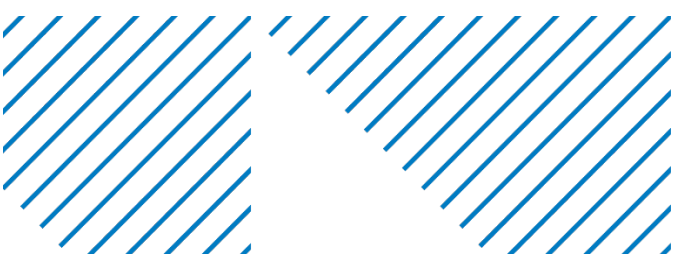




Exhibit T

2024 Permit Application



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|Irservice signed on 2024-04-04T10:23:43

Site or Project Name:

Beaver Dam Navigation Channels

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

Contact Information

Applicant Information

Organization Beaver Dam Lake Mgmt District

Last Name: Schroeder

First Name: Tom

Mailing Address: 1870 Hines Lakeview Drive

City: Cumberland

State: WI

Zip Code: 54829

Email:

Phone Number:
(xxx-xxx-xxxx)

Alternative Phone Number:
(xxx-xxx-xxxx)

Waterbody Address

Last Name:

First Name:

Street Address: varies locations

City: Cumberland

State: WI

Zip Code: 54829

Email:

Phone Number:
(xxx-xxx-xxxx)

Alternative Phone Number:
(xxx-xxx-xxxx)

Applicator

Name of Applicator Firm: Lake Restoration, Inc

Applicator Certification #: 143379-CA

Business Location License #: 93-006836-006558

Restricted Use Pesticide #:

Address: 12425 Ironwood Circle

City: Rogers

State: WI

Zip: 55374

Email: service@lakerestoration.com

Phone Number:
(xxx-xxx-xxxx) 763-428-9777

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 :**

Beaver Dam Lake Mgmt District

None

Water Body or Wetland Name:

Beaver Dam

Primary County:

Barron

Latitude:

45.320672

Longitude:

-92.004768

Section:

01

Township:

35

Range:

13

Direction:

E W

Waterbody Surface Area:

1,112 acres

Estimated Surface area that is 10ft or less

300 acres

Proposed Control Area(s)

Area(s) Proposed for Control:

Site Name (Optional)	Treatment Length	Treatment Width	Estimated Acreage	Average Depth	Calculated Volume
<input type="text"/>	0 ft. x <input type="text"/>	0 ft.	$\div 43,560 \text{ ft}^2 =$ <input type="text"/> ac	3.14 ft = <input type="text"/>	<input type="text"/> ac-ft
<input type="text"/>	0 ft. x <input type="text"/>	0 ft.	$\div 43,560 \text{ ft}^2 =$ <input type="text"/> ac	5.90 ft = <input type="text"/>	<input type="text"/> ac-ft
<input type="text"/>	0 ft. x <input type="text"/>	0 ft.	$\div 43,560 \text{ ft}^2 =$ <input type="text"/> ac	6.94 ft = <input type="text"/>	<input type="text"/> ac-ft
<input type="text"/>	0 ft. x <input type="text"/>	0 ft.	$\div 43,560 \text{ ft}^2 =$ <input type="text"/> ac	2.96 ft = <input type="text"/>	<input type="text"/> ac-ft
<input type="text"/>	0 ft. x <input type="text"/>	0 ft.	$\div 43,560 \text{ ft}^2 =$ <input type="text"/> ac	3.26 ft = <input type="text"/>	<input type="text"/> ac-ft
<input type="text"/>	0 ft. x <input type="text"/>	0 ft.	$\div 43,560 \text{ ft}^2 =$ <input type="text"/> ac	6.53 ft = <input type="text"/>	<input type="text"/> ac-ft
<input type="text"/>	0 ft. x <input type="text"/>	0 ft.	$\div 43,560 \text{ ft}^2 =$ <input type="text"/> ac	6.86 ft = <input type="text"/>	<input type="text"/> ac-ft
<input type="text"/>	0 ft. x <input type="text"/>	0 ft.	$\div 43,560 \text{ ft}^2 =$ <input type="text"/> ac	3.31 ft = <input type="text"/>	<input type="text"/> ac-ft
<input type="text"/>	0 ft. x <input type="text"/>	0 ft.	$\div 43,560 \text{ ft}^2 =$ <input type="text"/> ac	3.37 ft = <input type="text"/>	<input type="text"/> ac-ft

