#### April 2022

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

Re: Proposed Management of Curlyleaf pondweed on 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), Harmony Environmental, and Clarke Aquatic Services, Inc. (Clarke) proposes to manage up to 60 acres on East Balsam Lake with an aquatic herbicide to control the excessive growth of the aquatic invasive species, Curlyleaf pondweed (CLP). The District proposes to conduct applications of Aquathol K (liquid endothall) to be performed by Clarke should the spring plant survey exceed thresholds established by the District to implement control measures. Should herbicide application be recommended, it is anticipated that the applications will occur sometime in spring, 2022 and will proceed only after the District obtains a permit for the project from the Wisconsin Department of Natural Resources. Notification of the exact date of applications and water use restrictions associated with the use of Aquathol K will be provided by the posting on the shoreline in and adjacent to treatment areas, and public access points. *There are no water use restrictions with the use of Aquathol K*. Since there are no water use restrictions with the use of Aquathol K, the yellow treatment area signs can be taken down and disposed of the day following application.

For additional information on the proposed management including a completed copy of the permit application, WDNR Chemical Fact Sheet on endothall, as well as proposed management map please visit: http://www.blprd.com

For questions about the project or to request a hard copy of the permit application, please contact: Tom Kelly, Balsam Lake Protection and Rehabilitation District: tkelly56@comcast.net or (612) 508-0879.



## 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 | Cignod and Cubmitted by | u io0# flugara and arch | in Longulou Q2 signed on | 2022 04 10700.20.57  |
|---------------------------|-------------------------|-------------------------|--------------------------|----------------------|
| This Application has been | Signed and Submitted by | y: 1:0#.1] wamsmembersh | ipjamykay82 signed or    | 12022-04-19108:30:57 |

| Site or Project Name:               | Balsam Lake   |                          |    |
|-------------------------------------|---|--------------------------|----|
| Site of Hojeet Name.                | The permit application will be saved automatically with this name |                          |    |
| Activity:                           | Chemical Control Application                                      |                          |    |
| Eligibility                         | Is there more than one property owner?                            | $\odot$ Yes $\bigcirc$ N | 0  |
| (All questions must be no for it to | Will there be uncontrolled surface water discharge?               | 🔾 Yes 🖲 N                | lo |
| be considered a private pond.)      | Does the water body have public access?                           | $\odot$ Yes $\bigcirc$ N | lo |

#### Enter previous years permit information below to import Contact Information (Optional)

#### 3200-004 Chemical Aquatic Control Application

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

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

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

#### 3200-004 Chemical Aquatic Plant Control Application

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

| Contact Information                        |  |
|--|--|
| Applicant Information                      |  |
| Organization                               | Balsam Lake Protection and Rehabilitation District |
| Last Name:                                 | Kelly  |
| First Name:                                | Tom  |
| Mailing Address:                           | P.O. Box 202                                       |
| City:                                      | Balsam Lake  |
| State:                                     | <u>WI</u>  |
| Zip Code:                                  | 54810  |
| Email:                                     |  |
| Phone Number:                              |  |
| (xxx-xxx-xxx)<br>Alternative Phone Number: |  |
| (xxx-xxx-xxxx)                             |  |

## Waterbody Address

| Last Name:                |                |
|---------------------------|----------------|
| First Name:               |                |
| Street Address:           | 903 Park Drive |
| City:                     | Balsam Lake    |
| State:                    | <u>WI</u>      |
| Zip Code:                 | 54810          |
| Email:                    |                |
| Phone Number:             |                |
| (XXX-XXX-XXXX)            |                |
| Alternative Phone Number: |                |
| (ххх-ххх-хххх)            |                |

## Applicator

| Name of Applicator Firm:     | Clarke Aquatic Services, Inc.                       |
|------------------------------|---|
| Applicator Certification #:  | 315594, 288191, 312329                              |
| Business Location License #: | 93-018750-012132                                    |
| Restricted Use Pesticide #:  |   |
| Address:                     | 20061 Edison Circle E                               |
| City:                        | Clearwater  |
| State:                       | <u>MN</u>   |
| Zip:                         | 55320   |
| Email:                       | akay@clarke.com, mswanson@clarke.com, srodriguez@cl |

| Phone Number: | 715 001 0700 |
|---------------|--------------|
|               | 112-891-0198 |

(xxx-xxx-xxxx)

| lividuals and organizations (e.g. Lake | District, Lake Association P | property Owners As   | sociation County I | Department of Recreation) |
|--|------------------------------|----------------------|--------------------|---------------------------|
| onsoring removal.                      |                              | roperty officiaria   |                    |                           |
| TE: Phone and email address are op     | tional fields. This informat | ion will be publicly | viewable if provid | led on this application.  |
| Uploaded riparian owners to attach     | ment tab                     |                      |                    |                           |
| Name                                   | Address                      | \$                   | Phone              | Email Address             |
|  |                              |                      |                    |                           |
|  |                              |                      |                    |                           |
|  |                              |                      |                    |                           |
| ite Information - Complete             |                              |                      |                    |                           |
| Vater Body to be Treated               |                              |                      |                    |                           |
| Waterbody Property                     | Owners Association           | Tom Kelly            |                    |                           |
| or Waterbody Dis                       | ,<br>trict Representative :  |                      |                    |                           |
|  | Water Pedy Name              | Balsam Lako          |                    |                           |
|  | water body Name:             |                      |                    |                           |
|  | County:                      | Polk                 |                    | 1                         |
|  | Latitude:                    | 45.4653956           |                    |                           |
|  | Longitude:                   | -92.4272995          |                    |                           |
|  | Section:                     | 02                   |                    |                           |
|  | Section.                     |                      |                    |                           |
|  | Township:                    | 35                   |                    |                           |
|  | Range:                       | 17                   |                    |                           |
|  | Direction:                   | ● E ○ W              |                    |                           |
| Wat                                    | erbody Surface Area:         | 254                  | acres              |                           |
|  |                              |                      |                    |                           |
| Estimated Surface a                    | ea that is 10ft or less      |                      | acres              |                           |

