VILLAGE OF TWIN LAKES

105 East Main Street P O Box 1024 Twin Lakes, Wisconsin 53181
Phone (262) 877-2858 Fax (262) 877-4019

AGENDA

LAKE PROTECTION AND REHABILITATION DISTRICT COMMISSIONERS' MEETING
March 17, 2025
FOLLOWING THE REGULAR BOARD MEETING

1. Call To Order
2. Pledge of Allegiance
3. Roll Call
4. Consideration of a Motion to approve minutes from the February 3, 2025 Lake Protection and Rehabilitation District Commissioners' Meeting.
5. Discussion and possible action to approve a work order with Wisconsin Lake and Pond Resource LLC for 2025 lake weed treatment.
6. Adjourn

ROLL CALL:
ANDRES, Barb
INFUSINO, Tim
KASKIN, Bill
FITZGERALD, Kevin
KAROW, Aaron
PERL, Ken
SKINNER, Howard

AGENDA COPIES TO:
MIGON, Tony
POETKER, Bill
BECKER, Pam/Skinner,Vicki
NEAL, Bryan
WAHLER, Rich
VACANT
Newspapers
Post

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NOTICE IS HEREBY GIVEN THAT A MAJORITY OF THE VILLAGE BOARD AND/OR LAKE PROTECTION AND REHABILITATION DISTRICT BOARD OF COMMISSIONERS OR OTHER RELATED GOVERNMENTAL BODIES MAY BE PRESENT AT THIS MEETING TO GATHER INFORMATION ABOUT A SUBJECT OVER WHICH THEY HAVE DECISION MAKING RESPONSIBILITY. NO ACTION WILL BE TAKEN BY ANY GOVERNMENTAL BODY AT THIS MEETING OTHER THAN THE GOVERNMENTAL BODIES SPECIFICALLY REFERRED TO IN THIS INSTANT NOTICE. THIS CONSTITUTES A MEETING OF THE VILLAGE BOARD PURSUANT TO STATE EX REL BADKE VS. GREENDALE VILLAGE BOARD, 173 WIS 2D 553, 494 NW 2D 408 (1993), AND MUST BE NOTICED AS SUCH.

LAKE PROTECTION & REHABILITATION DISTRICT COMMISSIONERS' MINUTES
February 3, 2025 – Immediately following the Special Village Board Meeting
Village Hall, 105 E. Main Street, Twin Lakes, WI

CALL TO ORDER AT 7:46 PM BY PRESIDENT SKINNER/PLEDGE OF ALLEGIANCE/ ROLL CALL:
Present: Trustees Barb Andres, Bill Kaskin, Aaron Karow, Kevin Fitzgerald, Ken Perl, Tim Infusino, President Howard Skinner. Also Present: Engineer Greg Droessler, Administrator Laura Jager, Police Chief Katie Hall, Deputy Clerk Colleen Hoyt.

Skinner/Fitzgerald motion to approve minutes from the July 15, 2024 Lake Protection and Rehabilitation District Commissioners' Meeting. Motion carried 7-0.

Bill Poetker, 1607 E Lakeshore Drive, stated that the Lake District Committee is proactively supporting the School Resource Officer by allocating $50,000 to help offset police budget cuts. The intent was to address Village budget challenges and reduce reliance on the general fund. Trustee Fitzgerald asked if the Lake District Committee would allocate $25,000. Bill confirmed that the Village's portion, supported by the Lake District, was already budgeted. The funds ensure a dedicated officer on the lake while mitigating the Village's financial risk. Last year, $20,000 was allocated, with a goal to increase it to $25,000 in 2025, supplemented by another $25,000 from a separate fund.

Discussion and possible action regarding the Zerfas Drive & Little Flower Lane Drainage project.
This project was discussed with members of the Lake District Committee and the Stormwater Commission. They requested a prioritized capital improvement plan for lake-related projects. In collaboration with Public Works and the former Street Supervisor, we developed a list, and at the top was the Zerfas Drive and Little Flower Lane drainage projects.