	0	ft. x	0	÷ 43,560 ft. ² =	0.05	ac	4.18	ft =	0.22	ac-ft
	0	ft. x	0	÷ 43,560 ft. ² =	0.64	ac	2.90	ft =	1.86	ac-ft
	0	ft. x	0	÷ 43,560 ft. ² =	5.44	ac	5.18	ft =	28.17	ac-ft
	0	ft. x	0	÷ 43,560 ft. ² =	0.27	ac	2.40	ft =	0.65	ac-ft
	0	ft. x	0	÷ 43,560 ft. ² =	0.11	ac	4.49	ft =	0.50	ac-ft
	0	ft. x	0	÷ 43,560 ft. ² =	0.23	ac	3.68	ft =	0.85	ac-ft
	0	ft. x	0	÷ 43,560 ft. ² =	0.99	ac	5.06	ft =	5.01	ac-ft
	0	ft. x	0	÷ 43,560 ft. ² =	0.04	ac	3.76	ft =	0.13	ac-ft
	0	ft. x	0	÷ 43,560 ft. ² =	0.07	ac	3.45	ft =	0.24	ac-ft
	0	ft. x	0	÷ 43,560 ft. ² =	0.04	ac	3.66	ft =	0.14	ac-ft
	0	ft. x	0	÷ 43,560 ft. ² =	0.02	ac	3.79	ft =	0.09	ac-ft
	0	ft. x	0	÷ 43,560 ft. ² =	0.01	ac	3.91	ft =	0.04	ac-ft
	0	ft. x	0	÷ 43,560 ft. ² =	0.01	ac	3.95	ft =	0.03	ac-ft
	0	ft. x	0	÷ 43,560 ft. ² =	0.02	ac	3.19	ft =	0.07	ac-ft
	0	ft. x	0	÷ 43,560 ft. ² =	0.02	ac	3.78	ft =	0.07	ac-ft
	0	ft. x	0	÷ 43,560 ft. ² =	0.02	ac	3.67	ft =	0.07	ac-ft
	0	ft. x	0	÷ 43,560 ft. ² =	0.03	ac	2.98	ft =	0.10	ac-ft
	0	ft. x	0	÷ 43,560 ft. ² =	0.03	ac	3.43	ft =	0.09	ac-ft
	0	ft. x	0	÷ 43,560 ft. ² =	0.01	ac	3.89	ft =	0.02	ac-ft
	0	ft. x	0	÷ 43,560 ft. ² =	0.05	ac	2.77	ft =	0.13	ac-ft
	0	ft. x	0	÷ 43,560 ft. ² =	0.05	ac	3.03	ft =	0.16	ac-ft
	0	ft. x	0	÷ 43,560 ft. ² =	0.04	ac	3.48	ft =	0.13	ac-ft
	0	ft. x	0	÷ 43,560 ft. ² =	0.09	ac	3.30	ft =	0.29	ac-ft
	0	ft. x	0	÷ 43,560 ft. ² =	0.09	ac	2.51	ft =	0.23	ac-ft
	0	ft. x	0	÷ 43,560 ft. ² =	0.02	ac	3.54	ft =	0.08	ac-ft

	0	ft. x	0	ft.	$\div 43,560 \text{ ft.}^2 =$	0.15	ac	1.93	ft =	0.30	ac-ft
	0	ft. x	0	ft.	$\div 43,560 \text{ ft.}^2 =$	0.07	ac	4.16	ft =	0.30	ac-ft
	0	ft. x	0	ft.	$\div 43,560 \text{ ft.}^2 =$	0.05	ac	3.62	ft =	0.18	ac-ft
	0	ft. x	0	ft.	$\div 43,560 \text{ ft.}^2 =$	0.05	ac	3.70	ft =	0.19	ac-ft
	0	ft. x	0	ft.	$\div 43,560 \text{ ft.}^2 =$	0.03	ac	3.70	ft =	0.10	ac-ft
	0	ft. x	0	ft.	$\div 43,560 \text{ ft.}^2 =$	0.01	ac	3.76	ft =	0.05	ac-ft
	0	ft. x	0	ft.	$\div 43,560 \text{ ft.}^2 =$	0.02	ac	3.62	ft =	0.06	ac-ft
	0	ft. x	0	ft.	$\div 43,560 \text{ ft.}^2 =$	0.03	ac	3.00	ft =	0.10	ac-ft
	0	ft. x	0	ft.	$\div 43,560 \text{ ft.}^2 =$	0.25	ac	5.00	ft =	1.25	ac-ft
	0	ft. x	0	ft.	$\div 43,560 \text{ ft.}^2 =$	0.32	ac	5.50	ft =	1.76	ac-ft
	0	ft. x	0	ft.	$\div 43,560 \text{ ft.}^2 =$	0.31	ac	4.50	ft =	1.40	ac-ft
	0	ft. x	0	ft.	$\div 43,560 \text{ ft.}^2 =$	2.24	ac	3.30	ft =	7.39	ac-ft

Estimated Acreage
Grand Total ac

Calculated
Volume Grand
Total 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? <input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Don't Know	If Yes, date approved of most current copy <input type="text"/> <input type="text"/>	Link to Approved Plan: <input type="text"/> <input checked="" type="checkbox"/> 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

