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 2025-01-28T13:42:34

Site or Project Name:	Deep Lake 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	Deep Lake Residents
Last Name:	Yapp
First Name:	Craig
Mailing Address:	312 Fish Lane
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:	312 Fish Lane
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 : ☑ None

Water Body or Wetland Name: Deep Lake

Primary County: Adams

Latitude: 43.7812

Longitude: -89.6454

Section: 15

Township: 15

Range: 07

Direction: ◉ E ○ W

Waterbody Surface Area: 35 acres

Estimated Surface area that is 10ft or less 10 acres

Proposed Control Area(s)

Area(s) Proposed for Control:

Site Name (Optional)	Treatment Length		Treatment Width			Estimated Acreage		Average Depth		Calculated Volume	
D-1	0	ft. x	0 ft.	÷ 43,560 ft.^{2} =		3.57	ac	10.00	ft =	35.70	ac-ft
D-2	0	ft. x	0 ft.	÷ 43,560 ft.^{2} =		2.37	ac	7.00	ft =	16.59	ac-ft
D-3	0	ft. x	0 ft.	÷ 43,560 ft.^{2} =		0.85	ac	7.00	ft =	5.95	ac-ft
D-4	0	ft. x	0 ft.	÷ 43,560 ft.^{2} =		2.89	ac	10.00	ft =	28.90	ac-ft
D-5	0	ft. x	0 ft.	÷ 43,560 ft.^{2} =		2.39	ac	6.00	ft =	14.34	ac-ft

Estimated Acreage Grand Total 12.07 ac

Calculated Volume Grand Total 101.48 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		☑ 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	Will create for fragmentation
2. Manual removal	○ Yes ◉ No	Area too large
3. Sediment screens/covers	○ Yes ◉ No	Too costly
4. Dredging	○ Yes ◉ No	Too costly
5. Waterbody drawdown	○ Yes ◉ No	N/A
6. Nutrient controls in watershed	○ Yes ◉ No	N/A
7. Other:	○ Yes ◉ No	N/A

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)
Agristar 2,4-D Amine 4 Herbicide		42750-19	0.300

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	Deep Lake Riparian List 2025.docx
Public Notice	File Attachment	Newspaper ad 2025.jpg
Large Scale Worksheet	File Attachment	Deep Lake 2025 3200-004 Signed.pdf
Site Map	File Attachment	Deep Lake 2024 Map USE THIS.pdf
Lake Management Plan	File Attachment	Deep Lake propsed herbicide treatment areas 2024.pdf
Lake Management Plan	File Attachment	Neewspaper Affidavit of Publication 2025.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: (round up to nearest whole acre, to maximum of 50 acres)	12.07
acres X $25 per acre = $	$325.00
If proposed treatment is less than 0.25 acre, acreage fee is $0	
Basic Permit Fee (non-refundable)	$20.00
Total Fee	$345

Payment Information

Invoice Number:

	WP-00050559
Payment Confirmation Number:	WS2WT3012147334
Amount Paid:	$345

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.

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: Craig Yapp

Date Completed: 1/21/2025

Name of Lake: Deep 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 introduced into Deep 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)

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? 0 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:)
- ☒ 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: Local residents are working with County Water Resource agents

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.

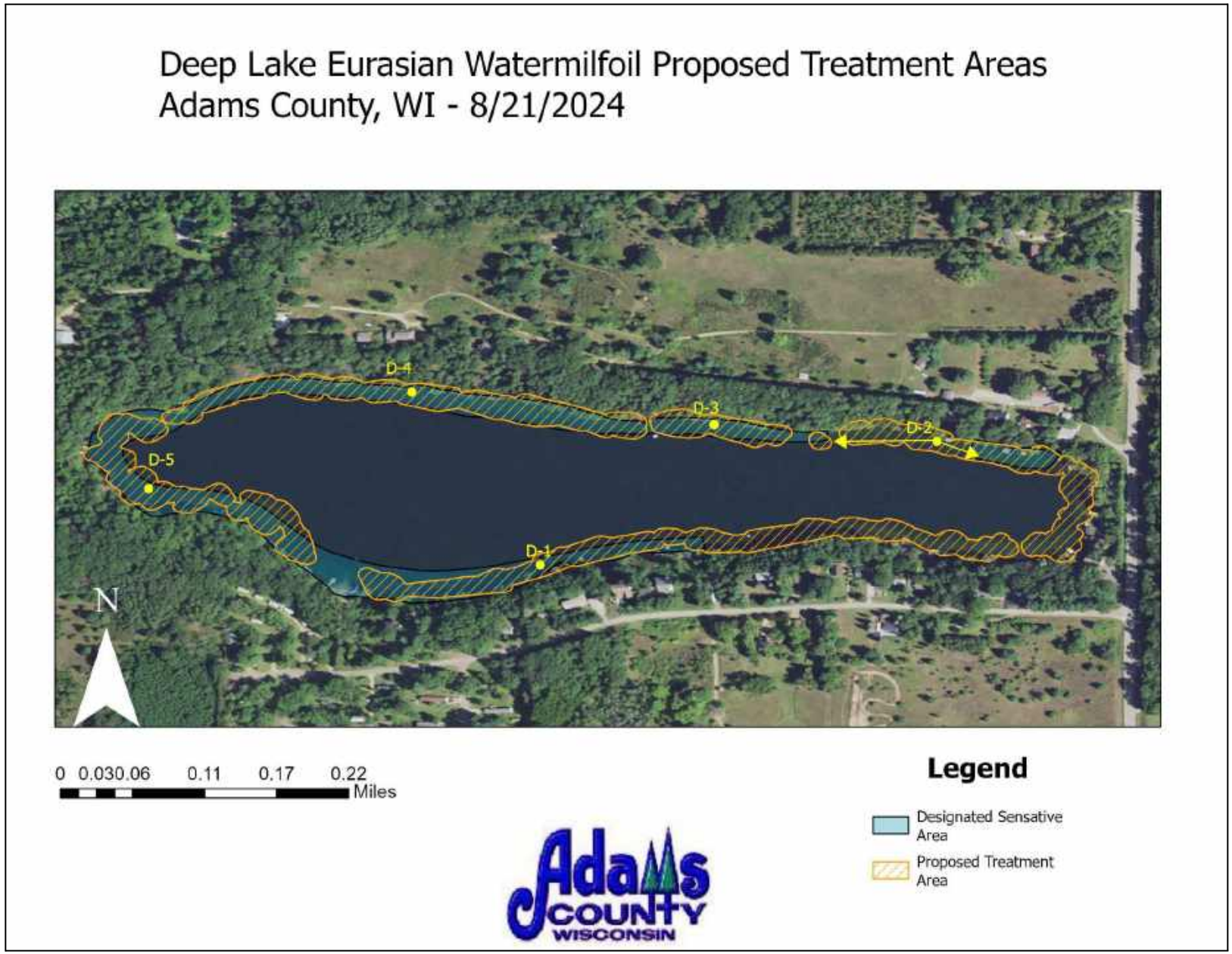
NOTE: This form is to be updated once every 5 years to include new information. Modifications of the proposed treatment within the 5-year period also require re-submittal of this form if the location or target organisms are changed, or if the treatment area is expanded by more than 10 percent.

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 [signature] For Carey Yapp 1/21/2025

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

Figure 5 - Proposed treatment areas



Deep Lake
Adams County

Meander Survey and proposed Herbicide Treatment Areas for Eurasian WaterMilfoil

October 21, 2024

On August 21, 2024 Adams County Land and Water Staff completed a meander survey via kayak to visually assess the extent of the invasive species Eurasian Watermilfoil (EWM) in Deep Lake.

Field Collection

Using a kayak, the perimeter of the lake was traveled counterclockwise starting at the southern shore. Populations of EWM were visually noted and marked with a polygon on FieldMaps (ArcGIS) by traveling around the perimeter of infested areas and dropping pins to close off the polygon. Areas were denoted “scattered”, “moderate”, or “dense” based on how much EWM was present within an infested area.

Based on the visual survey, 3.6 acres of EWM was mapped. This accounts for about 10% of Deep Lake’s acreage. Despite Deep Lake having good water clarity, there may be limitations in how much EWM was visually spotted if it was growing beyond what could be

seen through the water column. EWM grew from shore to about a depth of 20ft and was present around almost the entire perimeter in different densities.
Refer to *figure 1*, which represents the beds of milfoil as mapped in FieldMaps with their associated densities.

From a limited sample, the milfoil at Deep Lake Presented as "true" eurasian watermilfoil with 12+ pairs of leaflets (*figure 2, figure 3*). Hybrid milfoil is known to be present in the lake but areas infested, and of what strain, is currently unknown.

Proposed Treatment Area Methods

The proposed treatment area map (*figure 5*)was created using the milfoil bed polygons that were mapped in FieldMaps (*from figure 1*). Using the data collected in the field, the milfoil beds in close proximity to one-another were merged into treatment areas, 5 in total. From the merged polygons, a 25ft buffer was added to ensure all milfoil was being accounted for. This is what the treatment areas D-1 to D-5 represent. The 25ft buffer was created to cover the littoral zone, scattered milfoil, and unknown milfoil, but can be adjusted larger or smaller based on the recommendations of the WI Department of Natural Resources Aquatic Plant Management Staff. It should be noted that a large portion of the treatment area encompasses the lake's designated "sensitive areas", which are critical to the lake's ecology.

The acreage of each treatment area was calculated in ArcGIS. Using visual estimates from the field and back-checking bathymetry maps, the average depth of each treatment area was determined. This was used to find the volume (acre-ft) of each treatment area in the lake (*figure 4*).

To determine where the thermocline resides, temperature profile data that was collected by Deep Lake volunteers through the Citizen Lake Monitoring program was graphed. Data

from May, June, July, and September 2024 were compared. It was determined that through this time period, the metalimnion resided from 14ft to 32ft and the thermocline fell at about 15ft of depth.

Summary

The invasive species, eurasian watermilfoil, was present around the entirety of the lake in various densities. The treatment areas cover a large portion of the littoral zone of the lake. Extra considerations should be taken in the designated "sensitive areas" of the lake. The preservation of native aquatic plants is important to the health of the lake and herbicide quantity should reflect this consideration. These maps and figures represent where milfoil was found and where treatment would be most effective. No treatment may occur without the approval of your local WI Department of Natural Resources Aquatic Plant Management staff. This plan was drafted as guidance for practical lake management and should be updated/amended as recommended by the WI Department of Natural Resources or Adams Land and Water Conservation Department.

If you have questions or concerns, please reach out to Keifer Sroka, Adams County Lakes Specialist (keifer.sroka@co.adams.wi.us |608-339-4269)

Figure 1 - Eurasian watermilfoil beds mapped in FieldMaps via Kayak.

