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|hdharveyiii signed on 2025-03-03T17:02:00

Site or Project Name:	McGinnis Lake District 2025 The permit application will be saved automatically with this name
Activity:	Chemical Control Application-Lake, River, Pond
Eligibility: (All questions must be no for it to be considered a private pond.)	**Does the waterbody have:** • More than one property owner? ◉ Yes ○ No • Uncontrolled surface water discharge? ◉ Yes ○ No • Public access? ◉ Yes ○ No

3200-004 Chemical Aquatic Control Application - Lake, River, Pond

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: 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	McGinnis Lake District
Last Name:	Roberts
First Name:	Ken
Mailing Address:	PO Box 134
City:	Oxford
State:	WI
Zip Code:	53952
Email:	
Phone Number: (xxx-xxx-xxxx)	
Alternative Phone Number: (xxx-xxx-xxxx)	

Waterbody Address

Last Name:	
First Name:	
Street Address:	335 Ember Ct
City:	Oxford
State:	WI
Zip Code:	53952
Email:	
Phone Number: (xxx-xxx-xxxx)	
Alternative Phone Number: (xxx-xxx-xxxx)	

Applicator

Name of Applicator Firm:	Schmidt's Aquatic LLC
Applicator Certification #:	000977
Business Location License #:	93-022613-020730
Restricted Use Pesticide #:	
Address:	7470 Sherman Rd
City:	Bancroft
State:	WI
Zip:	54921
Email:	hdhiii@schmidtsaquatic.com
Phone Number: (xxx-xxx-xxxx)	920-980-9190

Adjacent Riparian Property Owners

NOTE: Phone and email address will not be publicly viewable.

☑ Uploaded riparian owners to attachment tab ☐ Riparian Owners Information is not applicable for this application

Name	Address	Phone	Email Address

Site Information - Complete

Waterbody Containing Control Area(s)

Waterbody Property Owners Association or Waterbody District Representative : McGinnis Lake District ☐ None

Water Body or Wetland Name: McGinnis Lake

Primary County: Adams

Latitude: 43.8423

Longitude: -89.6457

Section: 27

Township: 16

Range: 07

Direction: ◉ E ○ W

Waterbody Surface Area: 33 acres

Estimated Surface area that is 10ft or less 21 acres

Proposed Control Area(s)

Area(s) Proposed for Control:

Site Name (Optional)	Treatment Length		Treatment Width			Estimated Acreage		Average Depth		Calculated Volume	
A24	0	ft. x	0 ft.	÷ 43,560 ft.² =		0.32	ac	5.00	ft =	1.60	ac-ft
B24	0	ft. x	0 ft.	÷ 43,560 ft.² =		0.50	ac	4.50	ft =	2.25	ac-ft
C24	0	ft. x	0 ft.	÷ 43,560 ft.² =		3.64	ac	4.00	ft =	14.56	ac-ft
D24	0	ft. x	0 ft.	÷ 43,560 ft.² =		0.10	ac	3.00	ft =	0.30	ac-ft
E24	0	ft. x	0 ft.	÷ 43,560 ft.² =		0.52	ac	4.00	ft =	2.08	ac-ft
F24	0	ft. x	0 ft.	÷ 43,560 ft.² =		0.85	ac	4.00	ft =	3.40	ac-ft
G24	0	ft. x	0 ft.	÷ 43,560 ft.² =		0.66	ac	3.50	ft =	2.31	ac-ft
H24	0	ft. x	0 ft.	÷ 43,560 ft.² =		0.27	ac	3.50	ft =	0.95	ac-ft
I24	0	ft. x	0 ft.	÷ 43,560 ft.² =		0.20	ac	3.00	ft =	0.60	ac-ft

J24	0	ft. x	0 ft.	÷ 43,560 ft.^{2} =	0.11	ac	3.50	ft =	0.39	ac-ft
K24	0	ft. x	0 ft.	÷ 43,560 ft.^{2} =	0.05	ac	3.50	ft =	0.18	ac-ft
L24	0	ft. x	0 ft.	÷ 43,560 ft.^{2} =	3.77	ac	9.30	ft =	35.06	ac-ft