This is actually two separate projects:

1. **Zerfas Drive Culvert Replacement** – The existing 12-inch culvert is in poor condition. Public Works plans to replace it this spring/summer as part of a larger street project. The plan is to upgrade from a single 12-inch culvert to two 15-inch culverts to improve drainage from the west side to the east side into the swamp.
2. **Ditch Clearing** – Once stormwater crosses the road, it follows a series of ditches leading to the swamp. These ditches are overgrown with fallen trees and brush. Public Works does not have the necessary equipment to clear them, so the plan was to hire a contractor with specialized equipment. The estimated cost for both components is between $30,000 and $50,000.

This was brought up to assess whether the board wants to proceed with obtaining quotes before the area becomes too swampy to work in. It was suggested that the Public Works Committee assess the site first to determine what work can be handled in-house versus what requires a contractor.

Concerns were raised that excessive ditch clearing could cause flooding on Second Street without a proper water outlet. A site visit is necessary, and a recommendation was made to prioritize culvert installation, as Public Works is already preparing for it. The Lake District Steering Council has not yet approved funding for the culverts, and an exact cost is unknown. An estimate for 50 feet of 15-inch culvert was provided at approximately $1,000, plus labor. The board discussed whether to approve funding now, given uncertainty about whether the Lake District or Public Works will cover the cost.

Skinner/Karow motion to approve the culverts under Zerfas Drive. Motion carried 6-1 with Trustee Kaskin opposed.

ADJOURN – *Skinner/Andres motion to adjourn at 8:03 p.m. Motion carried 7-0.*

/s/Sabrina Waswo, Village Clerk

5.)

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a Jones Lake Management Partner

Professional Pond Management
Aquatic Herbicide and Algaecide Applications
Lake Management Planning and Services
Pond Design and Development

January 31, 2025

Village of Twin Lakes
Lakes Mary and Elizabeth
E-mail to: villageadmin@twinlakes.gov, tonyfmigon@yahoo.com, & deanandpamtodaro@gmail.com

Re: Costs for 2025 Lake Management Activities

Dear Ms. Jager, Mr. Migon, and Mr. Todaro:

In response to your request, Wisconsin Lake & Pond Resource (WLPR), has prepared a cost estimate for comprehensive lake and aquatic plant management services for Lakes Mary and Elizabeth, Kenosha County. This scope of services briefly describes the proposed work plan, anticipated project schedule and estimated project costs. All work would be completed in accordance with applicable federal, state, and local regulations, as outlined below.

Work Scope
These costs include labor, equipment, chemical costs, and direct costs to complete the described work plan. If more than one mobilization is required because DNR does not allow the treatment or it is outside of the allowable label parameters because of weather or other environmental factors, multiple mobilization charges may apply. Chemical and equipment costs are based on the referenced products, application rates and acreages and those costs are fixed as proposed, per unit labor costs generally increase as the treatment area decreases and are subject to change based on the final DNR approved treatment areas and application rates.

TASK 1.0 PREPARE WDNR & WPDES PERMIT APPLICATIONS
WLPR will prepare the Wisconsin Department of Natural Resources (WDNR) permit application for chemical control using treatment areas and maps created by WLPR with assistance from the Client. Additional attachments required, including a draft legal publication, if necessary, will be provided by WLPR to the Village. Any local publishing requirements in local newspaper(s) will be the responsibility of the Village. Once the permit application and riparian owner notifications are completed, they will be submitted to the DNR using the online electronic permit system. The Client is responsible for any WDNR permit fees.

TASK 2.0 EDUCATIONAL MAILING (OPTIONAL)
A packet of information regarding the proposed treatment will be distributed to riparian property owners consistent with NR107.04 (3) that are located within or adjacent to the permitted application (150') areas. It is assumed that the Client will provide an Excel spreadsheet mailing list of all riparian property owners to WLPR. ***It is also assumed for the purposes of this proposal that this Task will be completed by the lake group***, and it must be completed at least 15 days prior to the chemical treatment. All pertinent information for notification will be provided by WLPR.

TASK 3.0 HERBICIDE TREATMENT TARGETING EWM & GENERAL NAVIGATIONAL NUISANCE SPECIES
WLPR would treat areas of the Lakes consistent with the permitted application areas for AIS and/or general species causing a navigational nuisance. Initial treatment would be in May and during periods of calm wind (<7 mph). If liquid, the herbicide would be injected subsurface through trailing hoses. Product by application areas is included below. All products chosen have shown good success in controlling target species throughout Wisconsin.