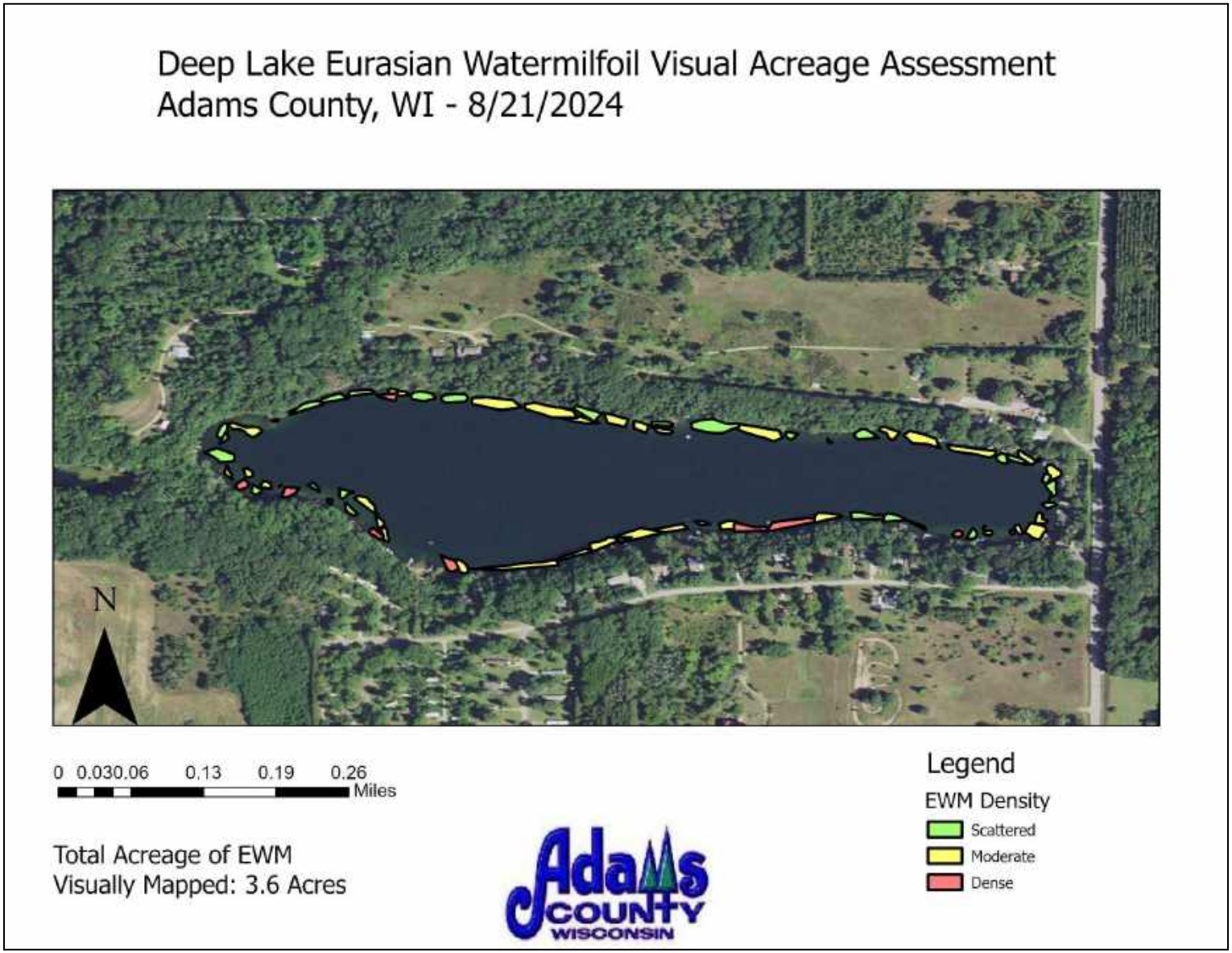


Figure 2 - Eurasian watermilfoil (EWM) sample

Figure 3 - Note 12+ leaflet pairs denoting "true" EWM

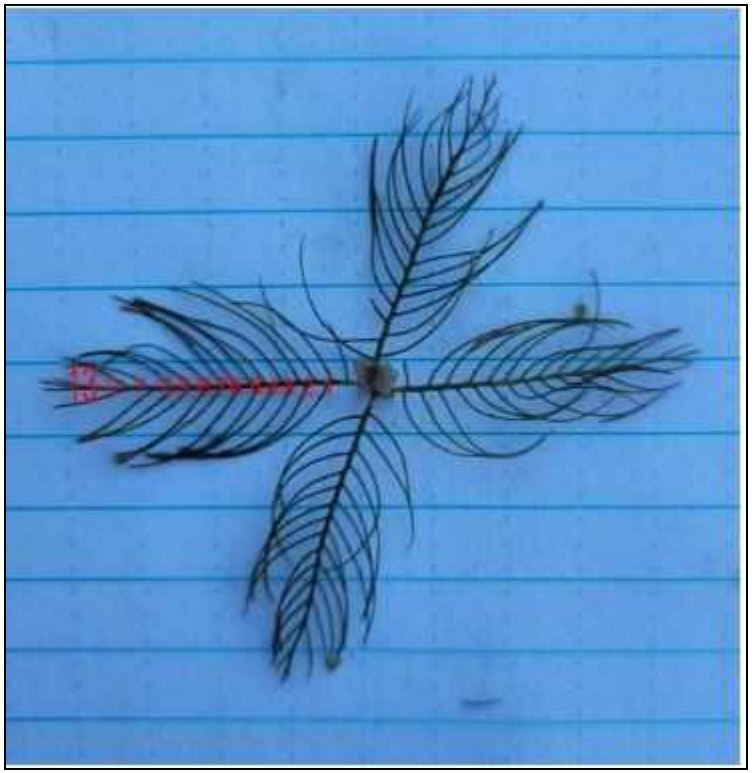


Figure 4 - Treatment area volume and temperature profile of Deep Lake in the year 2024

Site	Acres	Ave Depth	Total Volume (acre-feet)
D-1	3.57	10	35.7
D-2	2.37	7	16.59
D-3	0.85	7	5.95
D-4	2.89	10	28.9
D-5	2.39	6	14.34
Total	**12.07**		**101.48**
Epilimniotic Depth (ft) - 15ft			

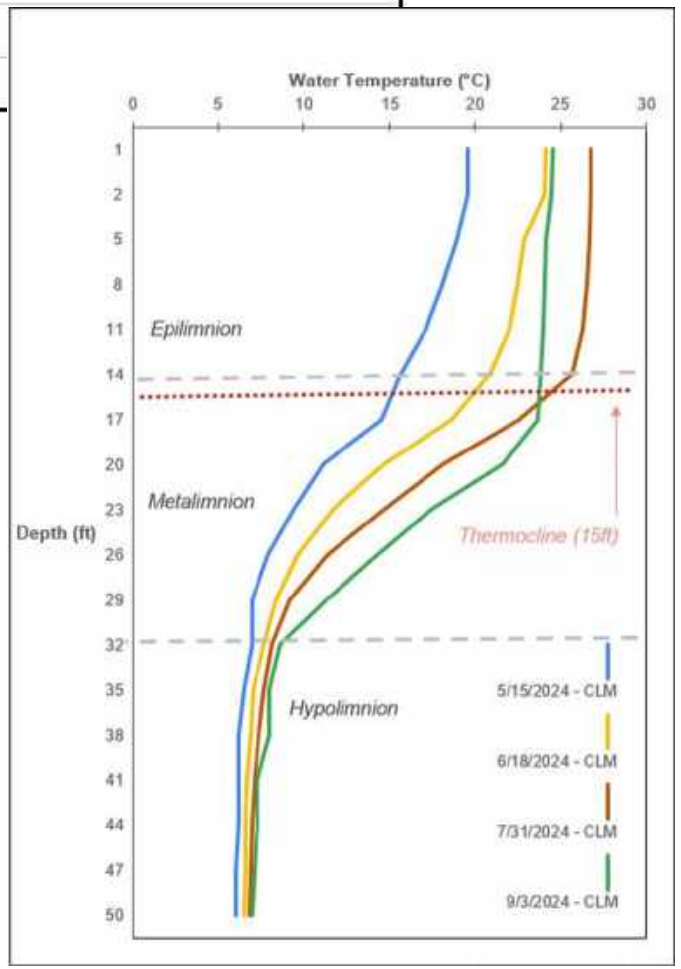
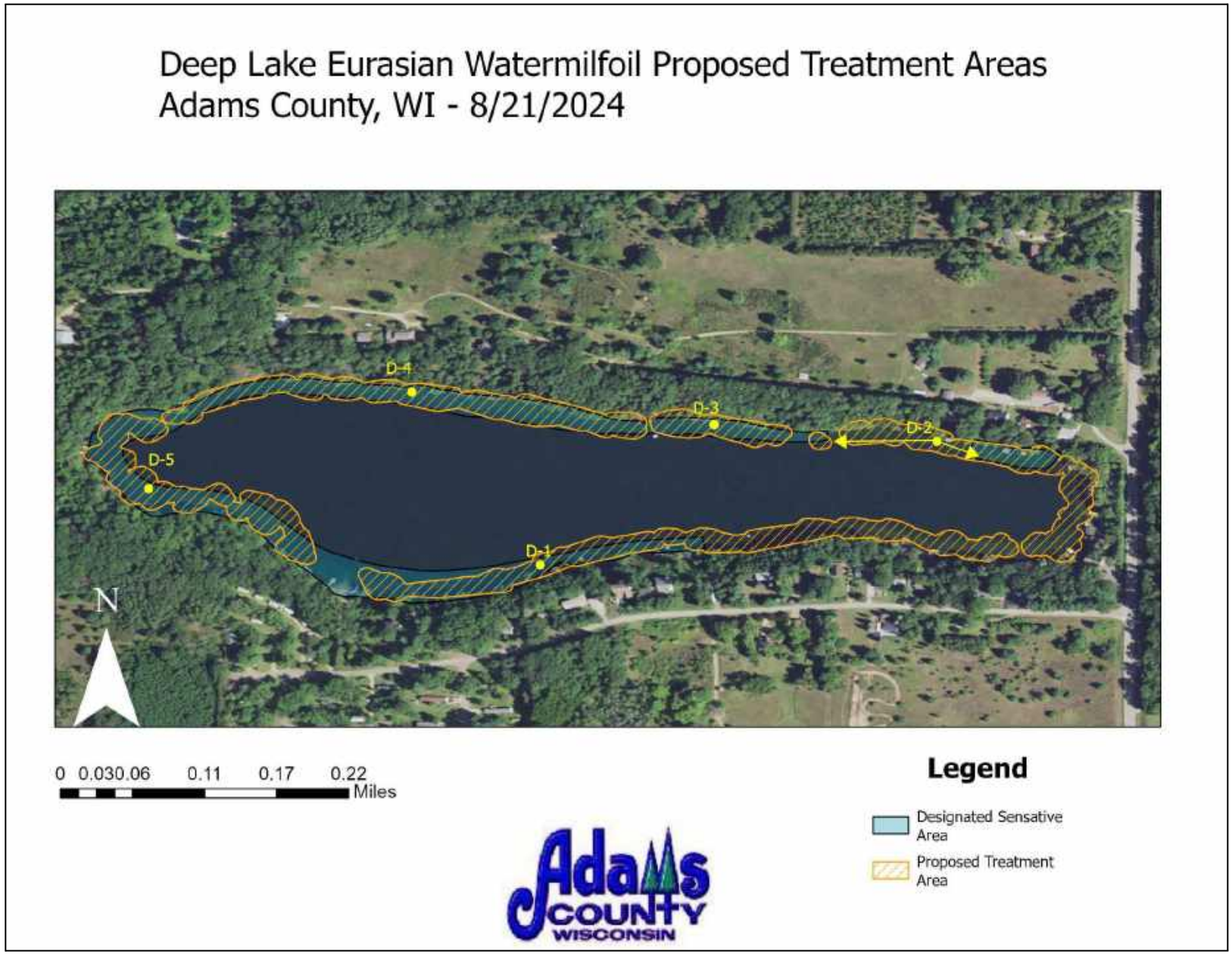


Figure 5 - Proposed treatment areas



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
Agri-Star Amine 2,4-D	Liquid Dimethylamine Salt 2,4-D	

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

CONSUMING FISH 0 Days

DRINKING WATER 21 Days

PET/LIVESTOCK WATER 7 Days

HOUSEHOLD USE (dishes, laundry, etc.) 0 Days

IRRIGATION (CROP) 21 Days

IRRIGATION (OTHER) 21 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 Deep Lake

CONTACT Craig Yapp

PHONE 608-220-5772

PUB-FH-443 2011

2,4-D CHEMICAL FACT SHEET

Formulations

2,4-D has been widely used since 1946 as a household weed-killer, agricultural herbicide and aquatic herbicide. It was registered with the U.S. EPA in 1986 and re-reviewed in 2005. It is currently under registration review. An interim registration review decision is expected in 2023. The active ingredient is 2,4-dichloro-phenoxyacetic acid. There are three types of 2,4-D used as aquatic herbicides: dimethyl amine salt, butoxyethyl ester and choline salt. 2,4-D is available in both liquid and granular formulations. It is labeled for control of emergent, floating-leaf and submerged vegetation using direct foliar, surface or subsurface application. Commercial formulations approved for aquatic use in Wisconsin include Weedar® 64, Sculpin® G and Freelexx®.[*]

Aquatic Use and Considerations

2,4-D is a systemic herbicide (i.e., it moves throughout the plant tissue) that primarily affects broadleaf plants. It is a WSSA Group 4 herbicide, meaning that the mechanism of action is by mimicking the plant growth hormone auxin. Following treatment, 2,4-D is taken up by the plant and translocated through the roots, stems and leaves, resulting in bending and twisting of stems followed by growth inhibition. Plants begin to decay within one to two weeks after application, but it can take several weeks for plants to fully decompose. Treatments should be made when plants are actively growing.

It is important to note that repeated use of herbicides in the same WSSA group (i.e., with the same mechanism of action) can lead to herbicide-resistant plants, even in aquatic environments. In order to reduce the risk of developing resistant genotypes, avoid using the same type of herbicides year after year, and utilize effective integrated pest management strategies as part of any long-term control program.

