

April, 2023

**Balsam Lake Property Owner or Occupant
Polk County, WI**

Re: Proposed Management for Curlyleaf Pondweed on East Balsam Lake

Dear Balsam Lake Property Owner or Occupant:

The Balsam Lake Protection and Rehabilitation District (the District) with support from the Wisconsin Department of Natural Resources (WDNR), proposes to assess and apply the aquatic herbicide, Aquathol K (liquid endothall), on up to 60 acres of East Balsam Lake to control the excessive growth of the exotic invasive aquatic plant, Curlyleaf Pondweed. Should the herbicide applications be warranted following spring survey work and permitted by the WDNR, the applications will be carried out by Clarke Aquatic Services, a SOLitude Lake Management Company.

We anticipate the applications to occur sometime in spring, 2023 and will proceed only after the District obtains a permit for the project from the WDNR.

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

THERE ARE NO WATER USE RESTRICTIONS WITH THE USE OF AQUATHOL K

Additional details regarding the proposed management including a copy of the permit application and the WDNR aquatic herbicide fact sheet on endothall can be found at: blprd.com

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

Jack Weix, Commissioner
Balsam Lake Protection and Rehabilitation District
Jack@ThePlasticResource.com
(612) 325-8530

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 2023-04-24T12:01:42

Site or Project Name:

Balsam Lake

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.)

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

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 Balsam Lake Protection and Rehabilitation District

Last Name:

First Name:

Mailing Address: P.O. Box 202

City: Balsam Lake

State: WI

Zip Code: 54810

Email:

Phone Number:

(xxx-xxx-xxxx)

Alternative Phone Number:

(xxx-xxx-xxxx)

Waterbody Address

Last Name:

First Name:

Street Address: 1819 110th St

City: Balsam Lake

State: WI

Zip Code: 54810

Email:

Phone Number:

(xxx-xxx-xxxx)

Alternative Phone Number:

(xxx-xxx-xxxx)

Applicator

Name of Applicator Firm: SOLitude Lake Management

Applicator Certification #: 315594, 288191, 312329

Business Location License #: 93-028484-019614

Restricted Use Pesticide #:

Address: w173n21440 Northwest Passage

City: Jackson

State: WI

Zip: 53037

Email: amy.kay@solitudelake.com

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

Adjacent Riparian Property Owners

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

Uploaded riparian owners to attachment tab

Name	Address	Phone	Email Address
<input type="text"/>	<input type="text"/>		

Site Information - Complete

Waterbody Containing Control Area(s)

Waterbody Property Owners Association
or Waterbody District Representative :

Jack Weix

None

Water Body Name:

Balsam Lake

Primary County:

Polk

Latitude:

45.4653956

Longitude:

-92.4272995

Section:

02

Township:

35

Range:

17

Direction:

E W

Waterbody Surface Area:

1,901

acres

Estimated Surface area that is 10ft or less

380

acres

Proposed Control Area(s)

Area(s) Proposed for Control:

Site Name (Optional)	Treatment Length	Treatment Width	Estimated Acreage	Average Depth	Calculated Volume
<input type="text"/>	0 ft. x	0 ft.	$\div 43,560 \text{ ft}^2 =$ 60.00 ac	6 ft =	360.00 ac-ft
			Estimated Acreage Grand Total	Calculated Volume Grand Total	60.00 ac 360.00 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 - 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 Lake Management plan been provided to the DNR? <input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Don't Know	If Yes, date approved of most current copy 8/1/2021	Link to Approved Plan: https://hme59e.p3cdn1.secureserver.net/ <input type="checkbox"/> Uploaded Plan copy as an Attachment
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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

- | | | |
|---|--|--|
| <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 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 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)