Some locations of the lakes can see dense growth of native aquatic plant species that may cause a nuisance to navigation. In particular, areas A-D in Lake Elizabeth and area A in Lake Mary were noted as locations that see a navigational nuisance. WLPR will manage these for reduction of nuisance conditions during an initial application at the same time as control actions for EWM. **Many nuisance treatment lanes require multiple control actions throughout the growing season. Follow-up applications may be necessary and may be completed if these areas are noted to be experiencing dense growth later during the summer by the Client.**

All products proposed are registered by the EPA, DATCP, and the WDNR for use in Wisconsin to remove populations of target aquatic plant growth. Areas of EWM growth in Lake Elizabeth (Areas A-E, Fig 5) will be controlled with ProcellaCOR EC at prescribed rates. All remaining areas on Lakes Elizabeth and Mary (Figures 6-7) seeing nuisance growth from non-algal species will be treated with a mixture of the active ingredients flumioxazin, liquid copper, and diquat at rates of 0.125, 0.111, and 0.245 ppm, respectively. All treatment area dimensions and rates are included below.

Lake	Area	Size (ac)	Avg. Depth (ft)	Product	Rate	Target
Elizabeth	A	2	4	flumioxazin:copper:diquat	0.125/0.111/0.245 ppm	EWM/NAV
	B	1.1	3	flumioxazin:copper:diquat	0.125/0.111/0.245 ppm	EWM/NAV
	C	0.5	4	flumioxazin:copper:diquat	0.125/0.111/0.245 ppm	NAV
	D	1.7	3	flumioxazin:copper:diquat	0.125/0.111/0.245 ppm	NAV
	A	0.94	3	ProcellaCOR EC	5 PDU/ac-ft	EWM
	B	0.31	3	ProcellaCOR EC	5 PDU/ac-ft	EWM
	C	0.4	3	ProcellaCOR EC	5 PDU/ac-ft	EWM
	D	1.4	3.5	ProcellaCOR EC	4 PDU/ac-ft	EWM
	E	1.11	3	ProcellaCOR EC	4 PDU/ac-ft	EWM
	TOTAL	**9.46**	---	---	---	---
Mary	A	1.6	3	flumioxazin:copper:diquat	0.125/0.111/0.245 ppm	NAV
	TOTAL	**1.6**	---	---	---	---

Task 4.0 Aquatic Plant Surveys and Mapping

WLPR will conduct limited late-season aquatic plant surveys on Lakes Mary and Elizabeth to assess 2025 management options and prepare for 2026. Approximate schedule for the survey is late August or early September, 2025 to ensure any aquatic plants present can be collected and identified. Data collected will include species presence, density, depth, GPS location, and bottom substrate. This data will be compiled in the WDNR spreadsheet (WiAPMS.xl) and submitted to the Village. Data collected will be used to create maps of any aquatic invasive species present and will be compared with historical data to assess ongoing results of AIS control and plan for potential management in 2026.

SCHEDULE AND ESTIMATED COST

Work can begin on this project once a signed contract is received. All field work will be coordinated with the Client and the WDNR. Sediment sampling is anticipated to take place as early as possible once WDNR approval of the sampling plan is received.

Task 1.0 Prepare WDNR Permit Application and Notices

Prepare WDNR Permit and Treatment Notices	$250.00
WDNR Permit Fee for Lake Elizabeth & Lake Mary*	$348.50
TOTAL COST Task 1.0	**$598.50**

Task 2.0 *Educational Mailing* ***(optional)*** *Base fee $250 + $1.50 each piece mailed =* ***$Actual Costs***

Task 3.0 Herbicide Treatment of EWM and General Nuisance Species

Initial EWM & Navigational Treatment – Elizabeth & Mary Lakes:

Mobilization, equipment, & vehicle/boat cost	$675.00
Labor: Total Treatment area of 11.06 acres	$1,925.00
ProcellaCOR EC to Areas A-E, Fig. 5 (59 PDU)	$4,528.25
Flumioxazin, diquat, & copper Areas A-D and Lake Mary (Fig. 6-7)	$2,450.00
Subtotal Cost	**$9,578.25**