For many years, 2,4-D has been used primarily in small-scale spot treatments. Some recent 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 labeled to control the invasive plant species Eurasian watermilfoil (*Myriophyllum spicatum*). Native species that are labeled as susceptible to 2,4-D include native milfoils (*Myriophyllum* spp.), coontail (*Ceratophyllum demersum*), common waterweed (*Elodea canadensis*), naiads (*Najas* spp.), waterlilies (*Nymphaea* spp. and *Nuphar* spp.), bladderworts (*Utricularia* spp.) and duckweeds (*Lemna* spp.).[†]

Post-Treatment Water Use Restrictions

There are no post-treatment restrictions on treated water use for fishing or livestock drinking water. Following the last registration review in 2005, the butoxyethyl ester products require a 24-hour waiting period for swimming. Minimum setback distances may apply for applications on waterbodies with potable water intakes. If 2,4-D is applied within the minimum setback distance, treated water should not be used as human drinking water for at least 7 to 21 days after treatment, depending on product and application rate. However, in one study, 2,4-D persisted in the

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

[†] May vary by formulation, application rate and/or product. Every product label must be carefully read and followed by the user.

water at levels above the irrigation threshold 93 days after treatment, suggesting that the current restrictions may not be sufficient under all application scenarios. Treated water can be used as potable water sooner if the concentration of 2,4-D falls below 70 parts per billion (ppb). Restrictions on treated water use for irrigation may apply based on application rate, product and irrigation site.[†]

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 13 to 40 days. 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. 2,4-D degradation in water is highly variable depending on numerous factors such as microbial presence, temperature, nutrients, light, oxygen, organic content of substrate, pH and whether the water has been previously exposed to 2,4-D. 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.

Once in contact with water, both the ester and amine formulations dissociate to the acid form of 2,4-D, with a faster dissociation to the acid form under more alkaline conditions.

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. The ester formulations are moderately to highly toxic to freshwater fish and invertebrates; the amine formulations are slightly toxic to practically non-toxic to freshwater fish and invertebrates.

2,4-D does not accumulate at significant levels in fish tissues. Although fish exposed to 2,4-D may take up very small amounts of its breakdown products to then be metabolized, most of these products are rapidly excreted in urine.

On a short-term exposure basis, 2,4-D is practically non-toxic to honeybees and slightly to moderately toxic to birds and mammals.

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 are possible after short- and long-term exposure to 2,4-D. It can cause irreversible eye damage and is harmful if swallowed, inhaled or absorbed through the skin. Wear proper personal protective equipment and follow label instructions while handling. In its consideration of exposure risks, the U.S. EPA believes no significant risks will occur to recreational users of water treated with 2,4-D.

There is not a clear link between exposure to 2,4-D and elevated cancer risk. The U.S. EPA has determined that there is not sufficient evidence to classify 2,4-D as 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

SPECIMEN LABEL

Agri Star® 2,4-D AMINE 4

HERBICIDE

ACTIVE INGREDIENT:	
Dimethylamine salt of 2,4-dichlorophenoxyacetic acid*	46.8%
OTHER INGREDIENTS:	53.2%
TOTAL:	100.0%

*Equivalent to 38.9% of 2,4-dichlorophenoxyacetic acid or 3.8 lb./gal. Isomer specific by AOAC Method.
EPA Reg. No. 42750-19

KEEP OUT OF REACH OF CHILDREN

DANGER – PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
(If you do not understand this label, find someone to explain it to you in detail.)

FIRST AID	
IF IN EYES	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
IF SWALLOWED	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give anything by mouth to an unconscious person.
IF ON SKIN OR CLOTHING	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
IF INHALED	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, hen give artificial respiration, preferably mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-424-9300 for emergency medical treatment information.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

See inside booklet for additional precautionary statements.

AD120115

For selective control of many broadcast weeds in certain crops, including, cereal grains (wheat, barley, millet, oats and rye), corn (field corn, popcorn and sweet corn), fallow land and crop stubble, rice, sorghum (grain and forage sorghum), soybeans (preplant burndown application only); forests; rangeland and established grass pastures, including Conservation Reserve Program (CRP) acres; non-cropland; grasses grown for seed or sod, ornamental turf; and aquatic areas.

Manufactured By:
Albaugh, LLC
Ankeny, Iowa 50021

FOR CHEMICAL SPILL, LEAK, FIRE, OR EXPOSURE CALL CHEMTREC (800) 424-9300

Albaugh®
Your Alternative™

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER

Corrosive. Causes irreversible eye damage. Harmful if swallowed. Do not get in eyes or on clothing. Avoid contact with skin. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

PERSONAL PROTECTIVE EQUIPMENT

Some materials that are chemical-resistant to this product are butyl rubber, natural rubber, neoprene or nitrile rubber.

All mixers, loaders, applicators, flaggers, and other handlers must wear:

1. Long-sleeved shirt and long pants.
2. Shoes and socks.
3. Chemical resistant gloves when applying with any handheld nozzle or equipment, mixing or loading, cleaning up spills or equipment, or otherwise exposed to the concentrate.
4. Chemical resistant apron when, mixing or loading, cleaning up spills or equipment, or otherwise exposed to the concentrate.
5. Wear protective eyewear (goggles or face shield).

See engineering controls for additional requirements.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. After each day of use, clothing or PPE must not be reused until it has been cleaned.

ENGINEERING CONTROLS STATEMENTS

Pilots must use an enclosed cockpit that meets the requirements listed in the WPS for agricultural pesticides [40 CFR 170.240(d)(6)]

When handlers use enclosed cabs or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic invertebrates. For terrestrial uses: Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment washwaters or rinsate. Apply this product only as directed on label.

This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Application around a cistern or well may result in contamination of drinking water or groundwater.

Fish breathe dissolved oxygen in the water and decaying weeds also use oxygen. For aquatic uses: when treating continuous, dense weed masses, it may be appropriate to treat only part of he infestation at a time. For example, apply the product in lanes separated by untreated strips that can be treated after vegetation in treated lanes has disintegrated. During the growing season, weeds decompose in a 2 to 3 week period following treatment. Begin treatment along the shore and proceed outwards in bands to allow fish to move into untreated areas. Waters having limited and less dense weed infestations may not require partial treatments.

Mixing and Loading: cases of groundwater contamination involving phenoxy herbicides such as 2,4-D have been associated with mixing/loading and disposal sites. Caution should be exercised when handling 2,4-D pesticides at such sites to prevent contamination of groundwater supplies. Use of closed systems for mixing or transferring this pesticide will reduce the probability of spills. Placement of the mixing/loading equipment on an impervious pad to contain spills will help prevent groundwater contamination.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

PESTICIDE STORAGE: Open dumping is prohibited. Do not store this product near fertilizers, seeds, insecticides, or fungicides. Reclose all partially used containers by thoroughly tightening screw cap. Absorb any spill with a suitable clay absorbent and dispose of as indicated under "Pesticide Disposal."

Protect from freezing. If stored below freezing, the product must be warmed to at least 70°F and agitated before using. This does not affect the efficiency of the product.

For safety and prevention of unauthorized use, all pesticides should be stored in locked facilities. To prevent accidental misuse, different pesticides should be stored in separate areas with enough distance between to provide clear identification.

Opened, partially used pesticides should be stored in original labeled containers when possible. When transfer to another container is necessary because of leakage or damage, carefully mark and identify contents of the new container.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of federal law and may contaminate groundwater. If these wastes cannot be disposed of by use according to label instructions, contact your state Pesticide or Environmental Control Agency or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

CONTAINER HANDLING: (See the Net Contents section on the container to determine if it non-refillable or refillable.) APPROPRIATE BOX MUST BE CHECKED.

Non-refillable containers (1 and 2.5 gallon): Do not reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Non-refillable containers (>5 gallon): Do not reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Refillable containers: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose.

When this container is empty, replace the cap and seal all openings that have been made during usage and return the container to the point of purchase, or to an alternate location designated by the manufacturer at the time of purchase of this product. If not returned, clean the empty container and offer for recycling, if available.

Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

To clean the container before final disposal, empty the remaining contents from the container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing process two more times.

If the container cannot be refilled, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

Do not apply this product through any type of irrigation system.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 48 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

Coveralls over short-sleeved shirt and short pants,

- Chemical-resistant gloves made of any waterproof material
- Chemical-resistant footwear plus socks, protective eyewear, and
- Chemical-resistant headgear for overhead exposure.

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Entry Restrictions for Non-WPS Uses: When this product is applied to rangeland and established pastures not harvested for hay or seed; non-cropland areas, ornamental turf not grown for sod or seed, and when applied by tree injection method only in forest sites, do not allow people (other than applicator) or pets on treatment area during application.

Do not enter or allow people (or pets) to enter treated area until sprays has dried.

PRODUCT INFORMATION

Performance of this product may be affected by local conditions, crop varieties, and application method. User should consult local Extension Service, Agricultural Experiment or University Weed Specialists, and state regulatory agencies for recommendations in his area.

Best results are obtained when product is applied to young succulent weeds that are actively growing. The lower specified rates will be satisfactory on susceptible annual weeds. For perennial weeds and conditions such as the very dry areas of the western states where control is difficult, use the higher specified rate.

When product is used for weed control in crops, the growth stage of the crop must be considered.

Some plants and weeds, especially woody varieties, are difficult to control and may require repeat applications if permitted by this label.

Apply 1 to 5 gallons of total spray by air or 5 to 25 gallons by ground equipment unless otherwise directed. In either case, use the listed amount of 2,4-D per acre. For crop uses, do not mix with oil, surfactants, or other adjuvants unless specifically recommended. To do so may reduce herbicide's selectivity and could result in crop damage.

Many states have regulations concerning aerial application of 2,4-D formulations. Consult local regulatory authorities before making applications. This product contains dimethylamine salt of 2,4-D, one of the least volatile forms of 2,4-D.

Do not allow product to come into contact with desirable, susceptible plants such as beans, cotton, fruit trees, grapes, legumes, ornamentals, peas, tomatoes, and other vegetables. Excessive amounts of this product in the soil may temporarily inhibit seed germination and all plant growth.

Do not use in greenhouses.

NOTE: Herbicide treatment of public water requires a permit from appropriate state agencies in most states. Your State Conservation Department or Game and Fish Commission will aid you in securing a permit in your state.

Spray equipment used to apply 2,4-D may not be used for any other purpose until thoroughly cleaned by a suitable chemical cleaner.

Spray Preparation: Add the specified amount of product to approximately 1/2 the volume of water to be used for spraying. Agitate well, then add the remainder of the water. Continue agitation during application until spray tank is empty.

Use in Liquid Nitrogen Fertilizer: Product may be combined with liquid nitrogen fertilizer suitable for foliar application on corn, grass, pastures, or small grains in one operation. Use product according to directions on this label for those crops. Use liquid nitrogen fertilizer at rates recommended by supplier or Extension Service Specialist. Mix the product and fertilizer according to the following instructions:

Fill the spray tank approximately 1/2 full with the liquid nitrogen fertilizer. In a separate clean container, mix the amount of product to be used with an equal amount of water. Add the product mixture to the spray tank while agitating. Add the remainder of the fertilizer while continuing to agitate. Apply immediately, maintaining agitation during application until tank is empty. DO NOT APPLY DURING COLD (NEAR FREEZING) WEATHER. Spray mixture must be used immediately and may not be stored.

Note: Pre-mixing the product with an equal amount of water is important.

Spot Treatments

To prevent misapplication, apply spot treatments with a calibrated boom or with hand sprayers using a fixed spray volume per 1,000 sq ft as indicated below.

Hand-Held Sprayers: Hand-held sprayers may be used for spot applications of 2,4-D AMINE 4. Apply the spray uniformly and at a rate equivalent to a broadcast application. Application rates in the table are based on the application rate for an area of 1,000 sq ft. Mix the amount of 2,4-D AMINE 4 (fl oz or ml) corresponding to the desired broadcast rate in 1 to 3 gallons of spray. To calculate the amount of 2,4-D AMINE 4 required for larger areas, multiply the table value (fl oz or ml) by the thousands of sq ft to be treated. An area of 1000 sq ft is approximately 10.5 x 10.5 yards (strides) in size.