- | | | |
|---|--|--|
| <input type="checkbox"/> Algae | <input type="checkbox"/> Flowering Rush | <input type="checkbox"/> Purple Loosestrife |
| <input type="checkbox"/> Common/Glossy Buckthorn | <input type="checkbox"/> Hybrid Cattail | <input type="checkbox"/> Reed Canary Grass |
| <input checked="" type="checkbox"/> Coontail | <input type="checkbox"/> Hybrid Watermilfoil | <input type="checkbox"/> Reed Manna Grass |
| <input type="checkbox"/> Curly-Leaf Pondweed | <input type="checkbox"/> Japanese Knotweed | <input type="checkbox"/> Starry Stonewort |
| <input type="checkbox"/> Duckweed | <input type="checkbox"/> Naiad | <input type="checkbox"/> Yellow Floating Heart |
| <input checked="" type="checkbox"/> Elodea | <input type="checkbox"/> Narrow-Leaf Cattail | <input type="checkbox"/> Yellow Iris |
| <input checked="" type="checkbox"/> Eurasian Watermilfoil | <input type="checkbox"/> Phragmites | <input checked="" type="checkbox"/> Pondweed |

Other Target Plants:

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

Chemical Control

Full Trade Name of Proposed Chemical(s)

- | | | | |
|--|--|--|---|
| <input type="checkbox"/> Agristar 2,4-D Amine | <input type="checkbox"/> Clipper | <input type="checkbox"/> K-Tea | <input type="checkbox"/> SCI-62 |
| <input type="checkbox"/> Algimycin PWF | <input type="checkbox"/> Clipper SC | <input type="checkbox"/> Littora | <input type="checkbox"/> Sculpin G |
| <input checked="" type="checkbox"/> Alligare 2,4-D | <input type="checkbox"/> Current | <input type="checkbox"/> Milestone | <input type="checkbox"/> SeClear |
| <input type="checkbox"/> Alligare Argos | <input type="checkbox"/> Cutrine-Plus | <input type="checkbox"/> Nautique | <input type="checkbox"/> SeClear G |
| <input type="checkbox"/> Alligare Diquat | <input type="checkbox"/> Cutrine-Plus Granular | <input type="checkbox"/> Navigate | <input type="checkbox"/> Shoreklear-Plus |
| <input type="checkbox"/> Alligare Ecomazapyr | <input type="checkbox"/> Cutrine-Ultra | <input type="checkbox"/> Navitrol | <input type="checkbox"/> Shredder Amine |
| <input type="checkbox"/> Alligare Glyphosate 5.4 | <input type="checkbox"/> DMA 4 IVM | <input type="checkbox"/> Navitrol DPF | <input type="checkbox"/> Sonar AS |
| <input type="checkbox"/> Aqua Neat | <input type="checkbox"/> Earthtec | <input type="checkbox"/> Phycomycin SCP | <input type="checkbox"/> Sonar Genesis |
| <input type="checkbox"/> Aqua Star | <input type="checkbox"/> Element 3A | <input type="checkbox"/> Polaris | <input type="checkbox"/> Sonar H4C |
| <input type="checkbox"/> AquaPro | <input type="checkbox"/> Flumioxazin 51% WDG | <input type="checkbox"/> Polaris AC | <input type="checkbox"/> Sonar PR |
| <input type="checkbox"/> Aquashade | <input type="checkbox"/> Formula F-30 | <input type="checkbox"/> Pond-Klear | <input type="checkbox"/> Sonar Q |
| <input type="checkbox"/> Aquashadow | <input type="checkbox"/> Garlon 3A | <input checked="" type="checkbox"/> ProcellaCOR EC | <input type="checkbox"/> Sonar RTU |
| <input type="checkbox"/> Aquastrike | <input type="checkbox"/> Green Clean | <input type="checkbox"/> Refuge | <input type="checkbox"/> Sonar SRP |
| <input type="checkbox"/> Aquathol K | <input type="checkbox"/> Habitat | <input type="checkbox"/> Renovate 3 | <input type="checkbox"/> SonarOne |
| <input type="checkbox"/> Aquathol Super K | <input type="checkbox"/> Harpoon | <input type="checkbox"/> Renovate LZR | <input type="checkbox"/> Stingray |
| <input type="checkbox"/> Avast! SC | <input type="checkbox"/> Harvester | <input type="checkbox"/> Renovate LZR Max | <input type="checkbox"/> Symmetry NXG |
| <input type="checkbox"/> Captain | <input type="checkbox"/> Havoc Amine | <input type="checkbox"/> Renovate Max G | <input type="checkbox"/> Touchdown Pro |
| <input type="checkbox"/> Captain XTR | <input type="checkbox"/> Hydrothol 191 | <input type="checkbox"/> Renovate OTF | <input type="checkbox"/> Tribune |
| <input type="checkbox"/> Chinook | <input type="checkbox"/> Hydrothol Granular | <input type="checkbox"/> Reward | <input type="checkbox"/> Trycera |
| <input type="checkbox"/> Clearcast | <input type="checkbox"/> Komeen | <input type="checkbox"/> Rodeo | <input type="checkbox"/> Weedar 64 |
| <input type="checkbox"/> Clearigate | <input type="checkbox"/> Komeen Crystal | <input type="checkbox"/> Roundup Custom | <input type="checkbox"/> Weedestroy AM-40 |