Estimated Acreage Grand Total: 10.99 ac

Calculated Volume Grand Total: 63.67 ac-ft

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

○ 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 - Lake, River, Pond 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:

◉ *Lake* ○ *Pond* ○ *Wetland* ○ *Marina* ○ *Other*

Has a management plan been provided to the DNR?	If Yes, date approved of most current copy	Link to Approved Plan:
◉ Yes ○ No ○ Don't Know	1/1/2023	☑ Uploaded Plan copy as an Attachment

Does the proposed plant removal agree with the approved plan? ◉ Yes ○ 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

List Target Plants

☐ 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 Proposed Chemical(s)

☐ Agristar 2,4-D Amine	☐ Clipper	☐ K-Tea	☐ 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?

◉ *All* ○ *Some* ○ *None*

What were the results of the treatment?

Good results

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	The lake district harvest the lake
2. Manual removal	○ Yes ◉ No	Area too large
3. Sediment screens/covers	○ Yes ◉ No	Area too large
4. Dredging	○ Yes ◉ No	Too expensive
5. Waterbody drawdown	◉ Yes ○ No	
6. Nutrient controls in watershed	◉ Yes ○ No	
7. Other:	○ Yes ◉ 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*

Waterbody concentration calculations (in ppm.)

Refer to DNR Waterbody pages http://dnr.wi.gov/lakes and https://dnr.wisconsin.gov/topic/lakes/plants/forms 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

Herbicide Name	Other Herbicide	E PA Reg. No.	Whole Waterbody Concentration (mg/l = ppm)
Aquathol K Aquatic Herbicide		70506-176	0.249

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	File Attachment	McGinnis Lake Master_Raparian 2025.xls
Public Notice	File Attachment	McGinnis Lake Newspaper Notification 2025.pdf
Large Scale Worksheet	File Attachment	Form 3200-4A McGinnis Lake 2025-Signed Copy.pdf
Site Map	File Attachment	McGinnis Lake 2025 Map & Dosing.docx
Lake Management Plan	File Attachment	McGinnis-Lake-Management-Plan-2023-Update.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)	10.99
acres X $25 per acre = $	$275.00
If proposed treatment is less than 0.25 acre, acreage fee is $0	
Basic Permit Fee (non-refundable)	$20.00
Total Fee	$295

Payment Information

Invoice Number:	WP-00051447
Payment Confirmation Number:	WS2WT3012231051
Amount Paid:	$295

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|hdharveyiii signed on 202.

☑ 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.

Clear Data

State of Wisconsin
Department of Natural Resources

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

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: McGinnis Lake District - Kenneth Roberts

Date Completed: 3/3/2025

Name of Lake: McGinnis Lake - Adams County

SECTION II. RECREATIONAL USES

Check those uses that apply and complete the information requested:

☐ 1. SWIMMING: 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

☐ 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. BOATING/NAVIGATION: Indicate on your lake map where the following boating activities take place within the proposed treatment area:
Sailing ☐ Water skiing ☐ Fishing ☐
Pleasure boating ☐ Jet skiing ☐ Other _____

☐ 5. AESTHETIC: 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. OTHER: What other activities occur in the proposed treatment area? Swimming, fishing, boating, and recreational acvtivities take place throughout the entire lake.

SECTION III. FISH AND WILDLIFE VALUE

1. 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.)

2. 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? Local DNR

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: Eurasian Water Milfoil & Curley Leaf Pondweed introduced into McGinnis Lake by an unknown source.

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: Eurasian watermilfoil / Curley Leaf Pondweed)

3. How often will it be necessary to:

   A. Chemically treat? 0 times per year for algae; 1 times per year for other plants

   B. Mechanically harvest? 1 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: McGinnis Lake District)
   - ☒ 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? ☐ Yes ☒ No

   If yes, please 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.