Rate Conversion Table for Spot Treatment:

Label Broadcast Rate (pt/acre)							
1/2	**2/3**	**3/4**	**1**	**2**	**3**	**4**	**8**
Equivalent Amount of 2,4-D AMINE 4 per 1000 sq ft							
1/5 fl oz† (5.5 ml)	1/4 fl oz (7.3 ml)	1/3 fl oz (8.3 ml)	3/8 fl oz (11 ml)	3/4 fl oz (22 ml)	1 fl oz (33 ml)	1 1/2 fl oz (44 ml)	3 fl oz (88 ml)

†Conversion factors: 1 pt – 16 fl oz; 1 fl oz = 29.6 (30) ml

Band Application: 2,4-D AMINE 4 may be applied as a band treatment. Use the formulas below to determine the appropriate rate and volume per treated area.

$$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{Broadcast rate per acre} = \text{Brand rate per treated acre}$$

$$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{Broadcast volume per acre} = \text{Band volume per treated acre}$$

SPRAY DRIFT MANAGEMENT

AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR.

A variety of factors including weather conditions (e.g. wind direction, wind speed, temperature, relative humidity) and method of application (e.g., ground, aerial, air-blast, chemigation) can influence pesticide drift. The applicator must evaluate all factors and make appropriate adjustments when applying this product.

Droplet Size

When applying sprays that contain 2,4-D as the sole active ingredient, or when applying sprays that contain 2,4-D mixed with active ingredients that require a Coarse or coarser spray, apply only as a Coarse or coarser spray (ASAE standard 572) or a volume mean diameter of 385 microns or greater for spinning atomizer nozzles.

When applying sprays that contain 2,4-D mixed with other active ingredients that require a Medium or more fine spray, apply only as a Medium or coarser spray (ASAE standard 572) or a volume mean diameter of 300 microns or greater for spinning atomizer nozzles.

Wind Speed

Do not apply at wind speeds greater than 15 mph. Only apply this product if the wind direction favors on-target deposition and are not sensitive areas (including, but not limited to, residential areas, bodies of water, known habitat for nontarget species, nontarget crops) within 250 feet downwind. If applying a Medium spray, leave one swath unsprayed at the downwind edge of the treated field.

Temperature Inversions

If applying at wind speeds less than 3 mph, the applicator must determine if: a) conditions of temperature inversion exist, or b) stable atmospheric conditions exist at or below nozzle height. Do not make applications into areas of temperature inversions or stable atmospheric conditions.

Susceptible Plants

Do not apply under circumstances where spray drift may occur to food, forage, or other plantings that might be damaged or crops thereof rendered unfit for sale, use or consumption. Susceptible crops include, but are not limited to cotton, okra, flowers, grapes (in growing stage), fruit trees (foliage), soybeans (vegetative stage), ornamentals, sunflowers, tomatoes, beans, and other vegetables, or tobacco. Small amounts of spray drift that might not be visible may injure susceptible broadleaf plants.

Other State and Local Requirements

Applicators must follow all state and local pesticide drift requirements regarding application of 2,4-D herbicides. Where states have more stringent regulations, they must be observed.

Equipment

All aerial equipment and ground application equipment must be properly maintained and calibrated using appropriate carriers or surrogates.

For aerial equipment, the boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter.

Release spray at the lowest height consistent with efficacy and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety. This requirement does not apply to forestry or rights-of-way applications.

When applications are made in a crosswind, the swath will be displaced downwind. The applicator must compensate for this by adjusting the path of the aircraft upwind.

For ground boom application, do not apply with a nozzle height greater than 4 feet above the crop canopy.

WEEDS CONTROLLED

ANNUAL OR BIENNIAL WEEDS

beggarticks[1]
bittercress, smallflowered[2]
bitterweed
broomweed, common[1]
burdock, common
buttercup, smallflowered[1][2]
carpetweed
cinquefoil, common[2]
cinquefoil, rough[2]
cocklebur, common
coffeeweed
copperleaf, Virginia[2]
croton, Texas
croton, wooly
fixweed
galinsoga
geranium, Carolina[2]
hemp, wild
horseweed (marestail)[2]
jewelweed
jimsonweed
knotweed[1]
kochia
lamsquarter, common
lettuce, prickly[1][2]
lettuce, wild
lupines
mallow, little[1]
mallow, Venice[1]
marshelder
morningglory, annual
morningglory, ivy
morningglory, woolly
mousetail[2]
mustards (except blue mustard)
parsnip, wild
pennycress (fanweed)
pepperweeds (Lepidium spp.)[1][2]
pigweeds (Amaranthus spp.)[1]
poorjoe
primrose, common
purslane, common[2]
pusley, Florida
radish, wild
ragweed, common
ragweed, giant
rape, wild
rocket, yellow
salsify, common[1]
salsify, westerm[1]
shepherdspurse
sicklepod
smartweed (annual species)[1][2]
sneezeweed, bitter
sowthistle, annual
sowthistle, spiny
spanishneedles
sunflower
sweetclover
tansymustard
thistle, bull
thistle, musk[1]
thistle, Russian (tumbleweed)[1]
velvetleaf
vetches

PERENNIAL WEEDS

Alfalfa[1][2]
artichoke, Jerusalem[1]
aster, many-flower[1]
Austrian fieldcress[1]
bindweed (hedge, field and European)[1][2]
blue lettuce
blueweed, Texas
broomweed
bullnettle[1][2]
carrot, wild[1]
catnip
chicory
clover, red[1][2]
coffeeweed
cress, hoary[1]
dandelion
docks[1]
dogbanes[1]
eveningprimrose, cutleaf[2]
garlic, wild
goldenrod
hawkweed, orange[1]
healal
ironweed, western[2]
ivy, ground[1]
nettles (including stinging)[1]
onion, wild[1]
pennywort
plantains
ragwort, tansy[1]
sowthistle, perennial
thistle, Canada[1][2]
vervains[1]
wormwood

[1] Difficult-to-Control Weeds: These weeds are only partially controlled and may require repeat applications and/or use of the higher specified rate of this product even under ideal conditions of application.
[2] This product may not be used to control this weed species in the state of California.

CROPS

ASPARAGUS

APPLICATION TIMING	2,4-D AMINE 4 (pt/acre)	SPECIFIC USE DIRECTIONS
Apply in the spring on actively growing weeds. Refer to the Weeds Controlled section for specific weeds controlled and any comments for each.	3 to 4	Apply in 50–60 gallons of water per acre for ground application and 12 gallons per acre for aerial application. If asparagus spears are present, treat immediately after cutting. Make no more than 2 applications during the harvest season and be spaced at least one month apart. Spears contacted by the spray may be malformed and off-flavored. If spears are malformed by spray, cut immediately and discard. To avoid spraying the fern, use only ground application for post harvest spraying.

ASPARAGUS RESTRICTIONS

- The preharvest interval (PHI) is 3 days.
- Limited to 2 applications per crop cycle.
- Maximum of 4 pts (2 lbs ae) per acre per application.
- Minimum of 30 days between applications.

2,4-D AMINE 4 contains 0.5 pounds a.e. of 2,4-D per pint. When tank mixing with products that contain 2,4-D, do not exceed a combined total of 4.0 pounds of a.e. per acre per year.

CEREAL GRAINS (Wheat, Barley, Millet, Oats, Rye, Triticale) (Not Underseeded with Legumes)

CROP/APPLICATION TIMING	2,4-D AMINE 4 (pt/acre)	SPECIFIC USE DIRECTIONS
Wheat, Barley, Millet, Rye, Triticale		Apply after crop is fully tilled, but before boot stage of growth (usually 4 to 8 inches tall) but not forming joints in the stem. Do not apply before tillering or from early boot through the milk stage of growth.
Annual and biennial broadleaf weeds	1/2 to 2†	
Perennial broadleaf weeds	1 to 2†	
Oats		Apply after crop is fully tillered, but before boot stage or growth (usually 4 to 8 inches tall) and weeds are small. Do not apply before tillering or from early boot through the milk stage of growth. Do not apply during or immediately following cold weather.
(Spring Seeded)	1/2	
(Fall Seeded Southern)	3/4 to 1-1/2†	
Preharvest application (all cereals)	1	Apply using air or ground equipment to control weeds that could interfere with harvest, or to suppress perennial weeds. Apply when grain is in dough stage. Do not apply from early boot through the milk stage of growth.

†Use the lower rate in the rate range if small annual or biennial weeds are the major problem. Use the higher rate if perennial weeds or annual or biennial weeds are present which are considered to be hard-to-kill as determined by local experience. Higher rates increase the risk of crop injury and should be used only where weed control justifies such risk. Do not apply 2,4-D AMINE 4 at the crop seedling stage of growth. Consult state agricultural experiment station or extension service weed specialists for recommendations or suggestions to fit local conditions.

CEREAL GRAIN RESTRICTIONS:

- **Postemergence:**
  - Make no more than one application per crop cycle.
  - Do not apply more than 2 pints per acre per application.
- **Preharvest:**
  - Make no more than one application per crop cycle.
  - Do not apply more than 1 pint per acre per application.
- Pre-Harvest Interval is 14 days.

2,4-D AMINE 4 contains 0.5 pounds a.e. of 2,4-D per pint. When tank mixing with products that contain 2,4-D, do not exceed a combined total of 1.75 pounds of a.e. per acre per year.

CORN
(Field Corn, Popcorn and Sweet Corn)

Use precautions: Corn hybrids vary in tolerance to 2,4-D. Apply this product only to varieties known to be 2,4-D tolerant. Consult your seed company representative or local Agricultural Experiment Station or Extension Service Weed Specialist for information on 2,4-D tolerance of corn varieties. Application of this product may cause temporary stem brittleness in corn. To avoid stem breakage, delay cultivation for 8 to 10 days following application.

APPLICATION TIMING/ STAGE OF GROWTH	2,4-D AMINE 4 (pt/acre)	SPECIFIC USE DIRECTIONS
Preplant (Burndown) Preemergence (Field corn, popcorn, and sweet corn) Refer to the Weeds Controlled section for specific weeds controlled and any comments for each.	1 to 2	For best results, growth conditions should be favorable for active weed growth. Use high rate in rate range for less susceptible weeds, cover crops such as alfalfa, weeds in advanced stages of development, or under less favorable growth conditions. **Preplant:** Apply 7 to 14 days before planting corn to control emerged broadleaf weed seedling or existing cover crops. **Preemergence:** Apply any time after planting, but before corn emerges to control broadleaf weed seedlings or existing cover crops. Do not use on light sandy soils.
Postemergence (Field corn, popcorn, and Sweet corn) Annual broadleaf weeds Crop up to 8 inches tall Crop 8 inches tall to tasseling (directed spray only) Perennial broadleaf weeds	 1/2 to 1 1 1	Apply when weeds are small and corn is less than 8 inches tall (to top of canopy). If corn is more than 8 inches tall, use drop nozzles to keep spray off foliage. Treat perennial weeds when they are in bud to bloom stage. Do not tank mix with atrazine, oil or other adjuvants. Do not apply from tasseling to hard dough stage. **Note:** Corn treated with 2,4-D may become temporarily brittle. Wind or cultivation may cause stem breakage during the period of time that corn is brittle. **Sweet Corn:** To minimize potential for crop injury, use only lowest rate in rate range.
Preharvest (Field corn and popcorn only)	up to 3	Apply after corn is in hard dough (or denting) stage. Do not apply preharvest to sweet corn.

CORN RESTRICTIONS:

- **Preplant or Pre-emergence:**
  - Make no more than one application per crop cycle.
  - Do not apply more than 2 pints per acre per application.
- **Postemergence:**
  - Make no more than one application per crop cycle.
  - Do not apply more than 1 pint per acre per application.
  - Minimum spray interval between applications for sweet corn is 21 days.
- **Preharvest (Field and Pop only):**
  - Make no more than one application per crop cycle.
  - Do not apply more than 3 pints per acre per application.
- Do not use treated crop as fodder for 7 days following application.
- Corn (Field and Pop) Pre-Harvest Interval is 7 days.
- Corn (Sweet) Pre-Harvest Interval is 45 days.

2,4-D AMINE 4 contains 0.5 pounds a.e. of 2,4-D per pint. When tank mixing with products that contain 2,4-D, do not exceed a combined total of 3.0 pounds of a.e. per acre per year for Field and Pop Corn.

Do no exceed a combined total of 1.5 pounds of a.e. per acre for Sweet Corn.

HOPS

APPLICATION TIMING	2,4-D AMINE 4 (pt/acre)	SPECIFIC USE DIRECTIONS
Post-emergence Refer to the Weeds Controlled section for specific weeds controlled and any comments for each.	1 pint	Make directed applications to the row middles. Make up to 3 applications at 30-day intervals with the last application before harvest.
PRECAUTIONS: Hop foliage, especially new growth, is susceptible to this product. Take care to avoid spray or drift outside target area. The use of shielded or hooded sprayers, coarse sprays and low pressure (30 psi or less) will minimize contact with foliage and plant injury.		