Other Proposed Chemical(s):

Have the proposed chemicals been permitted in a prior year on the proposed site?

- All Some None

What were the results of the treatment?

Method of Application: Injection

Other Method of Application

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

Alternatives to Chemical Control:	Feasible?	If No, Why Not?
1. Mechanical harvesting	<input type="radio"/> Yes <input checked="" type="radio"/> No	areas to shallow
2. Manual removal	<input type="radio"/> Yes <input checked="" type="radio"/> No	to labor intensive
3. Sediment screens/covers	<input type="radio"/> Yes <input checked="" type="radio"/> No	n/a
4. Dredging	<input type="radio"/> Yes <input checked="" type="radio"/> No	n/a
5. Waterbody drawdown	<input type="radio"/> Yes <input checked="" type="radio"/> No	n/a
6. Nutrient controls in watershed	<input checked="" type="radio"/> Yes <input type="radio"/> No	
7. Other:	<input type="radio"/> Yes <input type="radio"/> No	

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

Will surface water outflow and/or overflow be controlled to prevent chemical loss?

- Yes No

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

- Yes No

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	2024 Adjacents.pdf
Public Notice	 File Attachment	Public Notice.pdf
Large Scale Worksheet	 File Attachment	
Site Map	 File Attachment	2024 Beaver Dam Lake Map.pdf
Lake Management Plan	 File Attachment	+2024 EWM Mgmt Plan.pdf

Fee Calculation

Chemical Control Application

1. s. NR 107.11(1), Wis. Adm. Code, lists the conditions under which the permit fee is limited to the \$20 minimum charge.
2. s. NR 107.11(4), Wis. Adm. Code, lists the uses that are exempt from permit requirements.
3. s. NR 107.04(2), Wis. Adm. Code, provides for a refund of acreage fees if the permit is denied or if no treatment occurs.

If Proposed treatment is over 0.25, calculate acreage fee: (round up to nearest whole acre, to maximum of 50 acres) acres X \$25 per acre = \$	13.942000000...
If proposed treatment is less than 0.25 acre, acreage fee is \$0	<u>\$350.00</u>
Basic Permit Fee (non-refundable)	\$20.00
Total Fee	<u>\$370</u>

Payment Information

Invoice Number: WP-00046358
Payment Confirmation Number: WS2WT3011268378
Amount Paid: \$370

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|Irservice signed on 2024-0

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.

Memorandum

To: Beaver Dam Lake Management District (Board of Commissioners)
From: Barr Engineering Co. (Meg Rattei)
Subject: 2024 Beaver Dam Lake Eurasian Watermilfoil (EWM) Herbicide Treatment Program, Navigation Channel and Resident Access Corridor Herbicide Treatment Program, Monitoring Programs, and July Survey of Navigation Channels and Resident Access Corridors
Date: February 21, 2024
Project: 49030011.24
c: Austin Dehn (WDNR), Tyler Mesalk (WDNR), Alex Smith (WDNR), Jim Bartlett (Lake Restoration, Inc.), Andrew McFerrin (Aquatic Plant Management), and Nick Johnson (Aquatic Plant Management)

The purpose of this memorandum is to present:

1. 2024 EWM Herbicide Treatment Program
2. 2024 Navigation Channel and Resident Access Corridor Herbicide Treatment Program
3. 2024 Monitoring Programs
4. 2024 July Survey of Navigation Channels and Resident Access Corridors

1.0 2024 EWM Herbicide Treatment Program

During the October 2023 plant survey, EWM was not observed in West Lake, Williams Bay, Library Lake, Norwegian Bay, East Lake, and City Bay, and the EWM observed in Rabbit Island Bay during October 2023 was rake removed. The EWM documented in Cemetery Bay during October 2023 will be treated with herbicide during spring 2024. ProcellaCOR will be applied to 3.12 acres in Cemetery Bay, contingent upon the Beaver Dam Lake Management District obtaining a Wisconsin Department of Natural Resources (WDNR) permit for the treatment (a WDNR permit is required for herbicide treatment) (Figure 1 and Table 1). WDNR staff will do a site visit prior to treatment to determine whether treatment is warranted. The proposed treated area is 0.6 percent of the lake's 530-acre littoral area. A ProcellaCOR dose of 6 Prescription Dose Units (PDU) would be applied to the 0.88 acres in Treatment Area 1, 2, and 3 and a ProcellaCOR dose of 4 PDU would be applied to the 2.24 acres in Treatment Area 4 (Figure 1).



