

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 2021-04-22T12:41:38

Site or Project Name:

McDill Pond

The permit application will be saved automatically with this name

Activity:

Chemical Control Application

Eligibility:

(All questions must be no for it to be considered a private pond.)

Is there more than one property owner?

Yes No

Will there be uncontrolled surface water discharge?

Yes No

Does the water body have public access?

Yes 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 completed 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: <http://dnr.wi.gov/files/pdf/forms/3200/3200-004A.pdf>
- 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 McDill Inland Lake Protection and Rehabilitation District

Last Name: Olson

First Name: Krista

Mailing Address: 3317 Della Street

City: Stevens Point

State: WI

Zip Code: 54481

Email:

Phone Number:

(xxx-xxx-xxxx)

Alternative Phone Number:

(xxx-xxx-xxxx)

Waterbody Address

Last Name:

First Name:

Street Address: 3317 Della Street

City: Stevens Point

State: WI

Zip Code: 54481

Email:

Phone Number:

(xxx-xxx-xxxx)

Alternative Phone Number:

(xxx-xxx-xxxx)

Applicator

Name of Applicator Firm: Clarke Aquatic Services

Applicator Certification #: 315594, 288191, 312329

Business Location License #: 93-018750-012132

Restricted Use Pesticide #:

Address: 20061 Edison Circle E

City: Clearwater

State: MN

Zip: 49448

Email: akay@clarke.com

Phone Number: 715-891-6798
(xxx-xxx-xxxx)

Adjacent Riparian Property Owners or Other Individuals Sponsoring Removal

Individuals and organizations (e.g. Lake District, Lake Association, Property Owners Association, County Department of Recreation), sponsoring removal.

NOTE: Phone and email address are optional fields. This information will be publicly viewable if provided on this application.

Uploaded riparian owners to attachment tab

Name	Address	Phone	Email Address
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Site Information - Complete

Water Body to be Treated

Waterbody Property Owners Association or Waterbody District Representative :

None

Water Body Name:

County:

Portage

Latitude:

Longitude:

Section:

Township:

Range:

Direction:

E W

Waterbody Surface Area:

 acres

Estimated Surface area that is 10ft or less

 acres

Proposed Treatment Area

Area(s) Proposed for Control:

Treatment Length	Treatment Width	Estimated Acreage	Average Depth	Calculated Volume
0 ft.	x 0 ft.	$\div 43,560 \text{ ft}^2 =$ 58.40 ac	4 ft =	233.60 ac-ft
		Estimated Acreage Grand Total	Calculated Volume Grand Total	233.60 ac-ft
		58.40 ac		

Is the area with in or adjacent to a sensitive area designated by the Department of Natural Resources.

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.].

Is this permit being requested in accordance with an approved Aquatic Plant Management Plan?

- Yes No

Treatment Type:

- Lake Pond Wetland Marina Other

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

List Target Plants

- | | | |
|---|---|--|
| <input type="checkbox"/> Algae | <input type="checkbox"/> Flowering Rush | <input type="checkbox"/> Purple Loosestrife |
| <input type="checkbox"/> Common/Glossy Buckthorn | <input type="checkbox"/> Hybrid Cattail | <input type="checkbox"/> Reed Canary Grass |
| <input type="checkbox"/> Coontail | <input checked="" type="checkbox"/> Hybrid Watermilfoil | <input type="checkbox"/> Reed Manna Grass |
| <input checked="" type="checkbox"/> Curly-Leaf Pondweed | <input type="checkbox"/> Japanese Knotweed | <input type="checkbox"/> Starry Stonewort |
| <input type="checkbox"/> Duckweed | <input type="checkbox"/> Naiad | <input type="checkbox"/> Yellow Floating Heart |
| <input type="checkbox"/> Elodea | <input type="checkbox"/> Narrow-Leaf Cattail | <input type="checkbox"/> Yellow Iris |
| <input checked="" type="checkbox"/> Eurasian Watermilfoil | <input type="checkbox"/> Phragmites | <input type="checkbox"/> 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 Proposed Chemical(s)

Select Chemical Name: Tribune Herbicide

Select Chemical Name: ProcellaCOR EC

Other (not listed above) Other:

Have the proposed chemicals been permitted in a prior year on the proposed site?