RESTRICTIONS AND LIMITATIONS FOR HOPS:

- The preharvest interval (PHI) is 28 days.
- Postemergence:
  Limited to 3 applications per crop cycle.
  Maximum of 1 pt product (1/2 lb ae) per acre per application.
  Maximum of 3 pints product (1 ½ lbs. ae) per acre per crop cycle.
  Minimum of 30 days between applications.

2,4-D AMINE 4 contains 0.5 pounds a.e. of 2,4-D per pint. When tank mixing with products that contain 2,4-D, do not exceed a combined total of 1.5 pounds of a.e. per crop cycle.

RICE (Not for Use in California)

Precautions: Rice varieties vary in tolerance to 2,4-D, or may be susceptible to injury under certain conditions or stages of growth. Consult your seed company representative or local Agricultural Experiment Station or Extension Service Weed Specialist for information on 2,4-D tolerance of rice varieties, including optimum rates and timing.

APPLICATION TIMING	2,4-D AMINE 4 (pt/acre)	SPECIFIC USE DIRECTIONS
Preplant	1/2 to 2	Apply 2 to 4 weeks before planting rice to control emerged broadleaf weeds. Do not use in California.
Postemergence Refer to the Weeds Controlled section for specific weeds controlled and any comments for each.	1 to 2 †	Apply when rice is in late tillering stage and at the time of first joint development (first to second green ring.) Do not apply after panicle initiation, after rice internodes exceed one-half inch, at early seedling, early panicle or boot and heading stages.

†Application rates of 2 pt/acre may be applied to handle difficult weed control problems. However, do not use the 2 pt/acre rate unless possible crop injury is acceptable.

RICE RESTRICTIONS:

- **Preplant:**
  - Make no more than one application per crop cycle.
  - Do not apply more than 2 pints per acre per application.
- **Postemergence:**
  - Make no more than one application per crop cycle.
  - Do not apply more than 3 pints per acre per application.
- Pre-Harvest Interval is 60 days.

2,4-D AMINE 4 contains 0.5 pounds a.e. of 2,4-D per pint. When tank mixing with products that contain 2,4-D, do not exceed a combined total of 1.5 pounds of a.e. per crop cycle.

WILD RICE (For use in Minnesota only)

APPLICATION TIMING	2,4-D AMINE 4 (pt/acre)	SPECIFIC USE DIRECTIONS
For control of Common waterplantain. Apply when wild rice is in the 1 to 2 aerial leaf to early tillering stage and after waterplantain has emerged from the water and before wild rice has reached the boot stage.	1/2 pint	Broadcast in 4 to 10 gallons total spray volume. Do not spray after wild rice has reached the boot stage. For use only on wild rice grown in commercial paddies. Do not apply to wild rice growing in lakes or streams. Water that is drained out of wild rice paddies is not to be used to irrigate other crops. In order to protect federally listed endangered species, the Minnesota Department of Agriculture has a program to pre-notify landowners where pesticide applications may affect federally listed endangered or threatened species.

WILD RICE RESTRICTIONS
- Preharvest interval (PHI) is 60 days.
- Postemergence:
  Limited to 1 application per crop cycle.
  Maximum of 1/2 pt product (1/4 lb ae) per acre per application.

2,4-D AMINE 4 contains 0.5 pounds a.e. of 2,4-D per pint. When tank mixing with products that contain 2,4-D, do not exceed a combined total of 0.25 pounds of a.e. per crop cycle.

SORGHUM
(Grain Sorghum (Milo) and Forage Sorghum)

Use Precautions: Temporary crop injury can be expected under conditions of high soil moisture and high air temperatures. If it is necessary to apply 2,4-D AMINE 4 under these conditions, use no more than 2/3 pint per acre. Sorghum hybrids vary in 2,4-D tolerance. Apply only to varieties known to be tolerant to 2,4-D. Consult your seed company representative or local agricultural experiment station or Estension Service Weed Specialist for information on 2,4-D tolerance of sorghum varities.

APPLICATION TIMING/ STAGE OF GROWTH	2,4-D AMINE 4 (pt/acre)	SPECIFIC USE DIRECTIONS
Postemergence† Crop 6–8 inches tall Crop 8–15 inches tall (directed spray only) Refer to the Weeds Controlled section for specific weeds controlled and any comments for each.	1/2 to 1-1/2 3/4 to 1-1/2	Apply when sorghum is 6 to 15 inches tall. If sorghum is more than 8 inches tall (top of canopy), use drop nozzles to keep spray off foliage. Do not use with oil or other adjuvants. Do not treat during boot, flowering or dough stage.

SORGHUM RESTRICTIONS:
- Do not apply more than 1-1/2 pint per acre per application.
- Do not make more than 1 post-emergence application per year.
- Pre-Harvest Interval is 30 days.
- Do not permit meat or dairy animals to consume treated crop as fodder or forage for 30 days following application.

2,4-D AMINE 4 contains 0.5 pounds a.e. of 2,4-D per pint. When tank mixing with products that contain 2,4-D ester, do not exceed a combined total of 1.0 pounds of a.e. per acre per year.

SOYBEANS
For Use in Crop Residue Management Systems
(Pre-plant Burndown Application Only)

Important Notice: Unacceptable injury to soybeans planted in treated fields may occur. Whether or not soybean injury occurs and the extent of such injury will depend on weather (temperatures and rainfall) from herbicide application until soybean emergence and agronomic factors such as the amount of weed vegetation and previous crop residue present at the time of application. Injury is more likely to occur under cool rainy conditions and where there is less weed vegetation and crop residue present.

APPLICATION TIMING	2,4-D AMINE 4 (pt/acre)	SPECIFIC USE DIRECTIONS
Preplant (Burndown) Refer to the Weeds Controlled section for specific weeds controlled and any comments for each.	3/4 to 1	Apply not less than 15 days before planting soybeans. when weeds are small and actively growing. See Use Precautions and Restrictions below.
	>1 to 2	Apply not less than 30 days before planting soybeans. when weeds are small and actively growing. Use the higher rate on larger weeds and when perennials are present. See Use Precautions and Restrictions below.
Compatible crop oil concentrates, agricultural surfactants and fluid fertilizers approved for use on growing crops may be added to spray mixtures to increase the herbicidal effectiveness on certain weeds. Read and follow all directions and precautions on this label and on the label of each product added to the spray mixture.		

SOYBEAN PRECAUTIONS:

- Do not apply prior to planting soybeans if you are not prepared to accept the results of soybean injury including possible loss of stand and yield.
- Do not mow or cultivate weeds prior to treating with this product as poor control may result.

SOYBEAN (Preplant) RESTRICTIONS

- **Pre-plant (2 application option):**
  - Do not apply more than 1 pint per acre per preplant application.
  - Do not apply within 15 days of planting soybeans.
- **Pre-plant (single application option):**
  - Do not apply more than 2 pints per acre.
  - Do not apply within 30 days of planting soybeans.
- Do not feed treated hay, forage, or fodder or graze treated soybeans to livestock.
- Do not feed or graze treated cover crops to livestock.
- Do not replant fields treated with this product in the same growing season with crops other than those labeled for 2,4-D preplant use.

2,4-D AMINE 4 contains 0.5 pounds a.e. of 2,4-D per pint. When tank mixing with products that contain 2,4-D, do not exceed a combined total of 1.0 pounds of a.e. per acre per crop cycle.

STRAWBERRIES
(Established planting only)

APPLICATION TIMING	2,4-D AMINE 4 (pt/acre)	SPECIFIC USE DIRECTIONS
Apply in early spring when strawberries are dormant or immediately after the last picking. Refer to the Weeds Controlled section for specific weeds controlled and any comments for each.	2 to 3 pints	Apply in 25–50 gallons of water per acre. Apply in established strawberry plantings only. Do not apply unless possible injury to the crop is acceptable. Follow recommendations of State Extension Horticultural Specialist in the area.

STRAWBERRY RESTRICTIONS:

- Do not apply in California or Florida.
- Dormant or after last picking:
  Limited to 1 application per crop cycle.
  Maximum of 3 pints (1.5 lbs a.e.) per acre per application.

2,4-D AMINE 4 contains 0.5 pounds a.e. of 2,4-D per pint. When tank mixing with products that contain 2,4-D, do not exceed a combined total of 1.5 pounds of a.e. per crop cycle.

SUGARCANE

APPLICATION TIMING/ STAGE OF GROWTH	2,4-D AMINE 4 (pt/acre)	SPECIFIC USE DIRECTIONS
Preemergence Postemergence Refer to the Weeds Controlled section for specific weeds controlled and any comments for each.	3 3 to 4	Preemergence: Apply before cane emerges. Postemergence: Apply after cane emergence through layby. Use higher rate for perennial weeds and difficult-to-control weeds.

SUGARCANE RESTRICTIONS:

- **Pre-emergent Application:**
  - Do not make more than one pre-emergence application per crop cycle.
  - Do not apply more than 4 pints per acre per application.
- **Post-emergent Application:**
  - Do not make more than one post-emergence application per crop cycle.
  - Do not apply more than 4 pints per acre per application.
- Do not harvest cane prior to crop maturity.

2,4-D AMINE 4 contains 0.5 pounds a.e. of 2,4-D per pint. When tank mixing with products that contain 2,4-D, do not exceed a combined total of 4.0 pounds of a.e. per acre per crop cycle.

FALLOWLAND AND CROP STUBBLE

Fallowland is idle land, postharvest to crops or between crops.

TYPE OF WEEDS	2,4-D AMINE 4 (pt/acre)	SPECIFIC USE DIRECTIONS
Annual broadleaf weeds	1 to 2	Use a lower rate in the rate range when weeds are small (2 to 3 inches tall) and actively growing. Use a higher rate in the rate range when weeds are larger and under less favorable growth conditions.
Biennial broadleaf weeds	2 to 4	Apply when musk thistles or other biennial species are in the seedling to rosette stage and before development of flower stalks. The lower rate can be used in the spring during the rosette stage. Use the highest rate in the fall or after flower stalks have developed.
Perennial broadleaf weeds	2 to 4	Apply when perennial weeds are in bud to early bloom stage or while in good vegetative growth.
Wild garlic and onion in crop stubble	4	Apply to new regrowth of wild garlic or onion that occurs in the fall after harvest of other crops.

FALLOW LAND PRECAUTION:

- For best weed control results, do not cultivate for at least 2 weeks after application or until top growth is dead.

FALLOW LAND RESTRICTIONS

- Preharvest Interval: Do not cut forage or hay within 7 days of application.
- Make no more than two applications per year.
- Do not apply more than 4 pints per acre per application.
- Minimum spray interval between applications is 30 days
- Plant only labeled crops within 29 days following application.

2,4-D AMINE 4 contains 0.5 pounds a.e. of 2,4-D per pint. When tank mixing with products that contain 2,4-D, do not exceed a combined total of 4.0 pounds of a.e. per acre per year.

TURF USES

GRASSES GROWN FOR SEED OR SOD FARMS

Agricultural Use Requirements: When used in grass grown for seed or sod farms, follow PPE and reentry instructions in the "Agricultural Use Requirement" section of this label.

TREATMENT SITE/ (APPLICATION TIMING)	2,4-D AMINE 4 (pt/acre)	SPECIFIC USE DIRECTIONS
Grasses Grown for Seed (Postemergence Use) Seedling grass (five-leaf stage or later) Well-established grasses	 3/4 to 1 1 to 4	Apply when weeds are small and actively growing. For best results, apply when soil moisture is adequate for active weed growth. Do not apply to newly seeded grasses until well established (five-leaf stage or later) and then use a maximum of 2/3 pt/acre. Cool season grasses are tolerant of higher rates. Do not apply to grass in the early boot through milk stage if seed production is desired.
Sod Farms (Postemergence) Refer to the Weeds Controlled section for specific weeds controlled and any comments for each.	1/2 to 4	When grass is well established, higher rates of up to 2 2/3 pint/acre may be applied for control of hard-to-kill annual or perennial weeds. Deep-rooted perennials such as bindweed and Canada thistle may require repeat applications. Avoid mowing sod farms for 1 to 2 days before or after application. Delay irrigation until the day following application.