EWM, pictured above, found in Cemetery Bay during October 2023 will be treated with ProcellaCOR in spring 2024 contingent upon WDNR permitting the treatment

The herbicide treatment is expected to suppress the EWM infestation in the treated areas to very low levels, but some EWM may survive. Removal of surviving EWM in subsequent years will keep EWM suppressed to very low levels. EWM spreads explosively in Beaver Dam Lake and a handful of plants becomes hundreds of plants in just a few months.

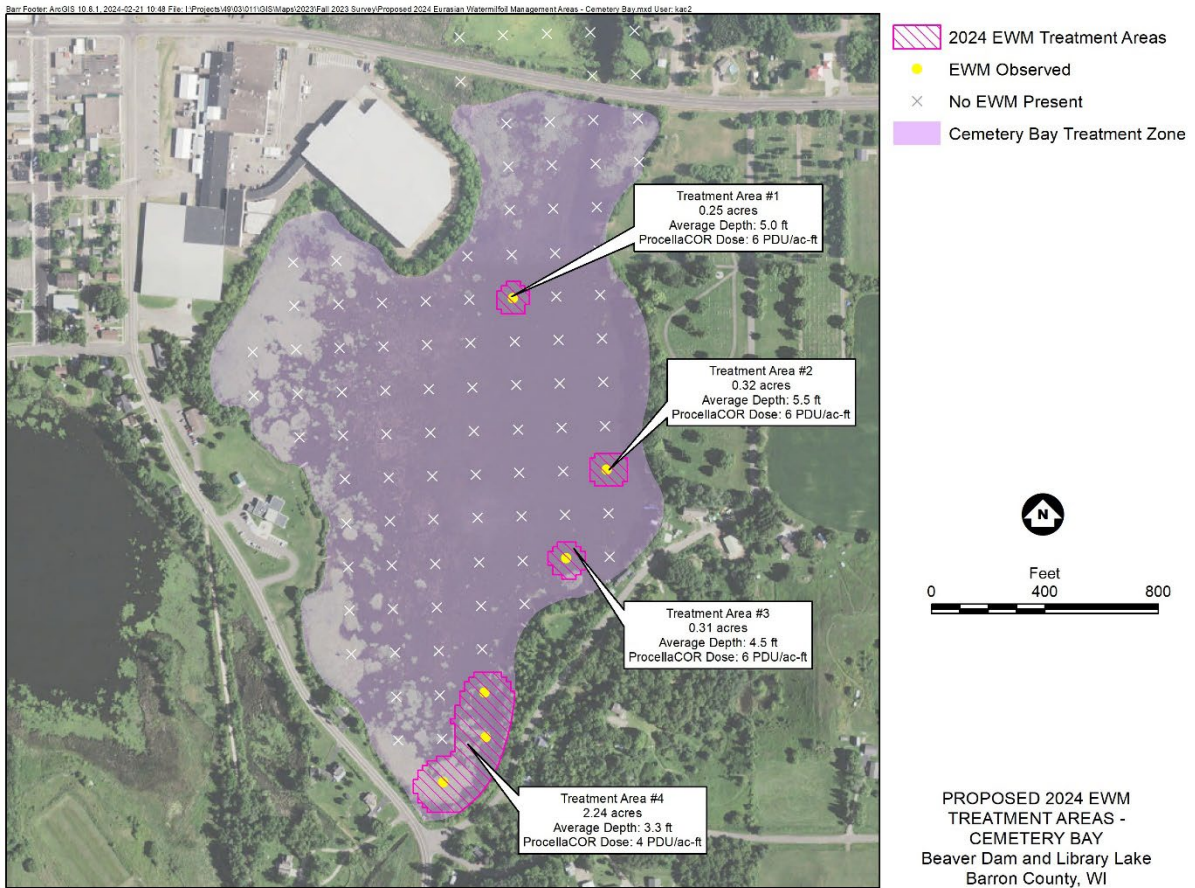


Figure 1 2024 Eurasian Watermilfoil Herbicide Treatment Plan: Cemetery Bay

Table 1 2024 Beaver Dam Lake EWM Herbicide Treatment Program

Location	EWM Extent (ac)	EWM Management Method	EWM Management Area (ac)	Name of Herbicide	Herbicide Dose
Cemetery Bay	3.12	Herbicide	3.12	ProcellaCOR	Treatment Area 1, Treatment Area 2, and Treatment Area 3: 6 PDU Treatment Area 4: 4 PDU

