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State of Wisconsin
Department of Natural Resources
Water Permit Central Intake - WT/3
PO Box 7185, Madison, WI 53707-7185
dnr.wi.gov

Chemical Aquatic Plant Control Application and Permit
Wisconsin Pollutant Discharge Elimination System (WPDES)
Pesticide Pollutant Permit Application

Form 3200-004 (R 11/11)

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.].

DNR Use Only
Table with 2 columns: ID Number, Permit Expiration Date, Waterbody #, Fee Received. Values: NE-2014-20-1740, 10-01-2014, 38700, \$1270.00

Section I - Applicant Information - Name of Permit Applicant. Also indicate names and addresses of all individuals, associations, communities or town sanitary districts sponsoring treatment. Attach additional sheets if necessary.

Form with fields for Name, Street Address, City, State, ZIP Code, Phone Number, Email Address. Applicant: Long Lake Preservation Association - Richard Clements, WI 53011, kingrichard@localnet.com

Section II - Aquatic Plant Control Location

Form with fields for Waterbody to be Treated, Lake Surface Area, Estimated Surface Area, County, Section, Township, Range, Name of Applicator or Firm, Street or Route, City, State, ZIP Code, Adjacent Riparian Property Owner Names, Name of Lake Property Owners' Association Representative.

Table for Area(s) Proposed for Control. Columns: Treatment Length, Treatment Width, Estimated Acreage, Average Depth, Total Estimated Acres. Includes calculations for lines A-E and Grand Total.

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. Private pond treatments are exempted from this requirement.

Form with fields: Is this area within or adjacent to a sensitive area designated by the Department of Natural Resources? DNR Use: NHI Review? Describe:

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### Section III – Fees

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.
4. Fee calculations:

Basic Permit Fee (non-refundable) ..... \$ 20.00  
 If proposed treatment is over 0.25 acre, calculate acreage fee:  
 (round up to nearest whole acre, to maximum of 50 acres.)

50 acres X \$25 per acre = \$ 1250.00

If proposed treatment is ≤ 0.25 acre, acreage fee is \$0.

Enter Acreage Fee (from above) ..... 1250.00

Total Fee Enclosed ..... \$ 1270.00

**Site Map:** Attach a sketch or a printed map of lake indicating area and dimensions of each individual area where plant control is desired and flow of surface water outside treatment area. Also show location of property owners riparian to and adjacent to the treatment area. Attach a separate list of owners and corresponding treatment dimensions coded to the lake map, if necessary.

### Section IV – Reasons for Aquatic Plant Control

Is this permit being requested in accordance with an approved Aquatic Plant Management Plan?  Yes  No

Treatment Type:

Lake  Pond  Wetland  Marina  Other

Goal of Aquatic Plant Control:

- Reduce nuisance algae accumulation
- Maintain navigational channel for common use
- Maintain private access for boating
- Maintain private access for fishing
- Improve swimming
- Control of purple loosestrife
- Control of invasive exotics
- Other: \_\_\_\_\_

Nuisance Caused By:

- Algae
- Emergent water plants (majority of leaves and stems growing above water surface, e.g. cattails, bulrushes)
- Floating water plants (majority of leaves floating on water surface, e.g., waterlilies, duckweed)
- Submerged water plants (leaves and stems below water surface, flowering parts may be exposed, e.g., milfoil, coontail)
- Other: \_\_\_\_\_

List Target Plants

Curlyleaf Pondweed  
Eurasian Watermilfoil

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

### Section V – Chemical Control

Alternatives to Chemical Control:

	Feasible?	If No, Why Not?
1. Mechanical harvesting	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<u>plant regrowth, fragmentation</u>
2. Hand pulling	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<u>area too large</u>
3. Hand raking	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<u>area too large, plant regrowth, fragmentation</u>
4. Hand cutting	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<u>area too large, plant regrowth, fragmentation</u>
5. Sediment screens/covers	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<u>area too large, would also prevent desirable plant growth</u>
6. Dredging	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<u>too expensive</u>
7. Lake drawdown	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<u>not site specific</u>
8. Nutrient controls in watershed	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<u>not site specific</u>
9. Other: _____	<input type="checkbox"/> Yes <input type="checkbox"/> No	_____

**Note: If proposed treatment involves multiple properties, consider feasibility of EACH alternative for EACH property owner.**  
 If you checked yes to any of the alternatives listed above, please explain your decision to use chemical controls:

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Section V - Chemical Control (continued)

Trade Name of Proposed Chemical(s)

Aquathol K (liquid endothal)

DMA 4 IVM (liquid 2, 4-D)

Weedestroy AM 40 (liquid 2, 4-D)

Method of Application: LittLine, Littoral Zone Treatment Technology

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

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

What were the results of the treatment?