Follow-up Navigational Treatment – Elizabeth & Mary Lakes (if requested):

Mobilization, equipment, & vehicle/boat cost	$675.00
Labor: Total Treatment area of 6.9 acres	$1,207.50
Flumioxazin, diquat, & copper Areas A-D and Lake Mary	$2,450.00
Subtotal Cost	**$4,332.50**

Task 5.0 Aquatic Plant Surveys and Mapping

Labor Cost – survey of both lakes	$2,700.00
Mobilization, equipment, and vehicle/boat charge	$675.00
Mapping & data entry	$875.00
Subtotal Cost	**$4,250.00**

Total Costs Tasks 1.0-5.0 (initial treatment only) **$14,426.75**

*** WDNR permit fee includes an on-line convenience fee of 2.5% as charged by the WDNR. Treatment record(s) will be completed at no cost.**

PAYMENT TERMS & CONDITIONS

Payment for services and expenses are due upon receipt, and will accrue interest after 30 days. Final reports will be withheld until all payments are made in full. Invoices for the services performed will be submitted either upon completion of such services or on a monthly basis. Refer to the attached Agreement for additional terms and conditions.

We are pleased to submit this proposal and trust this information meets your needs. The above-stated fee proposed for this scope of services is valid for 90 days from the date of this proposal and are subject to annual adjustments. Upon review and acceptance of the proposal and attached Standard terms and Conditions, please return a signed copy of this Agreement in its entirety via mail, fax or email, keeping one copy for your records.

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Lake Management Planning and Services
Pond Design and Development

If you have any questions, or require any additional information, please don't hesitate to contact us at (920) 872-2032 or via email at jim@wisconsinlpr.com. We thank you for this opportunity and look forward to working with you on this project.

Sincerely,

Jim Scharl
Senior Biologist – Lake Services Manager

Sydney Kanz
Aquatic Biologist

N7828 Town Hall Rd
Eldorado WI 54932

www.wisconsinlpr.com

Phone: (920) 872-2032
Fax: (920) 872-2036

Terms and Conditions

The following Terms and Conditions are attached to and form part of a proposal for lake management services to be performed by Wisconsin Lake & Pond Resource, LLC (herein after referred to as WLPR) when the Customer authorizes WLPR to proceed with the services, and together with the proposal shall constitute the AGREEMENT. This shall encompass all related lake management services for the Client, unless the Client is already under contract with another provider for additional or similar services at the time of this Agreement.

SERVICE, EQUIPMENT & MATERIAL COSTS: ***SEE ATTACHED PROPOSAL FOR SPECIFIC COSTS***
Travel, mileage or lump sum mobilization charge per each service date if applicable, will be based on the site location as outlined in the proposal. Additional services that are specifically requested by the Customer, and that are not covered in this contract, will be billed at a flat rate of $100 - $150/hour/employee or quoted per project. Any such additional services will be presented to the Customer as a quote and will not commence until the Customer approves the quote for additional services.

BILLING AND TERMS: Balance of payment will be due upon receipt of invoice. A late payment fee of financing charges of 1.5% per month, will be applied to balances more than 30 days past due.

PERMITS: It is understood by both parties that state, federal, and/or local permits may be required prior to performing aquatic management, installation, or construction services. WLPR will provide assistance in completing the permit(s) as outlined in the proposal and provide permit applications to the Customer, the Customer hereby agrees and is responsible to sign and submit said permit(s) with the appropriate fees to each required governmental entity prior to commencement of aquatic management services performed by WLPR. The Customer understands and agrees there may be certain liabilities and responsibilities within these permits.

PROFESSIONAL EXPECTATIONS AND LIABILITY: WLPR shall provide professional trained, insured, and licensed staff to perform aquatic management, installation, or construction services. WLPR staff shall exercise reasonable standard of care and will comply with the labeled requirements of all E.P.A. registered aquatic pesticides pertaining to transportation, application, and disposal, and will also post required warning signs that list any water use restrictions indicated on the label. Therefore, WLPR is not liable for personal, environmental or property damages that may occur as a result of applications of aquatic pesticides.