2.0 2024 Herbicide Treatment of Navigation Channels and Resident Access Corridors

Goal 2 of the Beaver Dam Lake Aquatic Plant Management (APM) Plan is “maintain navigation channels that are not impaired by native plants and invasive plant growth. The objectives of this goal are (1) Protect the lake’s ability to support recreational uses such as boating, pontooning, and fishing; (2) Provide riparian owners with the ability to navigate the lake with their boats and pontoons.” The Beaver Dam Lake Management District annually contracts with Endangered Resource Services, LLC (ERS) to inspect the lake’s navigation channels and resident access corridors to determine whether or not this goal has been attained. The 2023 navigation channel and resident access corridor inspection occurred concurrently with the summer plant survey on July 14, 15, 17, and 18. The 2023 inspection documented navigation channel and resident access impairment due to dense vegetation in Cemetery Bay, City Bay, the southwest bay of East Lake, and Norwegian Bay (Figure 2). Inspection results are discussed below.

- **Cemetery Bay** – The entire bay was covered with canopied fern pondweed (*Potamogeton robbinsii*) and watershield (*Brasenia schreberi*) making it difficult for residents to access the bay and navigate within the bay with their boats and pontoons.
- **City Bay** – Much of City Bay was dominated by dense canopied fern pondweed, large-leaf pondweed (*Potamogeton amplifolius*), and common waterweed (*Elodea canadensis*) impairing navigation. Also, dense vegetation was found in the tiny inlets on the west side of the south end of City Bay making it difficult for residents to access City Bay.



Canopied fern pondweed with scattered large-leaf pondweed (*Potamogeton amplifolius*) in Cemetery Bay on July 14, 2023



Pictured above, canopied fern pondweed in City Bay immediately north of the City Bay boat landing on July 15, 2023.



Pictured above, dense vegetation in the canal immediately south of the City Bay boat landing on July 15, 2023.

- **East Lake** – dense patches of fern pondweed dominated the southwest bay of East Lake making it difficult for residents to access the lake and causing navigation impairment within the southwest bay.
- **Norwegian Bay** – Dense fern pondweed and watershield made Norwegian Bay almost non-navigable.



Pictured above, dense fern pondweed and watershield in Norwegian Bay on July 14, 2023.

