identify on your watershed map the locations of any land use practices that are perceived to be contributing to excess plant growth
problems in the lake.

SECTION V. SOLUTIONS

Control of aquatic plant problems can be temporarily accomplished with short-term measures, but no strategy will be successful without
long-term planning to address the source of the problem. A sound plant management program should combine both short-term and long-
term control strategies.
1. What level of short-term control do you wish to achieve?
Remove 100% of the plants in the treatment area.
Remove 70-99% of the plants in the treatment area.
Remove less than 70% of the plants in the treatment area.
2. Which plants do you wish to remove in the short-term?
Remove all plant species.
Remove specific plant species only. (Name(s) of species: $E.W.M$.)
3. How often will it be necessary to:
A. Chemically treat? times per year for algae; times per year for other plants
B. Mechanically harvest? /2+ times per year
4. What long-term control alternatives have you begun to implement?
Developed a lake plant management plan.
Developed a lake protection plan.
Formed a Lake District, Lake Association or other organization. (Name: THREE LAKES WATERFONT ASSN.)
Established a monitoring program for the lake.
Contacted the Soil Conservation Service or Land Conservation Commission to identify land use controls that are needed in the watershed.
Conducted a septic survey with the county sanitarian.
Other:
Long-term planning can provide an organized approach to solving the problems that are affecting the water quality of your lake. Your DNR

lake management coordinator, county extension agent, or regional planning commission can provide specific technical information and assistance.

SECTION VI. PUBLIC INVOLVEMENT

- 1. Before you conduct a large-scale chemical aquatic plant treatment, you are required to provide the public with formal notice of the planned treatment (s. NR 107.04(3), Wis. Adm. Code). Please attach evidence (e.g., newspaper clipping) that such notice has been made.
- 2. You are also required to conduct a public informational meeting on the proposed large-scale treatment if 5 or more individuals, organizations or local or special units of government request such a meeting within 5 days of the notice (s. NR 107.04(3), Wis. Adm. Code).

Was a public informational meeting required for the proposed treatment? If yes, please

e attach evidence	that such a	meeting was held.	
-------------------	-------------	-------------------	--

3. These public notice and public meeting provisions apply each year that a treatment is proposed.

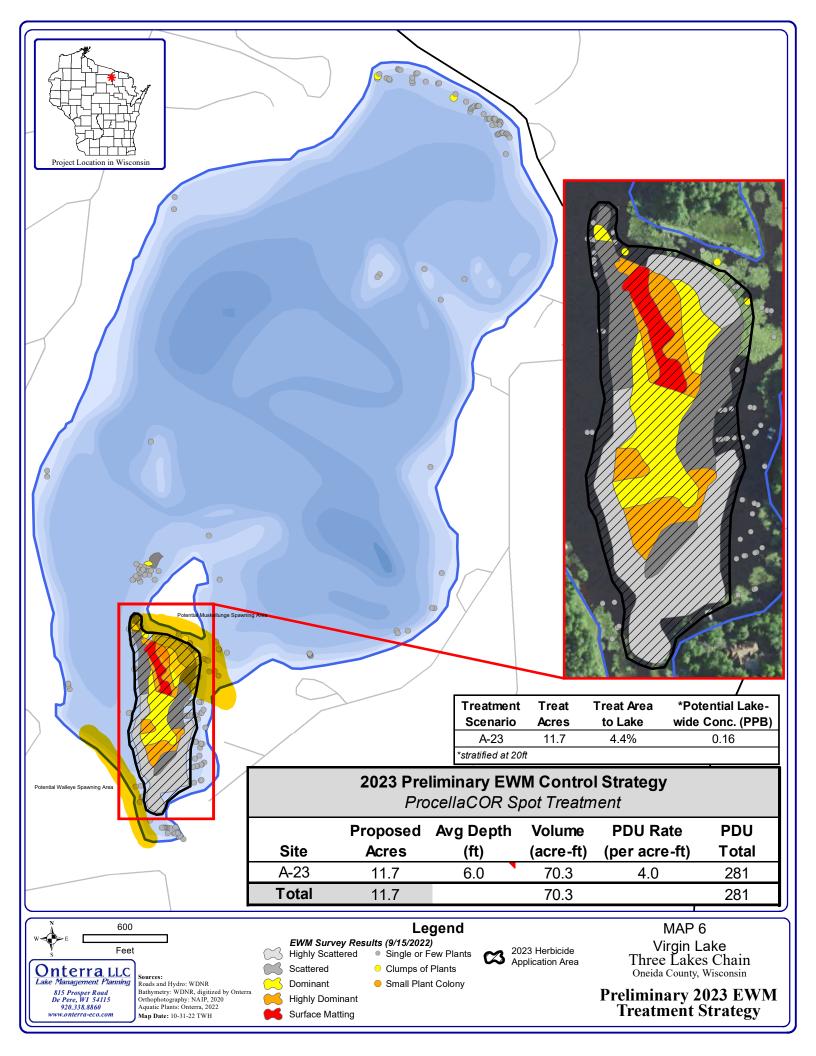
NOTE: This form is to be updated once every 5 years to include new information. Modifications of the proposed treatment within the 5-year period also require re-submittal of this form if the location or target organisms are changed, or if the treatment area is expanded by more than 10 percent.