All Some None

Method of Application:

What were the results of the treatment?

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	<input checked="" type="radio"/> Yes <input type="radio"/> No	<input type="text" value="active harvesting program in place"/>
2. Manual removal	<input type="radio"/> Yes <input checked="" type="radio"/> No	<input type="text" value="area too large, cost prohibitive"/>
3. Sediment screens/covers	<input type="radio"/> Yes <input checked="" type="radio"/> No	<input type="text" value="area too large, prevents beneficial plant growth"/>
4. Dredging	<input type="radio"/> Yes <input checked="" type="radio"/> No	<input type="text" value="too expensive"/>
5. Waterbody drawdown	<input type="radio"/> Yes <input checked="" type="radio"/> No	<input type="text" value="not site specific"/>
6. Nutrient controls in watershed	<input type="radio"/> Yes <input checked="" type="radio"/> No	<input type="text" value="not site specific"/>
7. Other:	<input type="radio"/> Yes <input type="radio"/> No	<input type="text"/>

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

Waterbody concentration calculations (in ppm.)

Refer to DNR Waterbody pages <http://dnr.wi.gov/lakes> to answer the following:

Does the waterbody stratify? Yes No

- If yes, calculate whole waterbody concentration using volume above thermocline.
- If no, calculate whole waterbody concentration using total lake value

Whole Waterbody Concentration ppm

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

WPDES coverage not needed

Required Attachments and Supplemental Information

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.

Riparian Owners	<input type="text" value="File Attachment"/>	LakeDistrictMailingMaster.xls
Public Notice	<input type="text" value="File Attachment"/>	McDillPond2021PublicNoticeProofforPermitApplication.pdf
Large Scale Worksheet	<input type="text" value="File Attachment"/>	
Site Map	<input type="text" value="File Attachment"/>	McDillPond2021PotentialTreatmentAreaMap.pdf

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) acres X \$25 per acre = \$	58.40
If proposed treatment is less than 0.25 acre, acreage fee is \$0	\$1,250.00
Basic Permit Fee (non-refundable)	\$20.00
Total Fee	\$1,270

Payment Information

Invoice Number: WP-00029076

Payment Confirmation Number: WS2WT3006558489

Amount Paid: \$1,270

Sign and Submit

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 2021.

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

With spring's return, so do Schmeeckle Reserve outdoor programs

BY PATRICK LYNN
METRO WIRE STAFF

Outdoor nature programs led by University of Wisconsin-Stevens Point environmental education students will return to the campus' Schmeeckle Reserve this spring.

Offered in April and May, the programs will be limited to 25 participants each, with face coverings and physical distancing required. All attendees must register ahead of time and no walk-ins will be allowed.

To register, email schmeeckle@uwsp.edu with the title(s) of the programs you want to attend, the number in your group, email address, and phone number. Registrations will be confirmed by email.

All programs will be held outdoors, starting at the campfire ring near the Visitors Center unless otherwise noted. In case of heavy rain or storms, registrants will be contacted with a rain date. In case of cancellation, attendees will be notified.

Spring programs will include:

- **The Maple Tree's Treat**, Tuesday, April 6, 5:30-6:30 p.m. – Discover the annual springtime tradition of collecting and transforming the sap into syrup.
- **True Crime: Schmeeckle's Predators**, Thursday, April 8, 5:30-6:30 p.m. – Become a detective and solve a murder mystery about wildlife hunters.
- **Schmeeckle's Sounds of Spring**, Tuesday, April 13, 5-6 p.m. – Turn up your ears to explore the sounds of spring at the reserve, from birds and bees to frogs and trees.
- **The Birds are Back in**

Town, Thursday, April 15, 5:30-6:30 p.m. – Welcome our migrating feathered friends back to Schmeeckle after a long vacation down south.