GRASSES GROWN FOR SEED OR SOD FARM PRECAUTIONS:

- Do not use on creeping grasses such as bentgrass except as a spot treatment.
- Do not use on injury-sensitive southern grasses such as St. Augustinegrass.
- Do not use on dichondra or other herbaceous ground covers. Legumes may be damaged or killed.
- Reseeding: Delay reseeding at least 30 days following application. Preferably, with spring application, reseed in the fall and with fall application, reseed in the spring.
- Use sufficient spray solution for thorough and uniform coverage, and no less than 2 gallons per acre.

GRASSES GROWN FOR SEED OR SOD FARM RESTRICTIONS:

- Do not apply more than 4 pints product (2.0 lbs ae) per acre per application.
- Do not make more than 2 applications per year.
- Minimum spray interval between broadcast applications is 21 days.

2,4-D AMINE 4 contains 0.5 pounds a.e. of 2,4-D per pint. When tank mixing with products that contain 2,4-D, do not exceed a combined total of 4.0 pounds of a.e. per acre per year.

ORNAMENTAL TURF
(Excluding Grasses Grown For Seed or Sod Farms)
(Includes lawns, golf courses, cemeteries and parks, airfields, roadsides, and vacant lots)

When this product is applied to ornamental turf areas, follow PPE and reentry instructions in the "Non-agricultural Use Requirements" section of this label.

TREATMENT SITE (APPLICATION TIMING)	2,4-D AMINE 4 (pt/acre)	SPECIFIC USE DIRECTIONS
Ornamental Turf (Postemergence) Seedling grass (five-leaf stage or later) Well-established grasses Biennial and perennial broadleaf weeds	 3/4 to 1 2 to 3 3	Apply when weeds are small and actively growing. For best results, apply when soil moisture is adequate for active weed growth. Deep-rooted perennial weeds such as bindweed and Canada thistle may require repeat applications. Do not apply to newly seeded grasses until well established (five-leaf stage or later) and then use a maximum of 2/3 pt/acre. Cool season grasses are tolerant of higher rates.

ORNAMENTAL TURFGRASS PRECAUTIONS:

- Do not use on creeping grasses such as bentgrass except as a spot treatment.
- Do not use on injury-sensitive southern grasses such as St. Augustinegrass.
- Do not use on dichondra or other herbaceous ground covers. Legumes may be damaged or killed.
- Reseeding: Delay reseeding at least 30 days following application. Preferably, with spring application, reseed in the fall and with fall application, reseed in the spring.

ORNAMENTAL TURFGRASS RESTRICTIONS:

- Do not apply more than 3 pints per acre per application.
- Do not make more than 2 applications per year.
- Minimum spray interval between broadcast applications is 30 days.

2,4-D AMINE 4 contains 0.5 pounds a.e. of 2,4-D per pint. When tank mixing with products that contain 2,4-D, do not exceed a combined total of 3.0 pounds of a.e. per acre per year.

RANGELAND, ESTABLISHED GRASS PASTURES & GRASS CUT FOR HAY
(Including Perennial Grasslands Not In Agricultural Production Such As Conservation Reserve Program Acres)

TARGET WEEDS OR WOODY PLANTS	2,4-D AMINE 4 (pt/acre)	SPECIFIC USE DIRECTIONS
Annual broadleaf weeds Biennial and perennial broadleaf weeds	2 2 to 4	For best results, apply when weeds are small and growing actively before the bud stage. Apply when musk thistles or other biennial species are in the seedling to rosette stage and before flower stalks appear. Refer to the "Weeds Controlled" section for a listing of susceptible weed species and weeds that may be only partially controlled and require repeat applications and/or use of higher specified rates, even under ideal conditions of application.
Spot Treatment to control broadleaf weeds	See Instructions for "Spot Treatment"	**Note:** To control broadleaf weeds in small areas with a hand sprayer, use an application rate equivalent to the broadcast rate specified for this treatment site and spray to thoroughly wet all foliage. See rate conversion table and instructions for "Spot Treatment" and use of hand-held sprayers under "Application".
Tree Injection Application		See instructions for tree injection application in "Forestry Uses" section.
Wild garlic and wild onion	4	Make three applications (fall-spring-fall or spring-all-spring) starting in late fall or early spring.

(continued)

RANGELAND, ESTABLISHED GRASS PASTURES *(cont.)*

(Including Perennial Grasslands Not In Agricultural Production Such As Conservation Reserve Program Acres)

TARGET WEEDS OR WOODY PLANTS	2,4-D AMINE 4 (pt/acre)	SPECIFIC USE DIRECTIONS
Broadleaf weed control in newly sprigged coastal bermudagrass	2 to 4	Applications may be made either preemergence or postemergence. Follow "Specific Use Directions" for annual, biennial and perennial broadleaf weed control, above.
Sand shinnery oak Sand sagebrush	2	Sand shinnery oak: Apply by aircraft between May 15 and June 15. Sand sagebrush: Apply by ground or aircraft when foliage is fully expanded and plants are actively growing. Use a 1:4 oil-water emulsion as carrier and a spray volume of 3 to 5 gallons per acre. Retreatment may be needed.
Big sagebrush Rabbitbrush	4	Apply by ground or aircraft when foliage is fully expanded and plants are actively growing. Use water or 1:4 oil-water emulsion as carrier and a spray volume of 5 to 10 gallons per acre. Retreatment may be needed.
Chamise, manzanita, buckbrush, coastal sage, coyotebrush, and chaparral species	4	Apply by ground or aircraft when foliage is fully expanded and plants are actively growing. Use water or 1:4 oil-water emulsion as carrier and a spray volume of 5 to 10 gallons per acre. Retreatment may be needed.
Southern wild rose Broadcast application Spot Treatment	 up to 4 8 pts/100 gal of spray	**Broadcast:** Apply in a spray volume of 5 or more gallons per acre by aircraft or 10 or more gallons per acre by ground equipment. **Spot Treatment:** Apply when foliage is well developed. Thorough coverage is required. Use 8 pints of 2,4-D AMINE 4 plus 4 to 8 fluid ounces of an agricultural surfactant per 100 gallons of water. Two treatments may be required. Do not exceed 2 2/3 pt per acre per applications.
Woody Brush Control	See instructions for basal treatment, cut stump or frill & girdle in "Forestry Uses" section.	
CRP Acres	For program lands such as CRP, consult program rules to determine whether grass or hay may be used. The more restrictive requirements of the program rules or this label must be followed.	

RANGELAND, PASTURE & GRASS CUT FOR HAY PRECAUTIONS:

- Do not use on bentgrass, alfalfa, clover, or other legumes.
- Do not use on newly seeded areas until grass is well established.
- Do not use from early boot to milk stage where grass seed production is desired.

RANGELAND, PASTURE & GRASS CUT FOR HAY RESTRICTIONS

- **Postemergence:**
  - For susceptible annual and biennial broadleaf weeds: Use 1.0 lbs ae/acre per application.
  - For moderately susceptible biennial and perennial broadleaf weeds: Use 1.0 to 2.0 lbs ae/acre per application.
  - For difficult to control weeds and woody plants: Use 2.0 lbs ae/acre per application.
  - Spot treatment: Use 2.0 lbs ae/acre.
- **Livestock Feeding Restrictions:**
  - Do not graze dairy animals on treated areas within 7 days after application.
  - Do not graze meat animals on treated areas within 3 days before slaughter.
  - Do not cut treated grass for hay within 7 days after application.
  - For government program grasslands, follow program grazing restrictions if more restrictive than those given above.
  - For program lands, such as Conservation Reserve Program, consult program rules to determine whether grass or hay may be used. The more restrictive requirements of the program rules or this label must be followed.
- Do not apply more than 4 pints per acre per application.
- Do not make more than 2 applications per year.
- Minimum spray interval between applications is 30 days.
- If grass is to be cut for hay, Agricultural Use requirements for the Worker Protection Standard are applicable.

2,4-D AMINE 4 contains 0.5 pounds a.e. of 2,4-D per pint. When tank mixing with products that contain 2,4-D, do not exceed a combined total of 4.0 pounds of a.e. per acre per year.

NON-CROPLAND AREAS

Such as fencerows, hedgerows, roadsides, right-of-way, utility power lines, railroads, airports.

TREATMENT SITE/ APPLICATION METHOD	2,4-D AMINE 4 (pt/acre)	SPECIFIC USE DIRECTIONS
Annual broadleaf weeds Biennial and perennial broadleaf weeds Susceptible woody plants	2 to 4 4 4 to 8	Apply when annual weeds are small and growing actively before the bud stage. Biennial and perennial weeds should be rosette to bud stage, but not flowering at the time of application. For difficult to control perennial broadleaf weeds and woody species, tank mix up to 8 pints of 2,4-D AMINE 4 plus 1 to 4 qt of Triclopyr 3A herbicide per acre. Oil or wetting agent may be added to the spray, if needed for increased effectiveness. **For ground application:** (high volume) apply a total spray volume of 100 to 400 gallons per acre; (low volume) apply a total spray volume of 10 to 100 gallons per acre. **For helicopter:** Apply a total spray volume of 5 to 30 gallons per acre.
Spot Treatment to control broadleaf weeds	See Instructions for "Spot Treatment"	**Note:** To control broadleaf weeds in small areas with a hand sprayer, use an application rate equivalent to the broadcast rate specified for this treatment site and spray to thoroughly wet all foliage. See rate conversion table and instructions for "Spot Treatment" and use of hand-held sprayers under "Application"
Tree Injection Application		See instructions for tree injection, basal treatment, cut stump or frill & girdle in "Forestry Uses" section.
Southern wild rose Broadcast application Spot Treatment	 up to 8 8 pts/100 gal of spray	**Broadcast:** Apply in a spray volume of 5 or more gallons per acre by aircraft or 10 or more gallons per acre by ground equipment. Apply when foliage is well developed. Thorough coverage is required. Use 8 pints of 2,4-D AMINE 4 plus 4 to 8 fluid ounces of an agricultural surfactant per 100 gallons of water. Two or more treatments may be required.

NON-CROPLAND PRECAUTIONS:

- Bentgrass, St. Augustine, clover, legumes and dichondra may be severely injured or killed by this treatment.

NON-CROPLAND RESTRICTIONS:

- Do not apply to newly seeded areas until grass is well established.
- Use 2 or more gallons of spray solution per acre.
- Do not harvest forage or hay from treated areas for 7 days after application.
- **Postemergence (annual & perennial weeds):**
  - Do not make more than 2 applications per year.
  - Do not apply more than 4 pints per acre per application.
  - Minimum spray interval between applications is 30 days.
- **Postemergence (woody plants):**
  - Do not make more than 1 application per year.
  - Do not apply more than 8 pints per acre per application.
- Applications to non-cropland areas are not applicable to treatment of commercial timber or other plants being grown for sale or other commercial use, or for commercial seed production, or for research purposes.

2,4-D AMINE 4 contains 0.5 pounds a.e. of 2,4-D per pint. When tank mixing with products that contain 2,4-D, do not exceed a combined total of 4.0 pounds of a.e. per acre per year.