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

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

ENDOTHALL CHEMICAL FACT SHEET

Formulations

Endothall was registered with the U.S. EPA for aquatic use in 1960, reregistered in 2005, and is currently under registration review. An interim registration review decision was released in 2021. Endothall is the common name of the active ingredient endothall acid (7-oxabicyclo[2,2,1] heptane-2,3-dicarboxylic acid). Endothall products are labeled for control of submersed aquatic plants using surface or subsurface application. Granular and liquid formulations are currently registered by the U.S. EPA and DATCP. Two types of endothall are available: dipotassium salt and dimethylalkylamine salt ("mono-N,N-dimethylalkylamine salt" or "monoamine salt"). Commercial formulations approved for aquatic use in Wisconsin include Aquathol® K and Hydrothol® 191.*

Aquatic Use and Considerations

Endothall is a contact herbicide (i.e., it affects plant cells on contact and does not move throughout the plant tissue) that inhibits respiration, prevents the production of proteins and lipids, and disrupts the cellular membrane in plants. It is a WSSA Group 31 herbicide, meaning the mechanism of action is by inhibiting serine-threonine protein phosphatase 1 (PP1). Although typical endothall application rates inhibit plant respiration, higher concentrations have been shown to increase respiration. Factors such as density and size of the plants present, water movement, and water temperature determine how quickly endothall works. For effective control, endothall should be applied when plants are actively growing. Under favorable conditions, plants begin to decompose within a few days after application. Uptake of endothall is increased at higher water temperatures and higher light levels.

If endothall is applied to a pond or enclosed bay with abundant vegetation, no more than one-third to one-half of the surface should be treated at one time because excessive decaying vegetation may deplete the oxygen content of the water and kill fish. Untreated areas should not be treated until the vegetation exposed to the initial application decomposes.

Endothall products vary somewhat in the target species they control, so it is important to always check the product label for the list of affected species. Endothall products are labeled to control the invasive species curly-leaf pondweed (*Potamogeton crispus*)† and Eurasian watermilfoil (*Myriophyllum spicatum*). Native species that are labeled as susceptible to endothall include coontail (*Ceratophyllum demersum*), naiads (*Najas* spp.), milfoils (*Myriophyllum* spp.), pondweeds (*Potamogeton* spp.), sago pondweed (*Stuckenia pectinata*), water stargrass (*Heteranthera dubia*) and horned pondweed *(Zannichellia palustris*).‡

Post-Treatment Water Use Restrictions

Due to the many formulations of this chemical the post-treatment water use restrictions vary. All endothall products have a drinking water standard of 0.1 parts per million (ppm) endothall acid and cannot be applied within 600 feet of a potable water intake. Use restrictions for dimethylalkylamine salt

* Product names are provided solely for your reference and should not be considered exhaustive nor endorsements.

† The chemical manufacturers of endothall recommend that targeted treatment areas be greater than 5 acres for effective curly-leaf pondweed control.

‡ May vary by formulation, application rate, and/or product. Every product label must be carefully reviewed and followed by the user.

formulations have additional irrigation and aquatic life restrictions.‡

Herbicide Degradation, Persistence and Trace Contaminants

Endothall disperses with water movement and is broken down by microorganisms into carbon, hydrogen and oxygen. Field studies show that low concentrations of endothall persist in water for several days to several weeks depending on environmental conditions. Degradation of endothall is primarily microbial and the half-life (the time it takes for half of the active ingredient to degrade) of the dipotassium salt formulations averages four to ten days, although dissipation due to water movement may significantly shorten the effective half-life in some treatment scenarios. Complete degradation by microbial action is 30 to 60 days. The initial breakdown product of endothall is an amino acid, glutamic acid, which is rapidly consumed by bacteria.