| Area(s) Proposed for Contro        | d:               |                  |                           |                     |                 |                       |        |             |
|------------------------------------|------------------|------------------|---------------------------|---------------------|-----------------|-----------------------|--------|-------------|
| Site Name                          | Treatment        | Treatment        | Width                     | Estimated Acreage   | 2               | Average Depth         | Calcul | ated Volume |
| (Optional)                         | <u>Length</u>    |                  |                           |                     |                 |                       |        |             |
|                                    | 0 <sub>ft.</sub> | x 0              | + 43,560 ft. <sup>2</sup> | = 60.00             | ac 6            | 5 ft =                | 360.00 | ac-ft       |
|                                    |                  | ft.              |                           |                     |                 |                       |        |             |
|                                    |                  | Estim            | ated Acreage              | 60.00               | ) <sub>ac</sub> | Calculated            | 360.00 | ac-ft       |
|                                    |                  |                  | Grand Total               |                     |                 | Volume Grand<br>Total |        |             |
|                                    |                  |                  | _                         |                     |                 |                       |        |             |
| Is the area with in or adjacent to | a sensitive area | designated by th | ne Department (           | of Natural Resource | es.             |                       |        |             |

○ 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:

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

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

| Chemical Control           |                |           |             |
|----------------------------|----------------|-----------|-------------|
| Full Trade Name of Propose | ed Chemical(s) |           |             |
| 🗌 Agristar 2,4-D Amine     | Clipper        | 🗌 К-Теа   | SCI-62      |
| 🗌 Algimycin PWF            | Clipper SC     | 🗌 Littora | 🗌 Sculpin G |

| Alligare 2,4-D          | Current<br>Cutrine-Plus | Milestone Nautique Nautique | SeClear SeClear G Seclear Blue |
|-------------------------|-------------------------|-----------------------------|--------------------------------|
|                         |                         |                             |                                |
|                         |                         |                             |                                |
| 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              | UWeedestroy AM-40              |

### Other Proposed Chemical(s):

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

#### What were the results of the treatment?

| Reduction of CLP populations has been successful over the course of several years, thresholds |
|---|
| have been established for warranting herbicide application on years the spring survey exceeds |
| that threshold.   |

Method of Application: Injection

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

| Alternatives to Chemical<br>Control: | Feasible?                    | If No, Why Not?                    |
|--------------------------------------|------------------------------|------------------------------------|
| 1. Mechanical harvesting             | ● Yes ○ No                   | active harvesting program in place |
| 2. Manual removal                    | 🔾 Yes 🖲 No                   | areas too large, too expensive     |
| 3. Sediment screens/covers           | 🔾 Yes 🖲 No                   | prevents beneficial plant growth   |
| 4. Dredging                          | 🔾 Yes 🖲 No                   | areas too large, too expensive     |
| 5. Waterbody drawdown                | 🔾 Yes 🖲 No                   | not site specific                  |
| 6. Nutrient controls in watershed    | 🔾 Yes 🖲 No                   | not site specific                  |
| 7. Other:                            | $\bigcirc$ Yes $\bigcirc$ No |                                    |
|                                      |                              |                                    |

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

Will surface water outflow and/or overflow be controlled to prevent chemical loss?  $\bigcirc$  Yes  $\odot$  No

Is the treatment area greater than 5% of surface area?

○ Yes ● No

#### WPDES Permit Request

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

○ Yes - complete section VII with signature.

- No
  - Already have WPDES
  - $\bigcirc$  WPDES coverage not needed

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

#### \* indicates completion of this item is required

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

| Riparian Owners          | I File Attachment | TaxRollParcelSpecialDistrictExtract2022.xlsx   |
|--------------------------|-------------------|--|
| Public Notice            | IIIe Attachment   | BalsamLake2022Proof of Publication.pdf   |
| Large Scale<br>Worksheet | File Attachment   |  |
| Site Map                 | J File Attachment | PotamogetoncrispusCurly-<br>leafpondweedBalsamLakePretreatmentMay172018MBer<br>gERSLLC.jpg |

#### **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:<br>(round up to nearest whole acre, to maximum of 50 acres) | 60.00      |
|--|------------|
| acres X \$25 per acre = \$<br>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-00034980

Payment Confirmation Number: WS2WT3008333269

#### 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 <a href="http://dnr.wi.gov/topic/invasives/disinfection.html">http://dnr.wi.gov/topic/invasives/disinfection.html</a>

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 2022-

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.



Certification No. 187

PRINTER'S AFFIDAVIT

Polk County.



# 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 ½ 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 Hyrdtohol 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.

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

#### **Endothall Chemical Fact Sheet**

# 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 <u>www.epa.gov/pesticides</u>

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

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

Wisconsin Department of Health Services <a href="http://www.dhs.wisconsin.gov/">http://www.dhs.wisconsin.gov/</a>

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