See Onterra's 2013 Final Report

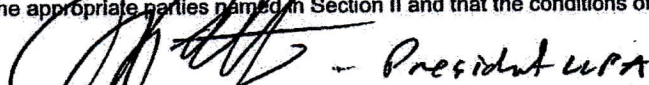
Note: Chemical fact sheets for aquatic pesticides used in Wisconsin are available from the Department of Natural Resources upon request.

Section VI - 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 has provided 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.

Check if you are signing as Agent for Applicant.

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 and that the conditions of the permit and pesticide use will be adhered to.

  
Signature of Applicant

2-23-2014  
Date Signed

All portions of this permit, map and accompanying cover letter must be in possession of the chemical applicator at time of treatment. During treatment all provisions of Chapter NR 107, specifically ss. NR 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.

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## Section VII – WPDES Permit Request

Is WPDES coverage being requested? Refer to <http://dnr.wi.gov/org/water/wm/ww/aquaticpesticides.htm> for more information.

Yes  No If no, you do not need to complete this section.

Select which permit you are requesting:  WI-0064556-1 Aquatic Plants, Algae & Bacteria  
 WI-0064564-1 Aquatic Animals  
 WI-0064581-1 Mosquitoes & other Flying Insects

Indicate WPDES permittee responsible for the pollutant discharge:  Applicator  Sponsor

Do you expect the pest control activity will result in a detectable pollutant discharge to waters of the state beyond the treatment area boundary or a pollutant residual in waters of the state after the treatment project is completed?  Yes  No

If yes, identify the pollutant(s): \_\_\_\_\_

Are you planning to incorporate integrated pest management principles, as specified in the WPDES permit, into your pest control activity to minimize any pollutant residual or pollutant discharge beyond the treatment area?  Yes  No

Type of WPDES coverage being requested:  One Treatment Site  Statewide Coverage

For informational purposes, select areas of WI for most of your aquatic treatments:  NW  NE  SW  SE

Is WPDES coverage being requested for more than 1 year?

Yes  No If yes, the permittee will remain in "active" WPDES status until a Notice of Termination is submitted.

I hereby certify that I am the authorized representative (as specified in Ch. NR 205.07(1)(g), Wis. Adm. Code) of the pest treatment activity which is the subject of this permit application. I certify that the information contained in this form and attachments is, to the best of my knowledge, true, accurate and complete.

\_\_\_\_\_  
Signature of Authorized Representative

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Date Signed

## Section VIII – Permit to Carry Out Chemical Treatment (Leave Blank – DNR Use Only)

The foregoing application is approved. Permission is hereby granted to the applicant to chemically treat the waters described in the application during the season of 2014.

Application fee received?

Yes  No

State of Wisconsin  
Department of Natural Resources  
For the Secretary

Advance notification of treatment required?

Yes  No

By Mary Hausberg  
Regional Director or Designee

3-25-2014  
Date Signed

3-25-2014  
Date Mailed

**Please Note:**

If you believe that you have a right to challenge this decision, you should know that Wisconsin statutes and administrative rules establish time periods within which requests to review Department decisions must be filed.

For judicial review of a decision pursuant to ss. 227.52 and 227.53, Wis. Stats., you have 30 days after the decision is mailed or otherwise served by the Department, to file your petition with the appropriate circuit court and serve the petition on the Department. Such a petition for judicial review shall name the Department of Natural Resources as the respondent.

This notice is provided pursuant to s. 227.48(2), Wis. Stats.