Endothall is highly water soluble and does not readily adsorb to sediments or lipids. The degradation rate of endothall increases with increasing water temperature and decreases under anaerobic conditions. Relative to other herbicides, endothall is unique in that is comprised of carbon, hydrogen and oxygen with the addition of potassium and nitrogen in the dipotassium and dimethylalkylamine formulations, respectively. This allows for complete breakdown of the herbicide without additional intermediate breakdown products.

Impacts on Fish and Other Aquatic Organisms

The dipotassium salt formulations are considered slightly to moderately toxic to freshwater fish and slightly toxic to freshwater invertebrates. However, certain species may be more sensitive than others. At recommended rates, the dipotassium salt formulations appear to have few short-term behavioral or reproductive effects on bluegill (*Lepomis macrochirus*) or largemouth bass (*Micropterus salmoides*). Bioaccumulation (the process by which chemicals in the environment or in a food source are taken up by plants or animals) of dipotassium salt formulations by fish from water treated with the herbicide is unlikely.

The dimethylalkylamine formulations are more active on aquatic plants than the dipotassium formulations but are also more toxic to non-target aquatic organisms. They are highly toxic to both freshwater fish and invertebrates at concentrations above 0.3 ppm. In recognition of the extreme toxicity of the dimethylalkylamine salt, product labels do not recommend treatment where fish are an important resource.

Tadpoles and freshwater scuds are sensitive to dimethylalkylamine salt at levels ranging from 0.5 to 1.8 ppm.

Human Health

Most concerns about adverse health effects revolve around applicator exposure. Endothall may be harmful or fatal if inhaled, swallowed, or absorbed through skin. It can also cause irreversible eye damage. Wear proper personal protective equipment and follow label instructions while handling.

Endothall poses no risk to water users if water use restrictions are followed. Endothall is not a neurotoxicant or mutagen, nor is it likely to be a human carcinogen.

For Additional Information

U.S. Environmental Protection Agency (EPA)
Office of Pesticide Programs
epa.gov/pesticides

Wisconsin Department of Agriculture, Trade, and Consumer Protection
datcp.wi.gov/Pages/Programs_Services/ACMOverview.aspx

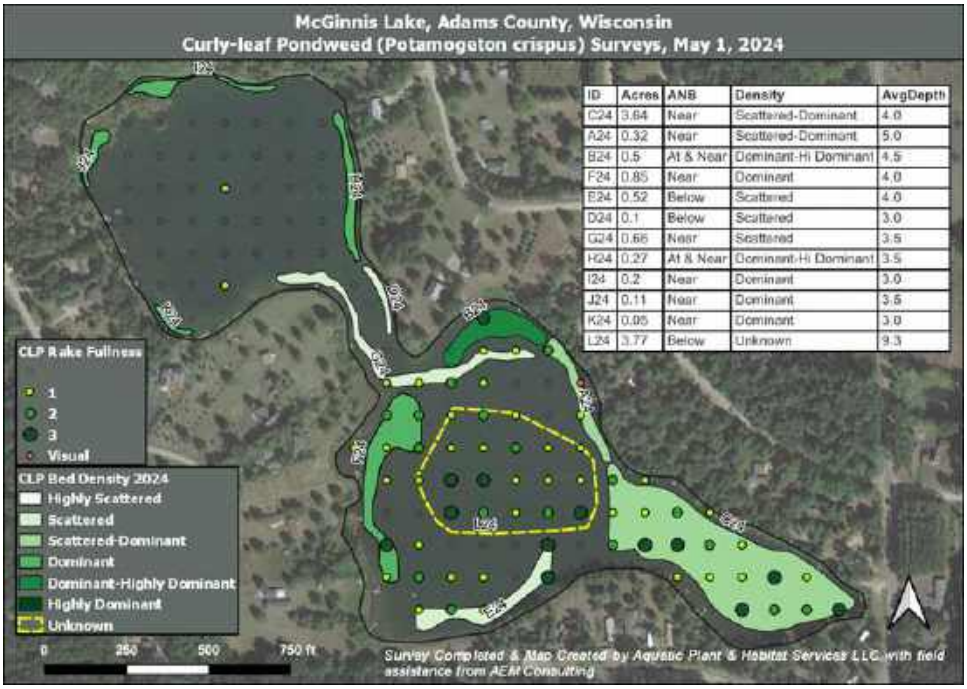
Wisconsin Department of Natural Resources
608-266-2621
dnr.wi.gov/lakes/plants