Yes 🚺 No

I hereby certify that the above information is true and correct and that copies of this application have been provided to the appropriate parties named in Section II of Form 3200-4, Application for Permit for Chemical Aquatic Plant Control.

> Applicant's Signature Frederick W. Kroch III

Please attach with map(s) to Form 3200-4, Application for Permit for Chemical Aquatic Plant Control.



Florpyrauxifen-benzyl Chemical Fact Sheet

Formulations

Florpyrauxifen-benzyl was registered with the EPA for aquatic use in 2017. The active ingredient is 2-pyridinecarboxylic acid, 4-amino-3-chloro-6-(4-chloro-2-fluoro-3-methoxyphenyl)-5-fluoro-, phenyl methyl ester. The current Wisconsin-registered formulation is a liquid (ProcellaCOR™ EC) solely manufactured by SePRO Corporation.

Aquatic Use and Considerations

Florpyrauxifen-benzyl is a systemic herbicide that is taken up by aquatic plants. The herbicide is a member of a new class of synthetic auxins, the arylpicolinates, that differ in binding affinity compared to other currently registered synthetic auxins. The herbicide mimics the plant growth hormone auxin that causes excessive elongation of plant cells that ultimately kills the plant. Susceptible plants will show a mixture of atypical growth (larger, twisted leaves, stem elongation) and fragility of leaf and shoot tissue. Initial symptoms will be displayed within hours to a few days after treatment with plant death and decomposition occurring over 2 - 3 weeks. Florpyrauxifenbenzyl should be applied to plants that are actively growing; mature plants may require a higher concentration of herbicide and a longer contact time compared to smaller, less established plants.

Florpyrauxifen-benzyl has relatively short contact exposure time (CET) requirements (12 – 24 hours typically). The short required CET may be advantageous for localized treatments of submersed aquatic plants, however, the target species efficacy compared to the size of the treatment area is not yet known.

In Wisconsin, florpyrauxifen-benzyl may be used to treat the invasive Eurasian watermilfoil (*Myriophyllum spicatum*) and hybrid Eurasian watermilfoil (*M. spicatum* X *M. sibiricum*). Other invasive species such as floating hearts (*Nymphoides* spp.) are also susceptible. In other parts of the country, it is used as a selective, systemic mode of action for spot and partial treatment of the invasive plant hydrilla (*Hydrilla verticillata*). Desirable native species that may also be negatively affected include waterlily species (*Nymphaea* spp. and *Nuphar* spp.), pickerelweed (*Pontederia cordata*), and arrowhead (*Sagittaria* spp.).