- **Get the Dirt on Life**, Tuesday, April 20, 5:30-6:30 p.m. – Discover a world underneath Schmeeckle's wetlands, forests and prairies. What lives underground?
- **Keep Your Head in the Clouds**, Thursday, April 22, 5:30-6:30 p.m. – From wispy clouds to dark thunderheads, clouds come in a variety of shapes and colors. Join in for some cloud watching and learning.
- **Who's Behind the Hoot?**, Saturday, April 24, 6:30-7:30 p.m. – Uncover the secrets of mysterious owls through storytelling. Take a walk through the forest to find who is behind the hoots. *Meet at the Menzel Pavilion Shelter Building.
- **The Story of Stumps**, Thursday, April 29, 5:30-6:30 p.m. – Restoration projects enhance the woods. Visit some stumps and listen to their stories about the future of the forest.
- **The Lake's View**, Saturday, May 1, 1-2 p.m. – Join a free canoe and kayak paddle around Lake Joanis to learn about its creatures, its island and history. *Meet at the beach on the south side of Lake Joanis off Maria Drive.
- **A Dinner Date with Nature**, Tuesday, May 4, 5:30-6:30 p.m. – Look no further than the local forest to find wild edibles such as mushrooms, ramps and



(Metro Wire photo)

- **fiddleheads.**
- **Oak Savannas: Rising from the Ashes**, Saturday, May 8, 4-5 p.m. – Take a trip through the

past, present and future of oak savannas to discover how Schmeeckle is restoring this rapidly disappearing native

habitat. Learn more about Schmeeckle Reserve at www.uwsp.edu/cnr-ap/schmeeckle.

CLASSIFIEDS

PUBLIC NOTICE

The McDill Inland Lake and Rehabilitation District (the District) proposes to chemically treat up to 100 acres of McDill Pond to control excessive growth of exotic invasive aquatic plants.

The proposed treatment is an application of the aquatic herbicides Reward or Tribune and ProcellaCOR EC to infestations to be performed by Clarke Aquatic Services. It is anticipated that the treatment will occur in spring 2021 and will proceed only after the District obtains a permit for the treatment from the Wisconsin Department of Natural Resources.

The water use restrictions for the products listed above are as follows: There are no swimming or fishing restrictions. Do not use water from treated areas for irrigation purposes for 5 days after treatment.

The District will hold a public informational meeting on the proposed treatments if five or more individuals, organizations, special units of government, or local units of government request one in writing. The person or entity requesting the meeting

shall state a specific agenda of topics including problems and alternatives to be discussed.

The request for a public informational meeting must be sent in writing to the McDill Inland Lake and Rehabilitation District, 3317 Della Street, Stevens Point, WI 54481, and to Wisconsin Department of Natural Resources, 473 Griffith Avenue, Wisconsin Rapids, WI 54494 within 5 days after the public notice is published.

HELP WANTED

Cooper's Southside BP is now hiring. Stop by to pick up an application, 3209 Church St., Stevens Point. Community Horizons is assisting with

the recruitment process of a self-directed caregiver in Stevens Point. Position is Monday-Friday 9:30am-1:30pm to care for adult autistic individual who is non verbal within family home. Ideal candidate will have working knowledge and experience with Autism and diabetes (knowledge of how to check blood sugars) Comfortable with behavior outbursts, must be dependable.

Position pays \$12 per hour and no weekends involved! Apply today to learn more.

*If hired Community Horizons will not be the legal employer on record. The member consumes all employment decisions. This is a W-2 position with payroll managed by fiscal agent. <https://communityhorizonsllc.com/>



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March, 2021

**McDill Pond Property Owner or Occupant
Portage County, WI**

Re: Proposed Aquatic Herbicide Application for Exotic Invasive Species control on McDill Pond.

Dear McDill Pond Lake Property Owner or Occupant:

The McDill Inland Lake and Rehabilitation District (the District) proposes to assess and chemically treat up to 100 acres on McDill Pond to control the excessive growth of the exotic invasive aquatic plants, Curlyleaf pondweed (CLP) and Eurasian watermilfoil (EWM). The District proposes to conduct an application of Reward or Tribune (liquid diquat) and ProcellaCOR EC (florpyrauxifen-benzyl) to be performed sometime in spring, 2021 by Clarke Aquatic Services, proceeding only after the District obtains a permit for the treatment from the Wisconsin Department of Natural Resources.

Notification of the exact dates of treatment and water use restrictions associated with the use of Reward will be provided by the posting of shoreline in and adjacent to treatment areas, and public access points.