INDEMNITY: Customer agrees to defend, indemnify, and hold WLPR harmless against any claim, demands, losses, liabilities, actions, lawsuits, arbitrations, or expenses of whatever nature, that may be brought against WLPR, relating to the management services provided pursuant to this Agreement, with the exception of claims arising directly out of alleged negligent conduct of WLPR's staff while actually performing the services which are the subject of this Agreement.

BUDGET: A budgetary range has been established based on multiple criteria. While the recommended budget is required to successfully manage the described waters, WLPR reserves the right to request an adjustment to the budget amount if there is a change in the scope, size of the management areas, product, or application rates. If this results in additional costs to the Customer, a change order identifying the change in scope and associated cost(s) will be in submitted in writing to the Customer. Any work and/or services associated with a change order will only commence upon Customer's written acceptance of the change order.

ENVIRONMENTAL LOSS: While WLPR staff shall make every effort to reduce the risk of loss of non-target aquatic life, including fish, this risk remains inherent with any aquatic management, installation, or construction services. Therefore, WLPR is not liable for any non-target loss, the Customer understands and accepts the risks associated with potential aquatic management activities.

SITE ACCESS: Customer agrees to provide a suitable vehicle access and boat launch to Customer's waters, if there is a fee to launch the Customer agrees to waive (if possible) or alternatively reimburse said launch fees, as part of the project costs billed to the Customer. In the absence of suitable access and launch, WLPR shall not be liable for damages done to lawns, shorelines or other property that may occur during access to the waterway.

TERMINATION: Either party may termination this agreement without cause upon 30 days written notice. Upon termination by either party, the Customer shall pay all outstanding fees for services render under this agreement to the effective date of termination.

WARRANTY: Aquatic Applications - given the numerous environmental variables associated with aquatic applications, no product performance guaranty or warranty, other than those provided by the manufacturer, are given or implied. Motors, electrical equipment, and components – warranties vary on these items due to different manufacturers. Please inquire with WLPR regarding specific warranties.

CUSTOMER AUTHORIZATION: The attached Proposal (and/or subsequent work orders or task revisions) and above Terms and Conditions are satisfactory and are hereby accepted. WLPR is authorized to perform all the work as described.

WLPR Representative: _____ Date: 01/31/2025

Customer: _____ Date: _____

Authorized Representative Signature: _____

Customer Contact Name (Printed): _____

Email: _____ Phone Number: _____

Customer Billing Address: _____

_____

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Lake Management Planning and Services
Pond Design and Development

December 30, 2024

Village of Twin Lakes
Attn: Laura Jager

Re: 2024 Aquatic Plant Survey & Report, Lakes Mary & Elizabeth, Kenosha County, WI

Dear Ms. Jager & Village Board:

In response to your request for aquatic plant management and surveying, Wisconsin Lake & Pond Resource (WLPR) visited the sites in early and late summer, 2024. The purpose of the visits was to control existing stands of aquatic invasive species (AIS) and document remaining populations of AIS and lake conditions to plan for 2025 management.

Background Information
Lakes Mary and Elizabeth make up the Twin Lakes in southern Kenosha County. Elizabeth is the largest at 725 acres and sits on the border of Illinois and Wisconsin. Lake Mary is 310 acres and directly to the north of Elizabeth. A small stream connects the lakes, flowing from Mary into Elizabeth and eventually out of Elizabeth and connecting to the North Branch Nippersink Creek. In each lake, there are two confirmed aquatic invasive species (AIS) plant present; Eurasian water-milfoil (HWM) and Curly-leaf pondweed (CLP). Curly-leaf pondweed has remained at low background levels and does not need management.

Past surveys have shown that Eurasian water-milfoil has grown to nuisance levels and required management throughout the years. Control of HWM has focused on the use of aquatic herbicides, which has been on the decline over the past years. No active HWM management has occurred in Lake Mary since 2021.

The aquatic plant community of the lakes has been healthy, though periodically dense, in shallow areas of both Lakes. Both lakes have also managed for a general mix of aquatic plant species impeding navigation in select, near-shore areas. Introduction of aquatic invasive species caused an expanding problem with excessive aquatic plant growth.