- | | | | |
|--|--|---|---|
| <input type="checkbox"/> Agristar 2,4-D Amine | <input type="checkbox"/> Clipper | <input type="checkbox"/> K-Tea | <input type="checkbox"/> SCI-62 |
| <input type="checkbox"/> Algimycin PWF | <input type="checkbox"/> Clipper SC | <input type="checkbox"/> Littora | <input type="checkbox"/> Sculpin G |
| <input type="checkbox"/> Alligare 2,4-D | <input type="checkbox"/> Current | <input type="checkbox"/> Milestone | <input type="checkbox"/> SeClear |
| <input type="checkbox"/> Alligare Argos | <input type="checkbox"/> Cutrine-Plus | <input type="checkbox"/> Nautique | <input type="checkbox"/> SeClear G |
| <input type="checkbox"/> Alligare Diquat | <input type="checkbox"/> Cutrine-Plus Granular | <input type="checkbox"/> Navigate | <input type="checkbox"/> Shoreklear-Plus |
| <input type="checkbox"/> Alligare Ecomazapyr | <input type="checkbox"/> Cutrine-Ultra | <input type="checkbox"/> Navitrol | <input type="checkbox"/> Shredder Amine |
| <input type="checkbox"/> Alligare Glyphosate 5.4 | <input type="checkbox"/> DMA 4 IVM | <input type="checkbox"/> Navitrol DPF | <input type="checkbox"/> Sonar AS |
| <input type="checkbox"/> Aqua Neat | <input type="checkbox"/> Earthtec | <input type="checkbox"/> Phycomycin SCP | <input type="checkbox"/> Sonar Genesis |
| <input type="checkbox"/> Aqua Star | <input type="checkbox"/> Element 3A | <input type="checkbox"/> Polaris | <input type="checkbox"/> Sonar H4C |
| <input type="checkbox"/> AquaPro | <input type="checkbox"/> Flumioxazin 51% WDG | <input type="checkbox"/> Polaris AC | <input type="checkbox"/> Sonar PR |
| <input type="checkbox"/> Aquashade | <input type="checkbox"/> Formula F-30 | <input type="checkbox"/> Pond-Klear | <input type="checkbox"/> Sonar Q |
| <input type="checkbox"/> Aquashadow | <input type="checkbox"/> Garlon 3A | <input type="checkbox"/> ProcellaCOR EC | <input type="checkbox"/> Sonar RTU |
| <input type="checkbox"/> Aquastrike | <input type="checkbox"/> Green Clean | <input type="checkbox"/> Refuge | <input type="checkbox"/> Sonar SRP |
| <input checked="" type="checkbox"/> Aquathol K | <input type="checkbox"/> Habitat | <input type="checkbox"/> Renovate 3 | <input type="checkbox"/> SonarOne |
| <input type="checkbox"/> Aquathol Super K | <input type="checkbox"/> Harpoon | <input type="checkbox"/> Renovate LZR | <input type="checkbox"/> Stingray |
| <input type="checkbox"/> Avast! SC | <input type="checkbox"/> Harvester | <input type="checkbox"/> Renovate LZR Max | <input type="checkbox"/> Symmetry NXG |
| <input type="checkbox"/> Captain | <input type="checkbox"/> Havoc Amine | <input type="checkbox"/> Renovate Max G | <input type="checkbox"/> Touchdown Pro |
| <input type="checkbox"/> Captain XTR | <input type="checkbox"/> Hydrothol 191 | <input type="checkbox"/> Renovate OTF | <input type="checkbox"/> Tribune |
| <input type="checkbox"/> Chinook | <input type="checkbox"/> Hydrothol Granular | <input type="checkbox"/> Reward | <input type="checkbox"/> Trycera |
| <input type="checkbox"/> Clearcast | <input type="checkbox"/> Komeen | <input type="checkbox"/> Rodeo | <input type="checkbox"/> Weedar 64 |
| <input type="checkbox"/> Clearigate | <input type="checkbox"/> Komeen Crystal | <input type="checkbox"/> Roundup Custom | <input type="checkbox"/> 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?