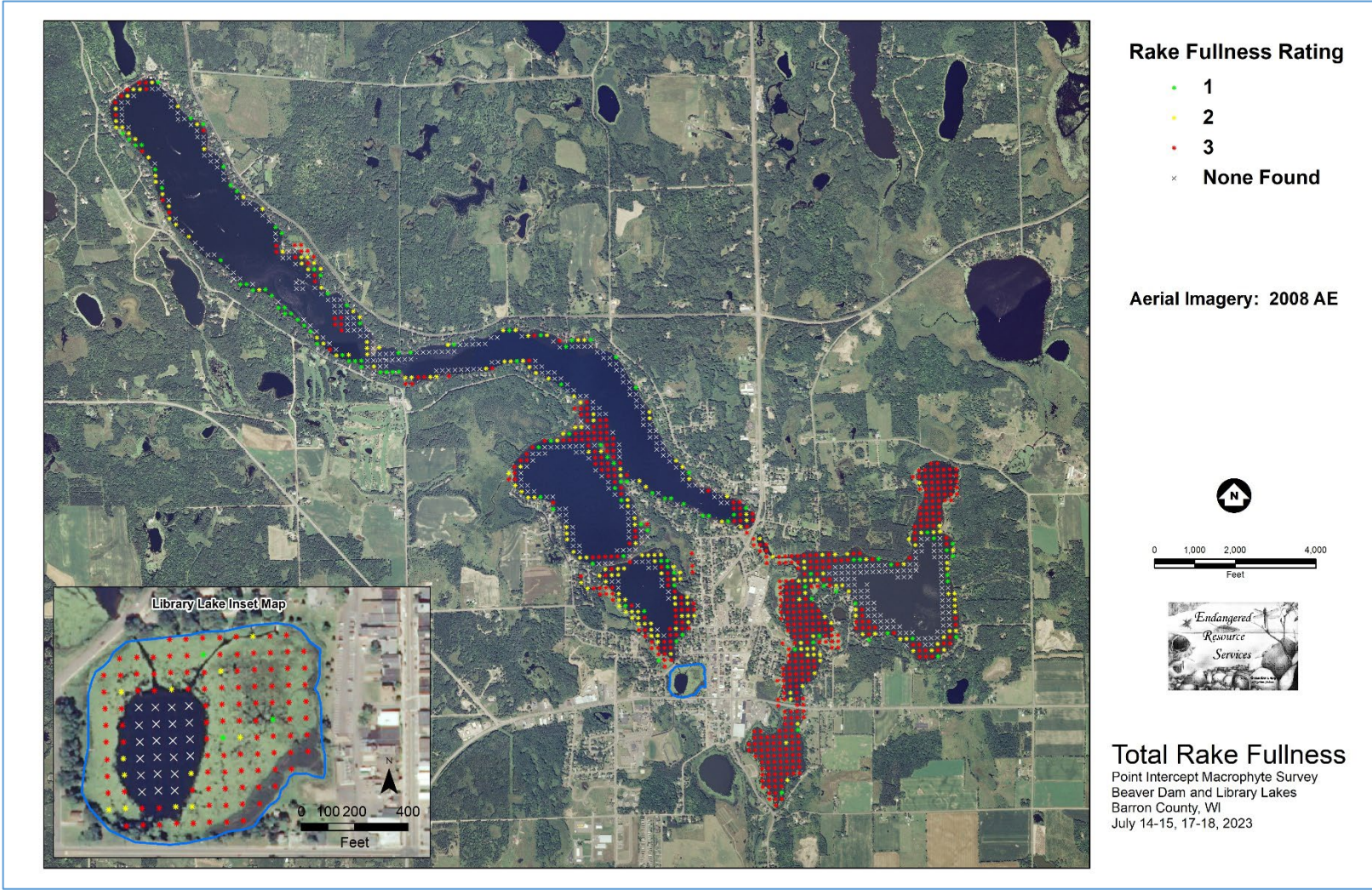


Figure 2 Total Plant Density as Measured by Total Rake Fullness in Beaver Dam Lake on July 14, 15, 17, and 18, 2023.

Treatment of resident access corridors and navigation channels in Cemetery Bay, City Bay, the southwest bay of East Lake, and Norwegian Bay is anticipated to be necessary in 2024. The Beaver Dam Lake Management District intends to submit a WDNR permit application to obtain a permit for herbicide treatment of the navigation channels and resident access corridors shown in Figure 3. The District understands that the permit will not be issued until the WDNR inspects the proposed treatment areas and verifies the need for treatment in each area. However, submitting the permit application prior to the growing season will allow the WDNR to review the permit application and the Great Lakes Indian Fish and Wildlife Commission to provide comments before the impairment occurs. Then, WDNR can quickly issue the permit when needed to alleviate impairment.

When permitted by the WDNR, the navigation channels and resident access corridors shown in Figure 3 will be treated with diquat. The total treatment area is 10.81 acres including:

- 1.20 acres in Norwegian Bay
- 0.38 acres in East Lake
- 7.78 acres in City Bay
- 1.39 acres in Cemetery Bay
- 0.064 acres under the bridge that goes between City Bay and Cemetery Bay

The herbicide dose for the treatment is dependent on water depth in the treated areas. A dose of 0.5 gallons per acre-foot will be administered to areas less than 4 feet in depth and a dose of 2 gallons per acre will be applied to areas with a depth of 4 feet or more.