A September 2023 survey documented 84.13 acres of HWM, not including individual stems and/or clumps, which was found primarily in Lake Elizabeth and in widely-scattered, low-density beds. Only the densest areas were recommended for management in 2024 and totaled 7.5 acres for direct HWM control. In addition, 2.2 acres were recommended for management of general nuisance-cause species. Vegetation in Lake Mary was less dense, with only 1.6 acres noted for potential nuisance management.

WDNR aquatic herbicide permits were applied for and approved to control these areas of HWM and a general mix of nuisance-causing growth (Figures 1-2). The aquatic herbicide ProcellaCOR EC (active ingredient florpyrauxifen-benzyl) was permitted for use within target areas for HWM while a mix of the active ingredients copper, diquat, and flumioxazin was used for general nuisance relieve. Application occurred on May 28, 2024, to areas in Lake Elizabeth. Craig Helker, WDNR lakes supervisor, assessed areas of Lake Mary that were permitted for control prior to application. This area did not contain nuisance growth and was not approved for management in 2024. The approved permits and treatment records are attached at the end of the report.

Hybrid Eurasian water-milfoil has caused the most significant problem within the lakes. To gauge current conditions and assess the need for 2025 management, follow-up aquatic plant surveys were completed on September 26-27, 2024, by WLPR.

2024 Aquatic Plant Surveys

WLPR conducted the 2024 surveys using a meander method throughout the entire photic zone of the lakes with rake throws and visual observations to verify the presence of AIS. All locations of HWM were recorded on a GPS. Observations of native aquatic plant species were recorded to create a list of those present within the lakes. Early fall of 2024 was warmer and drier than typical, resulting in an extended growing season and slightly below normal water levels. Water temperatures were 71-degrees during the surveys. Water levels were noted to be slightly below normal and excellent water clarity was present. Results of the surveys are found on Figures 3-4.

The composition of the aquatic plant community remained steady and of good diversity for similar lakes within the same region. Overall, 20 different native aquatic plant species were noted in Lake Elizabeth along with two AIS; hybrid Eurasian water-milfoil & curly-leaf pondweed (Table 1). Lake Mary had 16 native plants and HWM (Table 1). Like past surveys, moderately dense vegetation was noted in select portions of the lakes, primarily near-shore areas and around docks/marinas, and included a mix of shallow beds of widgeon grass, sago pondweed, muskgrass, and water celery.

	Elizabeth	Mary
Aquatic Invasive Species		
Curly-leaf pondweed	X	
Eurasian water-milfoil	X	X
Emergent Species		
Hardstem Bulrush	X	
Floating-Leaf Species		
Spatterdock	X	
White water lily	X	X
Free-floating Species		
Common watermeal		X
Large duckweed		X
Small duckweed	X	X

	Elzabeth	Mary
Submersed Species		
Common bladderwort	X	X
Common waterweed	X	
Coontail	X	
Floating-leaf pondweed	X	
Fries' pondweed	X	
Hybrid pondweed*		X
Illinois pondweed	X	X
Large-leaf pondweed	X	X
Long-leaf pondweed	X	
Muskgrass (chara)	X	X
Sago pondweed	X	X
Spiny naiad	X	X
Variable pondweed	X	X
Water celery	X	X
Water marigold	X	X
Water stargrass	X	X
Widgeon grass	X	X
Total	**22**	**17**

The 2024 surveys identified HWM growing at various densities and distribution in the survey locations. The following densities were used to describe the HWM populations:

1. **Spots** – small locations of individual plants or clumps that were not large enough to map around their perimeter.

2. **Scattered** – locations of HWM that had plants close enough to map as an area but were still widely scattered. HWM is merely present and not a large component of the biomass.
3. **Low** – HWM identified in distinct beds. While individual plants or clumps may reach the surface, most are lower growing or not as dense. Often mixed with other vegetation.
4. **Moderate** – HWM occupies over half the water column with many plants or clumps at or just below the surface. Few other plant species found.
5. **High** – locations of HWM that were at or near the surface and occupied much of the water column. HWM may be the only plant found growing in these locations.