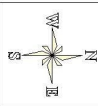
The water use restrictions associated with use of Reward are noted below:

5 Day Irrigation Restriction

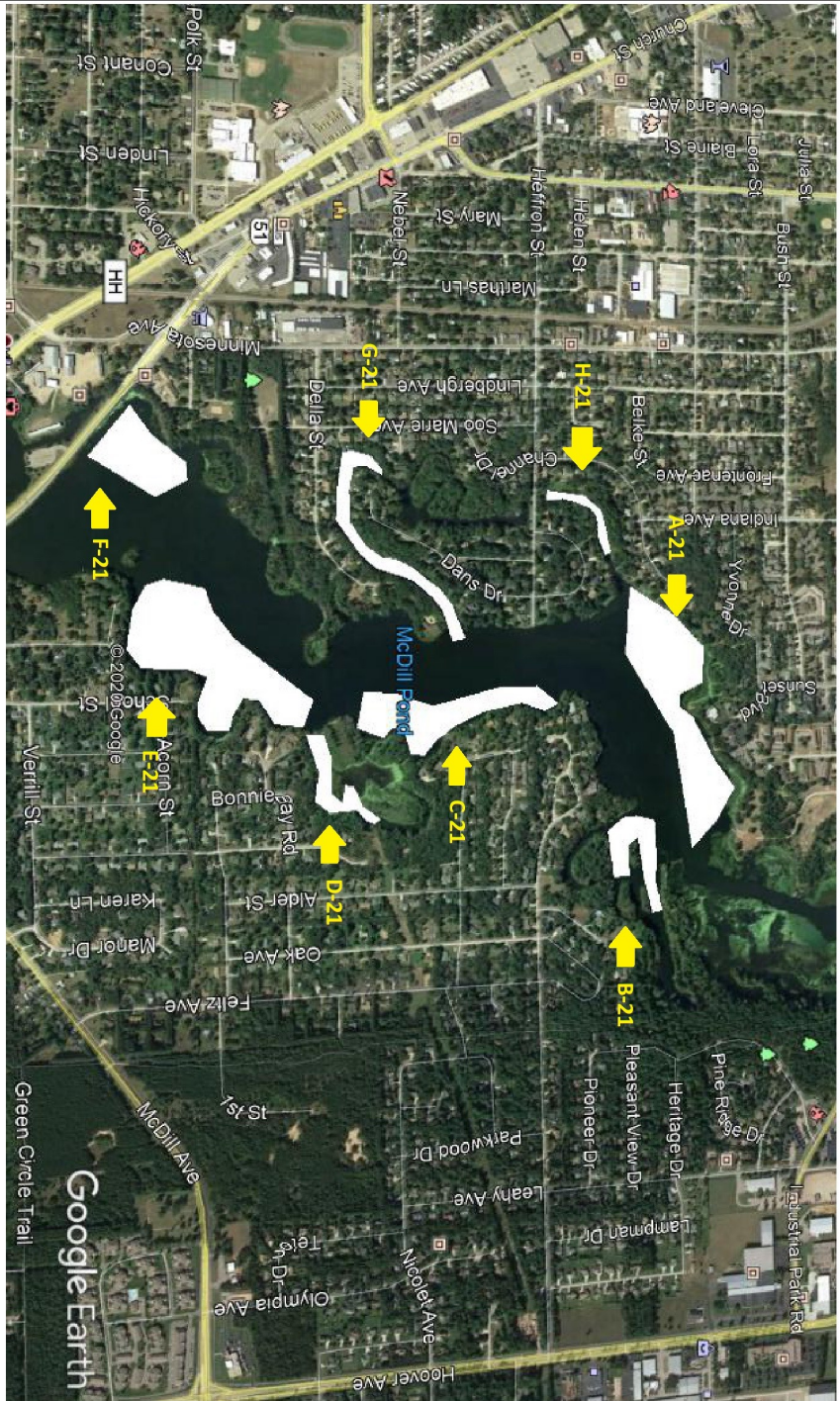
Additional details regarding the proposed treatment including a copy of the permit application and the WDNR aquatic herbicide fact sheets can be found at: www.mcdillpond.com. Should you not have access to the internet or would like a hard copy, the District will provide one, please request from the District contact below.