It is important to note that repeated use of herbicides with the same mode of action can lead to herbicide-resistant plants, even in aquatic plants. Certain hybrid Eurasian watermilfoil genotypes have been documented to have reduced sensitivity to aquatic herbicides. In order to reduce the risk of developing resistant genotypes, avoid using the same type of herbicides year after year, and utilize effective, integrated pest management strategies as part of any long-term control program.

Post-Treatment Water Use Restrictions

There are no restrictions on swimming, eating fish from treated waterbodies, or using water for drinking water. There is no restriction on irrigation of turf. Before treated water can be used for non-agricultural irrigation besides turf (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), follow precautionary waiting periods based on rate and scale of application, or monitor herbicide concentrations until below 2 ppb. For agricultural crop irrigation, use analytical monitoring to confirm dissipation before irrigating. The latest approved herbicide product label should be referenced relative to irrigation requirements.

The Wisconsin Department of Natural Resources provides equal opportunity in its employment, programs, services, and functions under an Affirmative Action Plan. If you have any questions, please write to Equal Opportunity Office, Department of Interior, Washington, D.C. 20240. This publication is available in alternative format (large print, Braille, audio tape. etc.) upon request. Please call (608) 267-7694 for more information.

Herbicide Degradation, Persistence and Trace Contaminants

Florpyrauxifen-benzyl is broken down quickly in the water by light (i.e., photolysis) and is also subject to microbial breakdown and hydrolysis. It has a half-life (the time it takes for half of the active ingredient to degrade) ranging from 1 - 6 days. Shallow clear-water lakes will lead to faster degradation than turbid, shaded, or deep lakes.

Florpyrauxifen-benzyl breaks down into five major degradation products. These materials are generally more persistent in water than the active herbicide (up to 3 week half-lives) but four of these are minor metabolites detected at less than 5% of applied active ingredient. EPA concluded no hazard concern for metabolites and/or degradates of florpyrauxifen-benzyl that may be found in drinking water, plants, and livestock.

Florpyrauxifen-benzyl binds tightly with surface sediments, so leaching into groundwater is unlikely. Degradation products are more mobile, but aquatic field dissipation studies showed minimal detection of these products in surface sediments.

Impacts on Fish and Other Aquatic Organisms

Toxicity tests conducted with rainbow trout, fathead minnow, water fleas (*Daphnia* sp.), amphipods (*Gammarus* sp.), and snails (*Lymnaea* sp.) indicate that florpyrauxifen-benzyl is not toxic for these species. EPA concluded florpyrauxifen-benzyl has no risk concerns for non-target wildlife and is considered "practically non-toxic" to bees, birds, reptiles, amphibians, and mammals.

Florpyrauxifen-benzyl does not bioaccumulate in fish or freshwater clams due to rapid metabolism and chemical depuration.



Human Health

EPA has identified no risks of concern to human health since no adverse acute or chronic effects, including a lack of carcinogenicity or mutagenicity, were observed in the submitted toxicological studies for florpyrauxifen-benzyl regardless of the route of exposure. EPA concluded with reasonable certainty that drinking water exposures to florpyrauxifenbenzyl do not pose a significant human health risk.

For Additional Information

Environmental Protection Agency Office of Pesticide Programs www.epa.gov/pesticides

Wisconsin Department of Agriculture, Trade, and Consumer Protection <u>http://datcp.wi.gov/Plants/Pesticides/</u>

Wisconsin Department of Natural Resources 608-266-2621 http://dnr.wi.gov/lakes/plants/

National Pesticide Information Center 1-800-858-7378 http://npic.orst.edu/

Washington State Department of Ecology. 2017. https://fortress.wa.gov/ecy/publications/documen ts/1710020.pdf



Wisconsin Department of Natural Resources Box 7921 Madison, WI 53707-7921