FORESTRY USES

Forest site preparation, forest roadsides, brush control, established conifer release (including Christmas trees and reforestation areas)

TREATMENT SITE METHOD OF APPLICATION	2,4-D AMINE 4	SPECIFIC USE DIRECTIONS
Annual Weeds Biennial and perennial broadleaf weeds and susceptible woody plants	2 to 4 pt/acre 4 to 8 pt/acre	Apply when weeds are small and growing actively before the bud stage. Apply when biennial and perennial species are in the seedling to rosette stage and before flower stalks appear. For difficult to control perennial broadleaf weeds and woody species, use up to 8 pt of 2,4-D AMINE 4 and 1 to 4 qt of Triclopyr 3A herbicide per acre. For conifer release, make application in early spring before budbreak of conifers when weeds are small and actively growing.
Spot Treatment to control broadleaf weeds	See Instructions for "Spot Treatment"	**Note:** To control broadleaf weeds in small areas with a hand sprayer, use an application rate equivalent to the specified broadcast rate and spray to thoroughly wet all foliage. See rate conversion table and instructions for "Spot Treatment" and use of hand-held sprayers under "Application".
Conifer Release: Species such as white pine, ponderosa pine, jack pine, red pine, black spruce, white spruce, red spruce, and balsam fir	3 to 8 pt/acre	To control competing hardwood species such as alder, aspen, birch, hazel, and willow, apply from mild to late summer when growth of conifer trees has hardened off and woody plants are still actively growing. Apply with ground or air equipment, using sufficient spray volume to ensure complete coverage. Because this treatment may cause occasional conifer injury. Do not apply if such injury cannot be tolerated.
Directed Spray: Conifer plantations including pine	8 pt/100 gal	Apply when brush or weeds are actively growing by directing the spray so as to avoid contact with conifer foliage and injurious amounts of spray. Apply in oil, oil-water, or water carrier in a spray volume of 10 to 100 gallons per acre.
Basal Spray	17 pt/100 gal or 2.6 fl oz/gal of water	Thoroughly wet the base and root collar of all stems until the spray begins to accumulate around the root collar at the ground line. Wetting stems with the mixture may also aid in control.
Surface of Cut Stumps		Apply as soon as possible after cutting trees. Thoroughly soak the entire stump with the 2,4-D mixture including cut surface, bark and exposed roots.
Frill and Girdle		Cut frills (overlapping V-shaped notched cut downward through the bark in a continuous ring around the base of the tree) using and axe or other suitable tool. Saturate the freshly cut frills with the 2,4-D mixture.
Tree Injection Application	(1 to 2 ml per injection site)	To control and prevent resprouting of unwanted hardwood trees such as elm, hickory, oak, and sweetgum in forests and other non-crop areas, apply by injecting at a rate of 1 ml of undiluted 2,4-D AMINE 4 per inch of trunk diameter as measured at breast height (DBH), approximately 4 1/2 ft. above the ground. Injection sites, however, should be as close to the root collar as possible and the injection bit must penetrate the inner bark. Applications may be made throughout the year, but for best results apply between May 15 and October 15. Do not treat Maples during the spring sap flow. For hard to control species such as ash, maple, and dogwood use 2 ml of undiluted 2,4-D AMINE 4 per injection site. **Note:** No Worker Protection Standard workers entry restrictions or worker notification requirements apply when this product is directly injected into agricultural plants.

(continued)

FORESTRY PRECAUTIONS:
- Do not allow sprays to contact conifer shoot growth (current year's new growth) or injury may occur.
- For conifer release, do not use on plantations where pine or larch are among the desired species.

FORESTRY RESTRICTIONS:
- Do not apply to nursery seedbeds.
- Grazing and Haying Restrictions: If grazing or haying is anticipated, do not apply more than 4 pt/acre of 2,4-D AMINE 4 per application. Do not harvest forage or hay from treated areas for 7 days after application.
- Do not make more than one broadcast application per year.
- For broadcast applications, do not apply more than 8 pt/acre of 2,4-D AMINE 4 per 12-month period.
- Basal spray, Cut Surface – Stumps, and Frill:
  - Limit of one basal spray or cut surface application per year.
  - Maximum of 8.0 lbs ae per 100 gallons of spray solution.
- Injection:
  - Limit to one injection application per year.
  - Maximum of 2.0 ml of 4.0 lbs ae formulation per injection site.

HYBRID POPLAR TREES, COTTONWOOD TREES AND WILLOW* TREES GROWN AS BIOENERGY CROPS

This product may be used in hybrid poplar trees, cottonwood trees and willow trees grown as bioenergy crops. Application during warm weather is preferred. Apply when weeds are actively growing, preferably before bud stage. Repeat treatment may be necessary for less susceptible weeds; re-apply as needed.

For hybrid poplar, cottonwood and willow make application prior to or after planting. For ground spray equipment, use 1/2 to 3 pints per acre. Apply 1 to 4 pints per acre using wick type applicators that treat weeds directly. Crop injury may result if the wick, wick solution or spray solution contact leaves or green bark of the crop trees.

NOTE: Exercise extreme care to avoid contact of the spray solution, spray, drift, or mist with tree foliage, green bark of trucks, stems or exposed roots of the poplar, cottonwood and will trees. Contact of the spray solution to these parts can result in serious damage. Even when using extreme care in application of this product, injury to crops from this herbicide may occur. If you are not prepared to accept some degree of crop injury, do not use this product.

*Not For Use in California.

TANK MIXTURES

This product may be tank mixed with Gly Star Plus (EPA Reg. No. 42750-61) to provide broader spectrum of control. All applicable product use restrictions and precautions on the 2,4-D Amine 4 (EPA Reg. No. 42750-19) and products used in tank mixes must be followed.

RESTRICTIONS AND LIMITATIONS
- Limited to 1 broadcast applications per year.
- Maximum of 4 pints (2 lb. ae) per acre per application.
- Minimum of 30 days between applications.
- Use sufficient spray volume for thorough and uniform coverage, but a minimum of 10 gallons per acre for broadcast application.
- Do not apply this product by air for use of weed control in hybrid poplar tree, cottonwood trees and willow tress grown as bioenergy crops.
- Do not apply through any type of irrigation system.
- Do not allow people (other than applicator) or pets on treatment area during application.
- Do not enter treatment areas until sprays have dried.
- Do not use this product in or near greenhouses, for use of weed control in hybrid poplar tree, cottonwood trees and willow tress grown as bioenergy crops.
- Do not spray immediately before irrigation and withhold above-ground irrigation for 3 days after application.
- Do not use treated vegetation for forage or hay or allow livestock to graze treated fields.
- Treated plantings not to be consumed by human or animal.

AQUATIC WEED CONTROL

Use in Ponds, Lakes, Reservoirs, Marshes, Bayous, Drainage Ditches, Canals, Rivers and Streams that are Quiescent or Slow Moving, Including Programs of the Tennessee Valley Authority

Notice to Applicators: Before application, coordination and approval of local and state authorities may be required, either by letter or agreement or issuance of special permits for such use.

EMERGENT AND FLOATING AQUATIC WEEDS:

Including Water hyacinth (Eichornia crassipe)

Application Rate: 4 to 8 pt/acre

Specific Use Directions:

Application Timing:

Spray weed mass only. Apply when water hyacinth plants are actively growing. Repeat application as necessary to kill regrowth and plants missed in previous operation. Use 8 pt/acre rate when plants are mature or when weed mass is dense.

Surface Application:

Use power operated sprayers with boom or spray gun mounted on boat, tractor or truck. Thorough wetting of foliage is essential for maximum control. Use 100 to 400 gallons of spray mixture per acre. To avoid spray drift to susceptible crops take special precautions such as the use of low flow pressure, large nozzles and spray thickening agents.

Aerial Application:

Use drift control spray equipment or thickening agent mixed in the spray mixture. Apply 8 pt of 2,4-D AMINE 4 per acre using standard boom systems using a minimum spray volume of 5 gallons per acre. For Microfoil® drift control spray systems, apply 2,4-D AMINE 4 in a total spray volume of 12 to 15 gallons per acre.

FLOATING AND EMERGENT WEEDS USE RESTRICTIONS:

- Maximum of 8 pints (4.0 lbs ae)/surface acre per application.
- Limited to 2 applications per season.
- Minimum of 21 days between applications.
- Spot treatments are permitted.
- Apply to emergent aquatic weeds in ponds, lakes, reservoirs, marshes, bayous, drainage ditches, non-irrigation canals, rivers, and streams that are quiescent or slow moving.
- Coordination and approval of local and state authorities may be required, either by letter or agreement or issuance of special permits for aquatic applications.

Water Use

1. Water for irrigation or sprays:
    A. If treated water is intended to be used only for crops or non-crop areas that are labeled for direct treatment with 2,4-D such as pastures, turf, or cereal grains, the treated water may be used to irrigate and/or mix sprays for these sites anytime after the 2,4-D aquatic application.
    B. Due to potential phytotoxicity considerations, the following restrictions are applicable: If treated water is intended to be used to irrigate or mix sprays for plants grown in commercial nurseries and greenhouses: and other plants or crops that are not labeled for direct treatment with 2,4-D, the water must not be used unless one of the following restrictions has been observed:
        i. A setback distance from functional water intake(s) of greater than or equal to 600 ft. was used for the application, or,
        ii. A waiting period of 7 days from the time of application has elapsed, or,
        iii. An approved assay indicates that the 2,4-D concentration is 100 ppb (0.1 ppm) or less at the water intake. Wait at least 3 days after application before initial sampling at water intake.

(continued)

2. Drinking water (potable water):

   A. Consult with appropriate state or local water authorities before applying this product to public waters. State or local agencies may require permits. The potable water use restrictions on this label are to ensure that consumption of water by the public is allowed only when the concentration of 2,4-D in the water is less than the MCL (Maximum Contaminant Level) of 70 ppb. Applicators should consider the unique characteristics of the treated waters to assure that 2,4-D concentrations in potable water do not exceed 70 ppb at the time of consumption.

   B. for floating and emergent weed applications, the drinking water setback distance from functioning potable water intakes is greater than or equal to 600 ft.

   C. If not setback distance of greater than or equal to 600 ft. is used for application, applicators or the authorizing organization must provide a drinking water notification prior to a 2,4-D application to the party responsible for public water supply or to individual private water uses. Notification to the party responsible for a public water supply or to individual private water users must be done in a manner to assure that the party is aware of the water use restrictions when this product is applied to potable water.

The following is an example of a notification via posting, but other methods of notification which convey the above restrictions may be used and may be required in some cases under state or local law or as a condition of a permit.

Example:
Posting notification should be located every 250 feet including the shoreline of the treated area and up to 250 feet of shoreline past the application site to include immediate public access points. Posting must include the day and time of application. Posting may be removed if analysis of a sample collected at the intake 3 or more days following application shows that the concentration in the water is less than 70 ppb (100 ppb for irrigation or sprays), or after 7 days following application, whichever occurs first.

Text of notification: Wait 7 days before diverting functioning surface water intakes from the treated aquatic site to use as drinking water, irrigation, or sprays, unless water at functioning drinking water intakes is tested at least 3 days after application and is demonstrated by assay to contain not more than 70 ppb 2,4-D (100 ppb for irrigation or sprays).

Application Date:_____Time:_____

   D. Following each application of this product, treated water must not be used for drinking water unless one of the following restrictions has been observed:

      i. A setback distance from functional water intake(s) of greater than or equal to 600 ft. was used for the application, or,
      ii. A waiting period of at least 7 days from the time of application has elapsed, or,
      iii. An approved assay indicated that the 2,4-D concentration is 70 ppb (0.07 ppm) or less at the water intake. Sampling for drinking water analysis should occur no sooner than 3 days after 2,4-D application. Analysis of samples must be completed by a laboratory that is certified under the Safe Drinking Water Act to perform drinking water analysis using a currently approved version of analytical Method Number 515,555, other methods for 2,4-D as may be listed in Title 40 CFR, Part 141.24. or Method Number 4015 (immunoassay of 2,4-D) from U.S. EPA Test Methods for Evaluating Solid Waste SW-846.

   E. **Note:** Existing potable water intakes that are no longer in use, such as those replaced by a connection to a municipal water system or a potable water well, are not considered to be functioning potable water intakes.

   F. Drinking water setback distances do not apply to terrestrial applications of 2,4-D adjacent to water bodies with potable water intakes.

3. Except as stated above, there are no restrictions on using water from treated areas for swimming, fishing, watering livestock or domestic purposes.

SUBMERGED AQUATIC WEEDS: Including Eurasian Water Milfoil *(Myriophyllum spicatum)*

TREATMENT SITE	SPECIFIC USE DIRECTIONS
Aquatic Weed Control in Ponds, Lakes, Reservoirs, Marshes, Bayous, Drainage Ditches, Canals, Rivers and Streams That are Quiescent or slow moving, Including Programs of The Tennessee Valley Authority	**Application Timing:** For best results, apply in spring or weed growth in areas heavily infested the previous year. A second application may be needed when weeds show signs of recovery, but no later than mid August in most area. **Subsurface Application:** Apply 2,4-D AMINE 4 undiluted directly to water through a boat mounted distribution system. Shoreline areas should be treated by subsurface injection application by boat to avoid aerial drift. **Surface Application:** Use power operated boat mounted boom sprayer. If rate is less than 5 gallons per acre, dilute to a minimum spray volume of 5 gallons per surface area. **Aerial Application:** Use drift control spray equipment or thickening agents mixed with sprays to reduce drift. Apply through standard boom systems in a minimum spray volume of 5 gallons per surface acre. For Microfoil® drift control spray systems, apply 2,4-D AMINE 4 in a total spray volume of 12 to 15 gallons per acre. Apply to attain a concentration of 2 to 4 ppm (see table below.)