For questions about the treatment, please contact:

Krista Olson, McDill Inland Lake and Rehabilitation District
mcdillpond@gmail.com
(715) 347-8901



ACCOUNT NAME:
 2021 McDill Pond Proposed Treatment Areas



Site	Acres	Avg Depth
A-21	16.5	3.1
B-21	3.8	3.3
C-21	8	2.8
D-21	2.5	2
E-21	16.7	4.1
F-21	5.6	4.1
G-21	4.3	4.2
H-21	1	2.1
Total	58.4	

WARNING: This document is the property of Clarke Environmental Mosquito Mgmt., Inc. Any unauthorized use of this property will be prosecuted as a theft of labor, services, or property. (Chapter 38, §16-1 and §16-3 of the IL. REV. STATUTES)



2021 McDill Pond Herbicide Rate Data				Tribune (liquid diquat)		ProcellaCOR (liquid floryprauxifen-benzel)	
ID	Acreage	Mean Depth Estimate	Volume	Qty/Acre	Total Gallons	Qty/Acre Ft	Total PDU
A-21	16.5	3.1	51.2	1.7	25.6		
B-21	3.8	3.3	12.5	2.0	6.2		
C-21	8.0	2.8	22.4	2.0	11.2		
D-21	2.5	2.0	5.0			9.0	45.0
E-21	16.7	4.1	68.5	2.0	33.4		
F-21	5.6	4.1	23.0	2.0	11.2		
G-21	4.3	4.2	18.1	2.0	8.6		
H-21	1.0	2.1	2.1		1.0		
Totals	58.4		202.7		97.2	9.0	45.00

Diquat Chemical Fact Sheet

Formulations

Diquat, or diquat dibromide, is the common name of the chemical 6,7-dihydrodipyrido (1,2-a:2',1'-c) pyrazinediium dibromide. Originally registered by the EPA in 1986, diquat was reregistered in 1995 and is currently being reviewed again. It is sold for agricultural and household uses as well as for use on certain floating-leaf and submersed aquatic plants and some algae. The aquatic formulations are liquids: two of the more commonly used in Wisconsin are Reward™ and Weedtrine-D™ (product names are provided solely for your reference and should not be considered endorsements).

Aquatic Use and Considerations

Diquat is a fast-acting herbicide that works by disrupting cell membranes and interfering with photosynthesis. It is a non-selective herbicide and will kill a wide variety of plants on contact. It does not move throughout the plants, so will only kill parts of the plants that it contacts. Following treatment, plants will die within a week.

Diquat will not be effective in lakes or ponds with muddy water or where plants are covered with silt because it is strongly attracted to silt and clay particles in the water. Therefore, bottom sediments must not be disturbed during treatment, such as may occur with an outboard motor. Only partial treatments of ponds or bays should be conducted (1/2 to 1/3 of the water body). If the entire pond were to be treated, the decomposing vegetation may result in very low oxygen levels in the water. This can be lethal to fish and other aquatic organisms. Untreated areas can be treated 10-14 days after the first treatment.

Diquat is used to treat duckweed (*Lemna* spp.), which are tiny native plants. They are a food source for waterfowl but can grow thickly and become a nuisance. Navigation lanes through cattails (*Typha* spp.) are also

maintained with diquat. Diquat is labeled for use on the invasive Eurasian watermilfoil (*Myriophyllum spicatum*) but in practice is not frequently used to control it because other herbicide options are more selective.