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	<input type="radio"/> Yes <input checked="" type="radio"/> No	active harvesting plan in place, harvesting causes fragmentation
2. Manual removal	<input type="radio"/> Yes <input checked="" type="radio"/> No	area too large
3. Sediment screens/covers	<input type="radio"/> Yes <input checked="" type="radio"/> No	area too large, prevents beneficial plant growth
4. Dredging	<input type="radio"/> Yes <input checked="" type="radio"/> No	too expensive
5. Waterbody drawdown	<input type="radio"/> Yes <input checked="" type="radio"/> No	not site specific
6. Nutrient controls in watershed	<input type="radio"/> Yes <input checked="" type="radio"/> No	alum application was performed in recent years
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

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"/>	Balsam Lake 2023 Riparian Owner List.xlsx
Public Notice	<input type="text" value="File Attachment"/>	Balsam Lake 2023 Proof of Publication.pdf
Large Scale Worksheet	<input type="text" value="File Attachment"/>	
Site Map	<input type="text" value="File Attachment"/>	Balsam Lake 2023 Map for Permit Application.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 = \$	60.00
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-00040724

Payment Confirmation Number: WS2WT3009989961

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 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.

PRINTER'S AFFIDAVIT

Polk County.

SS.

State of Wisconsin

Richard A. Lee

being duly sworn, says that he is the President of

INDIANHEAD ADVERTISER

which is a weekly shopper printed and published at

FREDERIC

in said county and state, that a notice, of which the annexed is a

printed copy taken from said shopper, was printed and published

in the full regular edition of said shopper once each week for

one successive weeks commencing and the

first publication on the 3rd day of April, 20 23

being one such publications.

Richard Lee President

Subscribed and sworn to before me this 5th day

of April, 20 23

Tamara J Nelson

Notary Public, Polk County, Wis.

My Commission expires 12/4/2026

FEES: one week at per WK=\$74.40

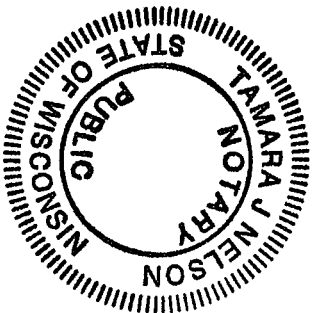
 weeks at per

Affidavit \$1.00

Includes WRN, WRS, TCN, TCS Advertisers

Total \$75.40

(Certification No. 187)



PUBLIC NOTICE

The Balsam Lake Protection and Rehabilitation District (the District) proposes to use an aquatic herbicide on up to 60 acres of Balsam Lake to control excessive growth of the aquatic invasive species, Curlyleaf pondweed (CLP).

Clarke Aquatic Services, Inc., a SOLitude Lake Management Company will conduct an application of the aquatic herbicide Aquathol K (liquid endotrally) targeting the CLP for control. It is anticipated that the application will occur sometime in spring, 2023 and will proceed only after the District obtains a permit for the herbicide application from the Wisconsin Department of Natural Resources.

The water use restrictions for Aquathol K are as follows: *There are no water use restrictions associated with the use of Aquathol K.*

The District will hold a public informational meeting on the proposed application 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 Balsam Lake Protection and Rehabilitation District P.O. Box 202 Balsam Lake, WI 54810 and to Wisconsin Department of Natural Resources, 810 West Maple Street, Spooner, WI 54801 within 5 days after the public notice is published.