Wisconsin Department of Health Services
dhs.wisconsin.gov

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

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

EGAD # 3200-2022-22



ID	Acres	ANB	Density	AvgDepth
C24	3.64	Near	Scattered-Dominant	4.0
A24	0.32	Near	Scattered-Dominant	5.0
B24	0.5	At & Near	Dominant-Hi Dominant	4.5
F24	0.85	Near	Dominant	4.0
E24	0.52	Below	Scattered	4.0
D24	0.1	Below	Scattered	3.0
G24	0.66	Near	Scattered	3.5
H24	0.27	At & Near	Dominant-Hi Dominant	3.5
I24	0.2	Near	Dominant	3.0
J24	0.11	Near	Dominant	3.5
K24	0.05	Near	Dominant	3.0
L24	3.77	Below	Unknown	9.3

McGinnis Lake 2025

Aquathol K

Site	Acres	AvgDep	Ac/Ft	A.I.	Gallons
A24	0.32	5.00	1.60	1.50	1.50
B24	0.50	4.50	2.30	1.50	2.20
C24	3.64	4.00	14.60	1.50	14.10
D24	0.10	3.00	0.30	1.50	0.30
E24	0.52	4.00	2.10	1.50	2.00
F24	0.85	4.00	3.40	1.50	3.30
G24	0.66	3.50	2.30	1.50	2.20
H24	0.27	3.50	0.90	1.50	0.90
I24	0.20	3.00	0.60	1.50	0.60
J24	0.11	3.50	0.40	1.50	0.40
K24	0.05	3.00	0.20	1.50	0.20
L24	3.77	9.30	35.10	1.50	33.80
	10.99		63.80		61.50

Gal	AI	Total	15'
46.2	4.23	195.426	
Ac/Ft	Total Ac/Ft	Total	
2.718	155.0	421.29	
195.426	421.29	0.464	PPM
		463875240	PPB

Gal	AI	Total	Whole Lake Concentration
46.2	4.23	195.426	
Ac/Ft	Total Ac/Ft	Total	
2.718	288.3	783.5994	
195.426	783.5994	0.249	PPM
		249395291	PPB

WARNING

PESTICIDE TREATMENT AREA

THIS WATERBODY HAS BEEN CHEMICALLY TREATED FOR:

- [x] INVASIVE PLANTS
- [ ] ALGAE
- [ ] NAVIGATION/ACCESS
- [ ] FISH REMOVAL
- [ ] MOSQUITO/BLACK FLY
- [ ] OTHER _____

PESTICIDE APPLIED	ACTIVE INGREDIENT	DATE TREATED
Aquathol K	Dipotassium Salt of Endothall	

WATER USE RESTRICTIONS APPLY AS FOLLOWS:

- TO [x] THE ENTIRE WATERBODY
- TO [ ] WATER WITHIN ____ FT OF THIS NOTICE AND ____ FT FROM SHORE

DO NOT USE TREATED WATER FOR THE FOLLOWING PURPOSES UNTIL:

SWIMMING 0 Days	HOUSEHOLD USE (dishes, laundry, etc.) 0 Days
CONSUMING FISH 0 Days	
DRINKING WATER 0 Days	IRRIGATION (CROP) 7 Days
PET/LIVESTOCK WATER 0 Days	IRRIGATION (OTHER) 7 Days

Wisconsin Dept. of Natural Resources
101 S. Webster St., P.O. Box 7921
Madison, WI 53707-7921
www.dnr.state.wi.us/lakes/plants/factsheets

SPONSOR McGinnis Lake District
CONTACT Ken Roberts
PHONE 608-617-6723

PUB-FH-443 2011