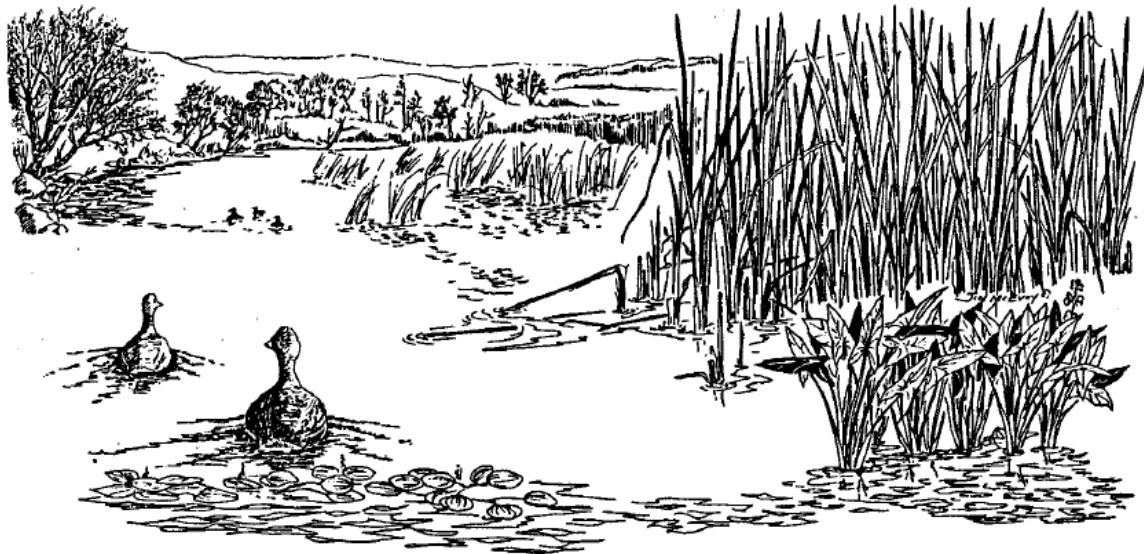
Post-Treatment Water Use Restrictions

There are no restrictions on swimming or eating fish from water bodies treated with diquat. Treated water should not be used for drinking water for one to three days, depending on the concentration used in the treatment. Do not use treated water for pet or livestock drinking water for one day following treatment. The irrigation restriction for food crops is five days, and for ornamental plants or lawn/turf, it varies from one to three days depending on the concentration used.

Herbicide Degradation, Persistence and Trace Contaminants

Diquat is not degraded by microbes. When applied to a waterbody, diquat binds with the organic matter in the sediment indefinitely. It does not degrade and will accumulate in the sediments. Diquat is usually detectable in the water column for less than a day to ~35 days after treatment. Diquat will remain in the water column longer when treating a waterbody with sandy soils due to the low organic matter and clay content. Because of its persistence and very high affinity for the soil, diquat does not leach into groundwater.

Ethylene dibromide (EDB) is a trace contaminant in diquat products. It originates from the manufacturing process. EDB is a carcinogen, and the EPA has evaluated the health risk of its presence in formulated diquat products. The maximum level of EDB in diquat dibromide is 10 ppb (parts per billion), it degrades over time, and it does not persist as an impurity.



Impacts on Fish and Other Aquatic Organisms

At application rates, diquat does not have any apparent short-term effects on most of the aquatic organisms that have been tested. However, certain species of important aquatic food chain organisms such as amphipods and *Daphnia* (water fleas) can be adversely affected at label application rates. Direct toxicity and loss of habitat are believed to be the causes. Tests on snails have shown that reproductive success may be affected, as well. These organisms only recolonize the treated area as vegetation becomes re-established.

Laboratory tests indicate walleye are the fish most sensitive to diquat, displaying toxic symptoms when confined in water treated with diquat at label application rates. Other game and panfish (e.g. northern pike, bass, and bluegills) are apparently not affected at these application rates. Limited field studies to date have not identified significant short or long-term impacts on fish and other aquatic organisms in lakes or ponds treated with diquat.

The bioconcentration factors measured for diquat in fish tissues is low. Therefore, bioconcentration is not expected to be a concern with diquat.

Human Health

The risk of acute exposure to diquat would be primarily to chemical applicators. Diquat

causes severe skin and eye irritation and is toxic or fatal if absorbed through the skin, inhaled or swallowed. Wearing skin and eye protection (e.g. rubber gloves, apron, and goggles) to minimize eye and skin irritation is required when applying diquat.

The risk to water users of serious health impacts (e.g. birth defects and cancer) is not believed to be significant according to the EPA. Some risk of allergic reactions or skin irritation is present for sensitive individuals.

For Additional Information

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

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

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

Wisconsin Department of Health Services
<http://www.dhs.wisconsin.gov/>

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



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. Florpyrauxifen-benzyl 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.

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 florpyrauxifen-benzyl 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
<http://datcp.wi.gov/Plants/Pesticides/>

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/documents/1710020.pdf>