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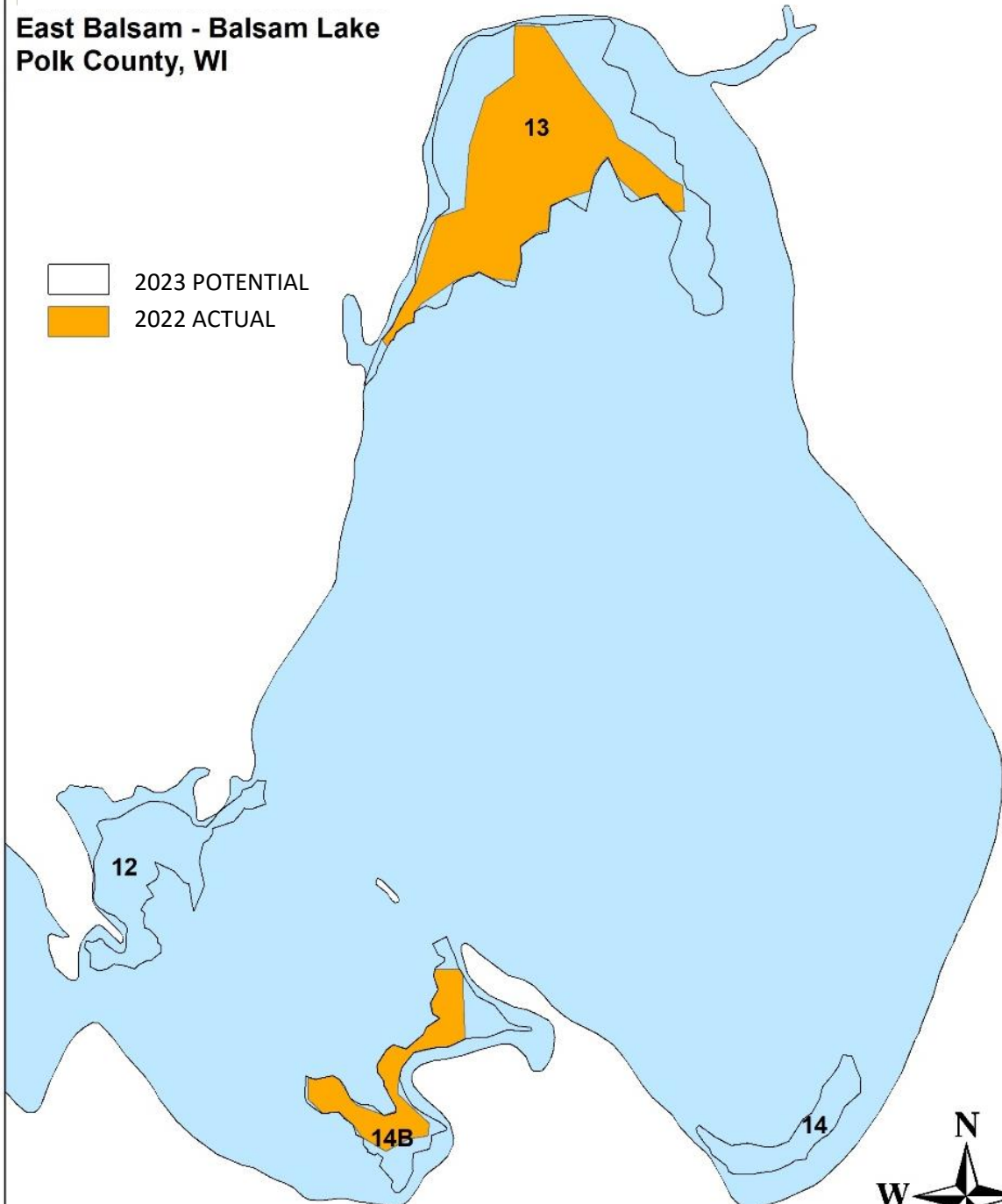
**BALSAM LAKE, POLK COUNTY, WISCONSIN
2023 POTENTIAL MANAGEMENT AREAS**

CLP Treatment Areas



**East Balsam - Balsam Lake
Polk County, WI**

-  2023 POTENTIAL
-  2022 ACTUAL



Endothall Chemical Fact Sheet

Formulations

Endothall is the common name of the active ingredient endothal acid (7-oxabicyclo[2,2,1]heptane-2,3-dicarboxylic acid). Endothall products are used to control a wide range of terrestrial and aquatic plants. Both granular and liquid formulations of endothall are available for aquatic use in Wisconsin. Two types of endothall are available: dipotassium salt (such as Aquathol®) and monoamine salts (such as Hydrothol 191). Trade names are provided for your reference only and are neither exhaustive nor endorsements of one product over another.