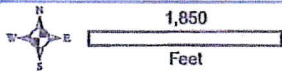
To request a contested case hearing pursuant to s. 227.42, Wis. Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to serve a petition for hearing on the Secretary of the Department of Natural Resources. The filing of a request for a contested case hearing is not a prerequisite for judicial review and does not extend the 30-day period for filing a petition for judicial review.

**Targeting CLP: Liquid Endothall**

Site	Acres	Ave. Depth (feet)	Volume (ac-ft)	Dose (ppm al)	Aquathol K (gallons)
A-14	3.0	5.0	15.0	3.5	33.7
C-14	4.7	3.5	16.5	2.5	26.4
D-14	7.8	4.0	31.2	2.5	50.1
E-14	5.4	3.0	16.2	2.5	26.0
H-14	1.7	3.5	6.0	3.0	11.5
I-14	3.0	3.5	10.5	3.0	20.2
J-14	7.9	4.0	31.6	3.0	60.9
K-14	3.6	4.0	14.4	3.0	27.8
L-14	4.6	3.0	13.8	2.5	22.2
M-14	0.9	5.0	4.5	3.0	8.7
N-14	1.7	6.0	10.2	3.0	19.7
O-14	0.9	4.0	3.6	3.0	6.9
R-14	0.7	3.0	2.1	3.0	4.0
S-14	0.7	3.0	2.1	3.0	4.0
T-14	2.0	3.0	6.0	3.0	11.6
<b>Total</b>	<b>48.6</b>		<b>183.6</b>		<b>333.8</b>

**Targeting EWM: Liquid 2,4-D**

Site	Acres	Ave. Depth (feet)	Volume (ac-ft)	Dose (ppm ae)	DMAIV (gallons)
L-14	4.6	3.0	13.8	3.0	29.6
<b>Total</b>	<b>4.6</b>		<b>13.8</b>		<b>29.6</b>



**Onterra LLC**  
 Lake Management Planning  
 815 Progress Rd  
 De Pere, WI 54115  
 920.338.8400  
 www.onterra-eco.com

Sources:  
 Roads and Hydro: WDNR  
 Bathymetry: WDNR 197, Digitized by Onterra  
 Aquatic Plants: Onterra, 2013  
 Map Date: October 22, 2013  
 Filename: LongLk\_CLP\_TreatStrat.mxd



Project Location in Wisconsin

**Legend**

-  Preliminary 2014 CLP Treatment Strategy
-  Preliminary 2014 EWM Treatment Strategy

**Long Lake**  
 Fond du Lac County, Wisconsin  
**2014 Preliminary AIS Treatment Strategy**

# 2,4-D Chemical Fact Sheet

## Formulations

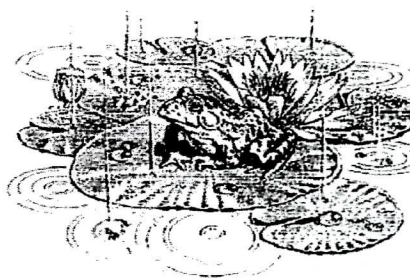
2,4-D is an herbicide that is widely used as a household weed-killer, agricultural herbicide, and aquatic herbicide. It has been in use since 1946, and was registered with the EPA in 1986 and re-reviewed in 2005. The active ingredient is 2,4-dichloro-phenoxyacetic acid. There are two types of 2,4-D used as aquatic herbicides: dimethyl amine salt and butoxyethyl ester. Both liquid and slow-release granular formulations are available. 2,4-D is sold under the trade names Aqua-Kleen, Weedar 64 and Navigate (product names are provided solely for your reference and should not be considered endorsements nor exhaustive).

## Aquatic Use and Considerations

2,4-D is a widely-used herbicide that affects plant cell growth and division. It affects primarily broad-leaf plants. When the treatment occurs, the 2,4-D is absorbed into the plant and moved to the roots, stems, and leaves. Plants begin to die in a few days to a week following treatment, but can take several weeks to decompose. Treatments should be made when plants are growing.

For many years, 2,4-D has been used primarily in small-scale spot treatments. Recently, some studies have found that 2,4-D moves quickly through the water and mixes throughout the waterbody, regardless of where it is applied. Accordingly, 2,4-D has been used in Wisconsin experimentally for whole-lake treatments.