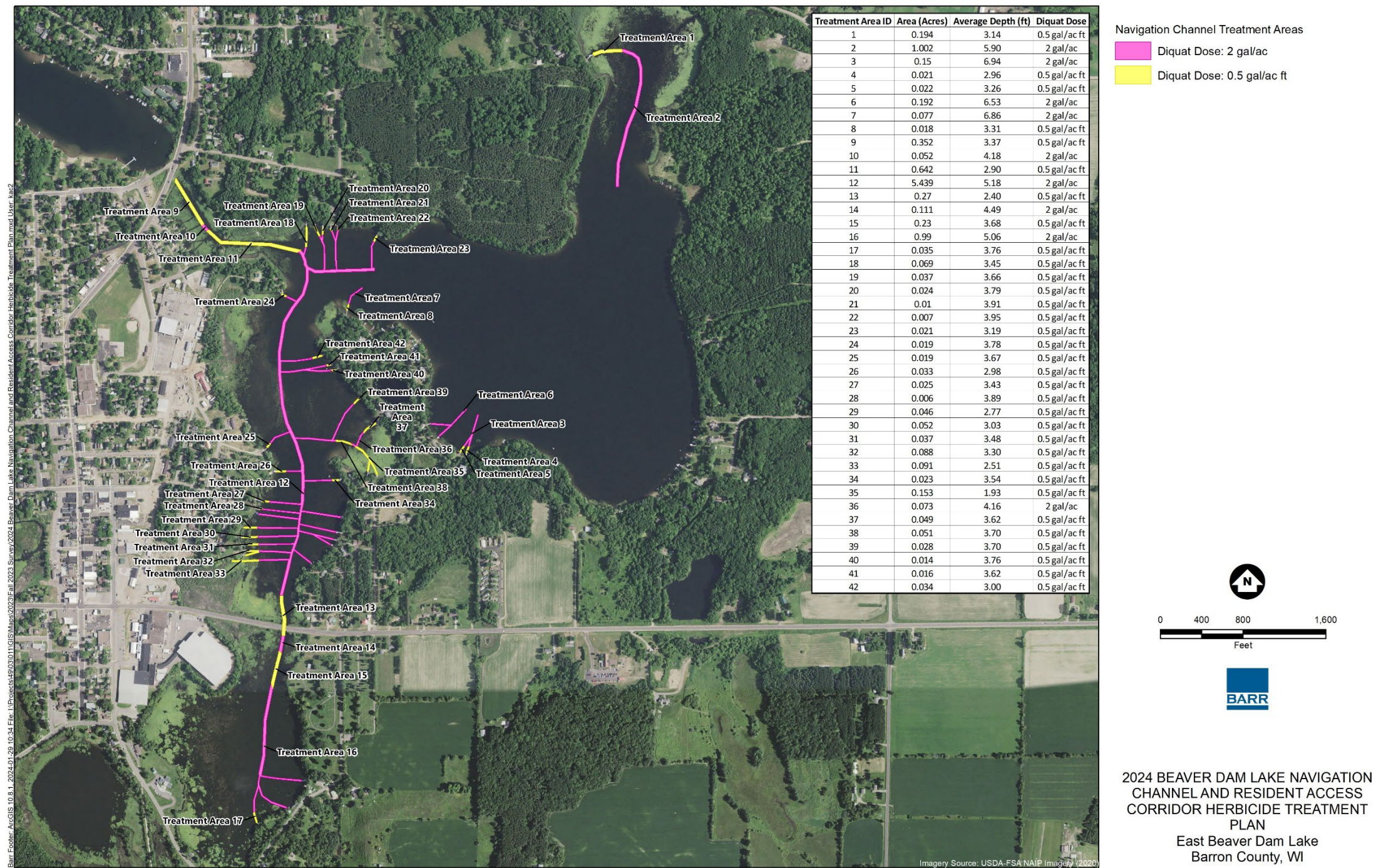


Figure 3 2024 Beaver Dam Lake Navigation Channel and Resident Access Corridor Herbicide Treatment Plan for Cemetery Bay, City Bay, the Southwest Bay of East Lake, and Norwegian Bay

3.0 2024 Aquatic Plant Monitoring Programs

The 2024 aquatic plant monitoring programs will include a July survey of all plant species in Beaver Dam Lake and an October survey of aquatic invasive species in Beaver Dam Lake. Details of the aquatic plant monitoring programs follow.

3.1 Beaver Dam Lake July Aquatic Plant Survey – All Species

During July, a point intercept survey of about 1,346 sample points will assess the entire plant community in Beaver Dam Lake. Maps showing the sample locations are found in Appendix E of the Beaver Dam Lake APM Plan (<http://www.beaverdamlake.org/apmp>). Data will be summarized in tabular format using the WDNR pre-treatment/post-treatment spreadsheet. Maps will be prepared showing location and density of each species identified in the July plant survey. Maps will also be prepared that show bottom substrate, lake depth, littoral zone, native species richness, and total rake fullness. Chi squared analysis will compare 2024 data with 2023 data to identify significant changes in frequency of occurrence of native species. The July 2024 monitoring program duplicates monitoring programs completed during 2009 through 2023.

3.2 Beaver Dam Lake Fall Aquatic Plant Survey – Aquatic Invasive Species (EWM and CLP)

During October, a fall point intercept survey of about 1,346 sample points will assess aquatic invasive species (EWM and CLP) extent in Beaver Dam Lake. Maps showing the sample locations are found in Appendix E of the Beaver Dam Lake APM Plan (<http://www.beaverdamlake.org/apmp>). The results of the EWM data collected during the fall aquatic invasive species survey will determine 2025 EWM management areas and will be used to design the 2025 EWM management program. The results of the CLP data collected during the fall aquatic invasive species survey will be evaluated to determine whether any areas would need additional CLP monitoring during June of 2025 when CLP is at its peak growth stage. The fall 2024 aquatic invasive species monitoring program duplicates monitoring programs completed during 2006 through 2023.

4.0 2024 Survey of Navigation Channels and Resident Access Corridors

In 2024, the Beaver Dam Lake Management District contractor will survey the Beaver Dam Lake navigation channels and resident access corridors during the July aquatic plant survey and determine whether herbicide treatment is necessary. If treatment is necessary, the Beaver Dam Lake Management District will contact the WDNR. If the WDNR would permit EWM removal, the Beaver Dam Lake Management District will take appropriate action. Navigation channels include the channels between Rabbit Island Bay and Library Lake and the Grove Street Bridge, the channel east of the Highway 63 box culvert, the area on both sides of the Highway 48 bridge, and channels through Cemetery Bay, City Bay, the southwest bay of East Lake, and Norwegian Bay. Resident access corridors include corridors from individual residences to open water or to a navigation channel.