Aquatic Use and Considerations

Endothall is a contact herbicide that prevents certain plants from making the proteins they need. Factors such as density and size of the plants present, water movement, and water temperature determine how quickly endothall works. Under favorable conditions, plants begin to weaken and die within a few days after application.

Endothall products vary somewhat in the target species they control, so it is important to always check the product label for the list of species that may be affected. Endothall products are effective on Eurasian watermilfoil (*Myriophyllum spicatum*) and also kill desirable native species such as pondweeds (*Potamogeton* spp.) and coontail (*Ceratophyllum* spp.). In addition, Hydrothol 191 formulations can also kill wild celery (*Vallisneria americana*) and some species of algae (*Chara*, *Cladophora*, *Spirogyra*, and *Pithophora*).

Endothall will kill several high value species of aquatic plants (especially *Potamogeton* spp.) in addition to nuisance species. The plants that offer important values to aquatic ecosystems often resemble, and may be growing with those plants targeted for treatment. Careful identification of plants and application of

endothall products is necessary to avoid unintended harm to valuable native species.

For effective control, endothall should be applied when plants are actively growing. Most submersed weeds are susceptible to Aquathol formulations. The choice of liquid or granular formulations depends on the size of the area requiring treatment. Granular is more suited to small areas or spot treatments, while liquid is more suitable for large areas.

If endothall is applied to a pond or enclosed bay with abundant vegetation, no more than 1/3 to 1/2 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.

Post-Treatment Water Use Restrictions

Due to the many formulations of this chemical the post-treatment water use restrictions vary. Each product label must be followed. For all products there is a drinking water standard of 0.1 ppm and can not be applied within 600 feet of a potable water intake. Use restrictions for Hydrothol products have irrigation and animal water 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. The half-life (the time it takes for half of the active ingredient to degrade) averages five to ten days. Complete degradation by microbial action is 30-60 days. The initial breakdown product of endothall is an amino acid, glutamic acid, which is rapidly consumed by bacteria.

Impacts on Fish and Other Aquatic Organisms

At recommended rates, the dipotassium salts (Aquathol and Aquathol K) do not have any apparent short-term effects on the fish species that have been tested. In addition, numerous studies have shown the dipotassium salts induce no significant adverse effects in aquatic invertebrates (such as snails, aquatic insects, and crayfish) when used at label application rates. However, as with other herbicide use, some plant-dwelling populations of aquatic organisms may be adversely affected by application of endothall formulations due to habitat loss.

In contrast to the low toxicity of the dipotassium salt formulations, laboratory studies have shown the monoamine salts (Hydrothol 191 formulations) are toxic to fish at dosages above 0.3 parts per million (ppm). In particular, the liquid formulation will readily kill fish present in a treatment site. By comparison, EPA approved label rates for plant control range from 0.05 to 2.5 ppm. In recognition of the extreme toxicity of the monoamine salt, product labels recommend no treatment with Hydrothol 191 where fish are an important resource.

Other aquatic organisms can also be adversely affected by Hydrothol 191 formulations depending upon the concentration used and duration of exposure. Tadpoles and freshwater scuds have demonstrated sensitivity to Hydrothol 191 at levels ranging from 0.5 to 1.8 ppm.

Findings from field and laboratory studies with bluegills suggest that bioaccumulation of dipotassium salt formulations by fish from water treated with the herbicide is unlikely. Tissue sampling has shown residue levels become undetectable a few days after treatment.



Human Health

Most concerns about adverse health effects revolve around applicator exposure. Liquid endothall formulations in concentrated form are highly toxic. Because endothall can cause eye damage and skin irritation, users should minimize exposure by wearing suitable eye and skin protection.

At this time, the EPA believes endothall poses no unacceptable risks to water users if water use restrictions are followed. EPA has determined that endothall is not a neurotoxicant or mutagen, nor is it likely to be a human carcinogen.

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/>