2,4-D is effective at treating the invasive Eurasian watermilfoil (*Myriophyllum spicatum*). Desirable native species that may be affected include native milfoils, coontail (*Ceratophyllum demersum*), naiads (*Najas* spp.), elodea (*Elodea canadensis*) and duckweeds (*Lemna* spp.). Lilies (*Nymphaea* spp. and *Nuphar* spp.) and bladderworts (*Utricularia* spp.) also can be affected.



## Post-Treatment Water Use Restrictions

There are no restrictions on eating fish from treated water bodies, human drinking water or pet/livestock drinking water. Following the last registration review in 2005, the ester products require a 24-hour waiting period for swimming. Depending on the type of waterbody treated and the type of plant being watered, irrigation restrictions may apply for up to 30 days. Certain plants, such as tomatoes and peppers and newly seeded lawn, should not be watered with treated water until the concentration is less than 5 parts per billion (ppb).

## Herbicide Degradation, Persistence and Trace Contaminants

The half-life of 2,4-D (the time it takes for half of the active ingredient to degrade) ranges from 12.9 to 40 days depending on water conditions. In anaerobic lab conditions, the half-life has been measured up to 333 days. After treatment, the 2,4-D concentration in the water is reduced primarily through microbial activity, off-site movement by water, or adsorption to small particles in silty water. It is slower to degrade in cold or acidic water, and appears to be slower to degrade in lakes that have not been treated with 2,4-D previously.

There are several degradation products from 2,4-D: 1,2,4-benzenetriol, 2,4-dichlorophenol, 2,4-dichloroanisole, chlorohydroquinone (CHQ), 4-chlorophenol and volatile organics.



### Impacts on Fish and Other Aquatic Organisms

Toxicity of aquatic 2,4-D products vary depending on whether the formulation is an amine or an ester 2,4-D. The ester formulations are toxic to fish and some important invertebrates such as water fleas (*Daphnia*) and midges at application rates; the amine formulations are not toxic to fish or invertebrates at application rates. Loss of habitat following treatment may cause reductions in populations of invertebrates with either formulation, as with any herbicide treatment. These organisms only recolonize the treated areas as vegetation becomes re-established.

Available data indicate 2,4-D does not accumulate at significant levels in the bodies of fish that have been tested. Although fish that are exposed to 2,4-D will take up some of the chemical, the small amounts that accumulate are eliminated after exposure to 2,4-D ceases.

On an acute basis, 2,4-D is considered moderately to practically nontoxic to birds. 2,4-D is not toxic to amphibians at application rates; effects on reptiles are unknown. Studies have shown some endocrine disruption in amphibians at rates used in lake applications, and DNR is currently funding a study to investigate endocrine disruption in fish at application rates.

As with all chemical herbicide applications it is very important to read and follow all label instructions to prevent adverse environmental impacts.

### Human Health

Adverse health effects can be produced by acute and chronic exposure to 2,4-D. Those who mix or apply 2,4-D need to protect their skin and eyes from contact with 2,4-D products to minimize irritation, and avoid inhaling the spray. In its consideration of exposure risks, the EPA believes no significant risks will occur to recreational users of water treated with 2,4-D.

Concerns have been raised about exposure to 2,4-D and elevated cancer risk. Some (but not all) epidemiological studies have found 2,4-D associated with a slight increase in risk of non-Hodgkin's lymphoma in high exposure populations (farmers and herbicide applicators). The studies show only a possible association that may be caused by other factors, and do not show that 2,4-D causes cancer. The EPA determined in 2005 that there is not sufficient evidence to classify 2,4-D as a human carcinogen.

The other chronic health concern with 2,4-D is the potential for endocrine disruption. There is some evidence that 2,4-D may have estrogenic activities, and that two of the breakdown products of 2,4-D (4-chlorophenol and 2,4-dichloroanisole) may affect male reproductive development. The extent and implications of this are not clear and it is an area of ongoing research.

### For Additional Information

Environmental Protection Agency  
Office of Pesticide Programs  
[www.epa.gov/pesticides](http://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/>