Dissolved Oxygen Rations: Fish require oxygen dissolved in water for life processes and a favorable water-oxygen ration must be maintained. Decaying weeds use up dissolved oxygen in water. Fish kill resulting from decaying plant material can be prevented by:

1. Treating the entire area when the weed mass is sparse and the rate of decomposition will not be sufficient to disturb the water-oxygen ratio: or
2. If application is delayed until there is a dense weed mass, treat no more than one-half of a lake or pond at one time. For large bodies of weed-infested water, apply product in lanes, leaving buffers strips at least 100 feet wide which can be treated in 4 to 5 weeks or when vegetation in treated lanes has decomposed. During the growing season, decomposition of treated strips will usually occur in 2 to 3 weeks.

SUBMERSED AQUATIC WEEDS USE RESTRICTIONS:

- Do not treat areas that are not infested with aquatic weeds.
- Do not exceed 10.8 lb of acid equivalent per acre foot of treated water.
- Do not apply within 1500 ft of an active potable or irrigation water intake.
- Wind speed: Do not apply when wind speed is at or above 10 mph when making ground or surface applications. Do not aerially apply when wind speed is greater than 5 mph. Wind speed restrictions do not apply for subsurface applications used in submerged aquatic weed control programs.
- Irrigation: Unless an approved assay indicated that the 2,4-D concentration is 100 ppb (0.1 ppm) acid or less, do not use water from treated areas for;
  1) irrigation other than non-crop areas or those crops or plants labeled for direct application of 2,4-D; or
  2) mixing sprays for agricultural or ornamental plants.
- Potable Water: Unless an approved assay indicated that the 2,4-D concentration is 70 ppb (0.07 ppm) acid or less, do not use water from treated areas for potable water (drinking water).
- Other Uses of Treated Water: Except as stated above, there are no restrictions on use of water from treated areas for fishing, watering of livestock, or other domestic purposes.
- Minimum of 21 days between applications.
- Apply only to emergent aquatic weeds in ponds, lakes, reservoirs, marshes, bayous, drainage ditches, non-irrigation canals, rivers, and streams that are quiescent or slow moving.
- Coordination and approval of local and state authorities may be required, either by letter or agreement or issuance of special permits for aquatic applications.

Submersed Weeds

- Maximum of 22.7 pints (10.8 lbs ae)/per acre-foot per application.
- Limited to 2 applications per season.
- Apply to aquatic weeds in ponds, lakes, reservoirs, marshes, bayous, drainage ditches, non-irrigation canals, rivers, and streams that are quiescent or slow moving.
- Do not apply within 21 days of previous application.
- When treating moving bodies of water, applications must be made while traveling upstream to prevent concentration of 2,4-D downstream from the application.
- Coordination and approval of local and state authorities may be required, either by letter of agreement or issuance of special permits for such use.

Table 1. Amount of 2,4-D to Apply for a Target Subsurface Concentration

Surface Area	Average Depth	For typical conditions – 2 ppm 2,4-D ae/acre-foot	For difficult conditions* – 4 ppm 2,4-D ae/acre-foot
1 acre	1 ft	5.4 lbs. (11.3 pints product)	10.8 lbs. (22.7 pints product)
	2 ft	10.8 lbs. (22.7 pints product)	21.6 lbs. (45.4 pints product)
	3 ft	16.2 lbs. (34.1 pints product)	32.4 lbs. (68.2 pints product)
	4 ft	21.6 lbs. (45.4 pints product)	43.2 lbs. (90.0 pints product)
	5 ft	27.0 lbs. (56.8 pints product)	54.0 lbs. (113.6 pints product)
*Examples include spot treatment of pioneer colonies of Eurasian Water Milfoil and certain difficult to control aquatic species.			

Water Use:

1. Water for irrigation or sprays:
   - A. If treated water is intended to be used only for crops or non-crop areas that are labeled for direct treatment with 2,4-D such as pastures, turf, or cereal grains, the treated water may be used to irrigate and/or mix sprays for these sites at anytime after the 2,4-D aquatic application.
   - B. Due to potential phytotoxicity and/or residue considerations, the following restrictions are applicable:
     If treated water is intended to be used to irrigate or mix sprays for unlabeled crops, noncrop areas or other plants not labeled for direct treatment with 2,4-D, the water must not be used unless one of the following restrictions has been observed:
     - i. A setback distance described in the Drinking Water Setback Table was used for the application, or,
     - ii. A waiting period of 21 days from the time of application has elapsed, or,
     - iii. An approved assay indicated that the 2,4-D concentration is 100 ppb (0.1 ppm) or less at the water intake. See Table 3 for the waiting period after application but before taking the initial sampling at water intake.
2. Drinking water (potable water):
   - A. Consult with appropriate state or local water authorities before applying this product to public waters. State or local agencies may require permits.

     The potable water use restrictions on this label are to ensure that consumption of water by the public is allowed only when the concentration of 2,4-D in the water is less than the MCL (Maximum Contaminant Level) of 70 ppb. Applicators should consider the unique characteristics of the treated waters to assure that 2,4-D concentrations in potable water do not exceed 70 ppb at the time of consumption.
   - B. For submersed weed applications, the drinking water setback distances from functioning potable water intakes are provided in Table 2. Drinking Water Setback Distance (below).
   - C. If not setback distance from the Drinking Water Setback Table (Table 2) is to be used for the application, applicators or the authorizing organization must provide a drinking water notification and an advisory to shut off all potable water intakes prior to a 2,4-D application. Notification to the party responsible for a public water supply or to individual private water users must be done in a manner to assure that the party is aware of the water use restrictions when this product is applied to potable water. The following is an example of a notification via posting, but other methods of notification which convey the above restrictions may be used and may be required in some cases under state or local law or as condition of a permit.

Example:

Posting notification should be located every 250 feet including the shoreline of the treated area and up to 250 feet of shoreline past the application site to include immediate public access points. Posting should include the day and time of application. Posting may be removed if analysis of a sample collected at the intake no sooner than stated in Table 3 (below) shows that the concentration in the water is less than 70 ppb (100 ppb for irrigation or sprays), or after 21 days following application, whichever occurs first.

Text of notification: Wait 21 days before diverting functioning surface water intakes from the treated aquatic site to use as drinking water, irrigation, or sprays, unless water at functioning drinking water intakes is tested no sooner than (insert days from Table 3) and is demonstrated by assay to contain not more than 70 ppb 2,4-D (100 ppb for irrigation or sprays).

Application Date:_____Time_____

D. Following each application of this product, treated water must not be used for drinking water unless one of the following restrictions has been observed:

i. A setback distance described in the Drinking Water Setback Distance Table was used for the application, or,
ii. A waiting period of at least 21 days from the time of application has elapsed, or,
iii. An approved assay indicates that the 2,4-D concentration is 70 ppb (0.07 ppm) or less at the water intake. Sampling for drinking water analysis should occur no sooner than stated in Table 3. Analysis of samples must be completed by a laboratory that is certified under the Safe Drinking Water Act to perform drinking water analysis using a currently approved version of analytical Method Number 515,555, other methods for 2,4-D as may be listed in Title 40 CFR, Part 141.24, or Method Number 4015 (immunoassay of 2,4-D) from U.S. EPA Test Methods for Evaluating Solid Waste SW-846.

E. **Note:** Existing potable water intakes that are no longer in use, such as those replaced by a connection to a municipal water system or a potable water well, are not considered to be functioning potable water intakes.

F. Drinking water setback distances do not apply to terrestrial applications of 2,4-D adjacent to water bodies with potable water intakes.

3. Except as stated above, there are no restrictions on using water from treated areas for swimming, fishing, watering livestock or domestic purposes.

Table 2. Drinking Water Setback Distance for Submersed Weed Application

Application Rate and Minimum Setback Distance (feet) From Functioning Potable Water Intake			
1 ppm*	2 ppm*	3 ppm*	4ppm*
600	1200	1800	2400
*ppm acid equivalent target water concentration			

Table 3. Sampling for Drinking Water Analysis After 2,4-D Application for Submersed Weed Applications

Minimum Days After Application Before Initial Water Sampling at the Functioning Potable Water Intake			
1 ppm*	2 ppm*	3 ppm*	4 ppm*
5	10	10	14
*ppm acid equivalent target water concentration			

BANKS OF IRRIGATION CANALS AND DITCHES

TARGET PANTS	2,4-D AMINE 4 (pt/acre)	SPECIFIC USE DIRECTIONS
Annual Weeds Biennial and perennial broadleaf weeds and susceptible wood plants	2 to 4 4	Apply using low pressure spray (10 to 40 psi) in a spray volume of 20 to 100 gallons per acre using power operated spray equipment. Apply when wind speed is low, 5 mph or less. Apply working upstream to avoid accidental concentration of spray into water. Cross-stream spraying to opposite banks is not permitted and avoid boom spraying over water surface. When spraying shoreline weeds, allow no more than 2 foot overspray onto water surface with an average of less than 1 foot of overspray to prevent significant water contamination. Apply when weeds are small and growing actively before the bud stage. Apply when biennial and perennial species are in the seedling to rosette stage and before flowering stalks appear. For hard-to-control weeds, a repeat application after 30 days at the same rate may be needed. For woody species and patches of perennial weeds, mix 2/3 gallon (5-1/3 pt) of 2,4-D AMINE 4 per 64 to 150 gallons of total spray. Wet foliage by apply about 3 to 4 gallons of spray per 1000 sq ft (10.5 x 10.5 steps).

DITCHBANK APPLICATION RESTRICTIONS

- Postemergence:
  - Limited to 2 applications per season.
  - Maximum of 4 pt/acre per application.
  - Minimum of 30 days between applications.
- Spot treatment permitted.
- Do not apply more than 8 pt/acre per year.
- Do not use on small canals with a flow rate less than 10 cubic feet per second (CFS) where water will be used for drinking purposes. CFS may be estimated by using the formula below. The approximate velocity needed for the calculation can be determined by observing the length of time that it takes a floating object to travel a defined distance. Divide the distance (ft.) by the time (sec.) to estimate velocity (ft. per sec.). Repeat 3 times and use the average to calculate CFS.

  Average Width (ft.) x Average Depth (ft.) x Average Velocity (ft. per sec.) = CFS

- For ditchbank weeds:
  - Do not allow boom spray to be directed onto water surfaces.
  - Do not spray across stream to opposite bank.
- For shoreline weeds:
  - Allow no more than 2 foot overspray onto water.

CONDITIONS OF SALE AND WARRANTY

The DIRECTIONS FOR USE of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of ALBAUGH, LLC, its Supplemental Distributors, or the Seller. All such risks shall be assumed by the Buyer.

ALBAUGH, LLC, its Supplemental Distributors and the Seller warrant that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the Directions for Use subject to the inherent risks referred to above. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, NEITHER ALBAUGH, LLC NOR ITS SUPPLEMENTAL DISTRIBUTOR MAKE ANY OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE OR OF MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY. THIS WARRANTY DOES NOT EXTEND TO, AND THE BUYER SHALL BE SOLELY RESPONSIBLE FOR, ANY AND ALL LOSS OR DAMAGE WHICH RESULTS FROM THE USE OF THIS PRODUCT IN ANY MANNER WHICH IS INCONSISTENT WITH THE LABEL DIRECTIONS.**

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BUYER'S EXCLUSIVE REMEDY AND THE EXCLUSIVE LIABILITY OF ALBAUGH, LLC, ITS SUPPLEMENTAL DISTRIBUTORS AND THE SELLER FOR ANY AND ALL CLAIMS, LOSSES, DAMAGES, OR INJURIES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER OR NOT BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY IN TORT OR OTHERWISE, SHALL BE LIMITED, AT THE MANUFACTURER'S OPTION, TO REPLACEMENT OF OR THE REPAYMENT OF THE PURCHASE PRICE FOR THE QUANTITY OF PRODUCT WITH RESPECT TO WHICH DAMAGES ARE CLAIMED. When Buyer suffers losses or damages resulting from the use or handling of this product (including claims based on contract, negligence, strict liability, or other legal theories), Buyer must promptly notify Seller in writing of any claims to be eligible to receive either remedy stated above. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, IN NO CASE SHALL ALBAUGH, LLC, ITS SUPPLEMENTAL DISTRIBUTORS, OR THE SELLER BE LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.** ALBAUGH, LLC, its Supplemental Distributors, and the Seller offer this product, and the Buyer accepts it, subject to the foregoing Conditions of Sale and Warranty, which may be varied only by agreement in writing signed by a duly authorized representative of ALBAUGH, LLC. No employee or agent of ALBAUGH, LLC, its Supplemental Distributor, or the Seller is authorized to vary or exceed the terms of this Warranty in any other manner.