Overall, populations of HWM were down significantly within both lakes. In Elizabeth, 8.86 acres of HWM while 1.61 acres were identified in Lake Mary during the September 2024 survey (Table 2, Figures 3-4). Populations of HWM undoubtably exist outside the areas identified in 2024. The breakdown of Eurasian water-milfoil present by density across the Lakes are as follows:

Lake Elizabeth: 2024 HWM Mapping

Density	Acres	Avg. Depth
Scattered	5.33	3.14
Low	2.19	3.00
Moderate	1.34	3.50
High	0	---
Total	8.86	3.34

Lake Mary: 2024 HWM Mapping

Density	Acres	Avg. Depth
Scattered	1.61	4.00
Low	0	---
Moderate	0	---
High	0	---
Total	1.61	4.00

For Elizabeth Lake, most locations of HWM populations were found as scattered beds in shallow water, transitioning to individual stems or clumps in slightly deeper flats (6-10 ft). A handful of low to moderate density areas were mapped in shallow, high-traffic locations with more organic components mixed in the sediment. The densest location was a 1.34-acre moderate density bed along the west shore and at the outflow of a large stormwater inlet. Here, the stormwater inlet scours the bottom, allowing for settling of nutrient-rich organic matter instead of higher sand or gravel components like in nearby sediments (Figure 3). The densest areas should be targeted for control in 2025 to reduce nuisance to the adjacent landowners.

HWM populations in Lake Mary were again documented at very low density and spread. Only 1.61 acres of scattered density beds were mapped, primarily in narrow, near-shore bands in the southwestern bay. The rest of the HWM was noted as individual spots or clumps (Figure 4). Most of the vegetation in Lake Mary was dominated by sporadically dense beds of widgeon grass, sago pondweed, wild celery, and muskgrass. An aquatic plant community is dynamic and changes year to year based on growing conditions and many other factors. Some species identified in 2024 were not directly sampled in the past and vice versa, but this should not be a cause for concern.

NEXT STEPS

Successful, historical management of AIS in Lakes Elizabeth and Mary by the Village has reduced populations substantially, resulting in periodic, small-scale control. The district's approach has allowed native populations to flourish and enhance the health of the lake.

Current DNR recommendations for control of AIS include the use of an integrated pest management approach, or IPM. The use of IPM includes changing methods of control, including but not limited to: varying herbicide active ingredients, mechanical harvesting, hand or suction harvesting, monitoring-

only, and no-action. The spread of HWM in Lakes Elizabeth and Mary recorded in 2024 is found primarily in the shallow, near-shore areas and scattered at very low density in most locations. A few small locations in Lake Elizabeth are dense enough to warrant control in 2025 while populations in Lake Mary continue to be very low and scattered, not requiring active management. Continued management for HWM has maintained a low-frequency, background population.

It is our recommendation to continue to conduct management in select areas for control of denser areas of HWM and navigational relief of a general mix of species if necessary, in select locations. Continued monitoring for new or existing populations of AIS is an important, recommended management step to continue. HWM control should focus on the densest areas of growth with a highly selective, early-season herbicide application. In total, 0.91 acres are recommended for control of an HWM (Figure 5). A recommended timeline for 2025 actions is as follows:

- **March 2025**: Apply for WDNR permit for up to AIS and/or nuisance relief (Figure 6-7):
    - **Elizabeth**: 4.16 acres for HWM control and 5.3 acres for nuisance relief
    - **Mary**: 1.6 acres for nuisance relief.
- **May 2025**: Selective herbicide application for HWM control with ProcellaCOR EC in Lake Elizabeth.
- **May/June 2025**: Nuisance control application to areas in Lakes Elizabeth and/or Mary - only if necessary.
- **August/September 2025**: aquatic plant survey and mapping to assess AIS populations.
- **October/November 2022**: Complete an assessment of AIS present for 2026 planning.
    - Update management report and recommendations to the district. Future planning may involve any of the following actions:
        - Varying scale of AIS control in 2026
        - Continued monitoring
        - No action

If you have any questions, require any additional information, or would like a formal proposal on any of the above management options please contact us directly as follows:

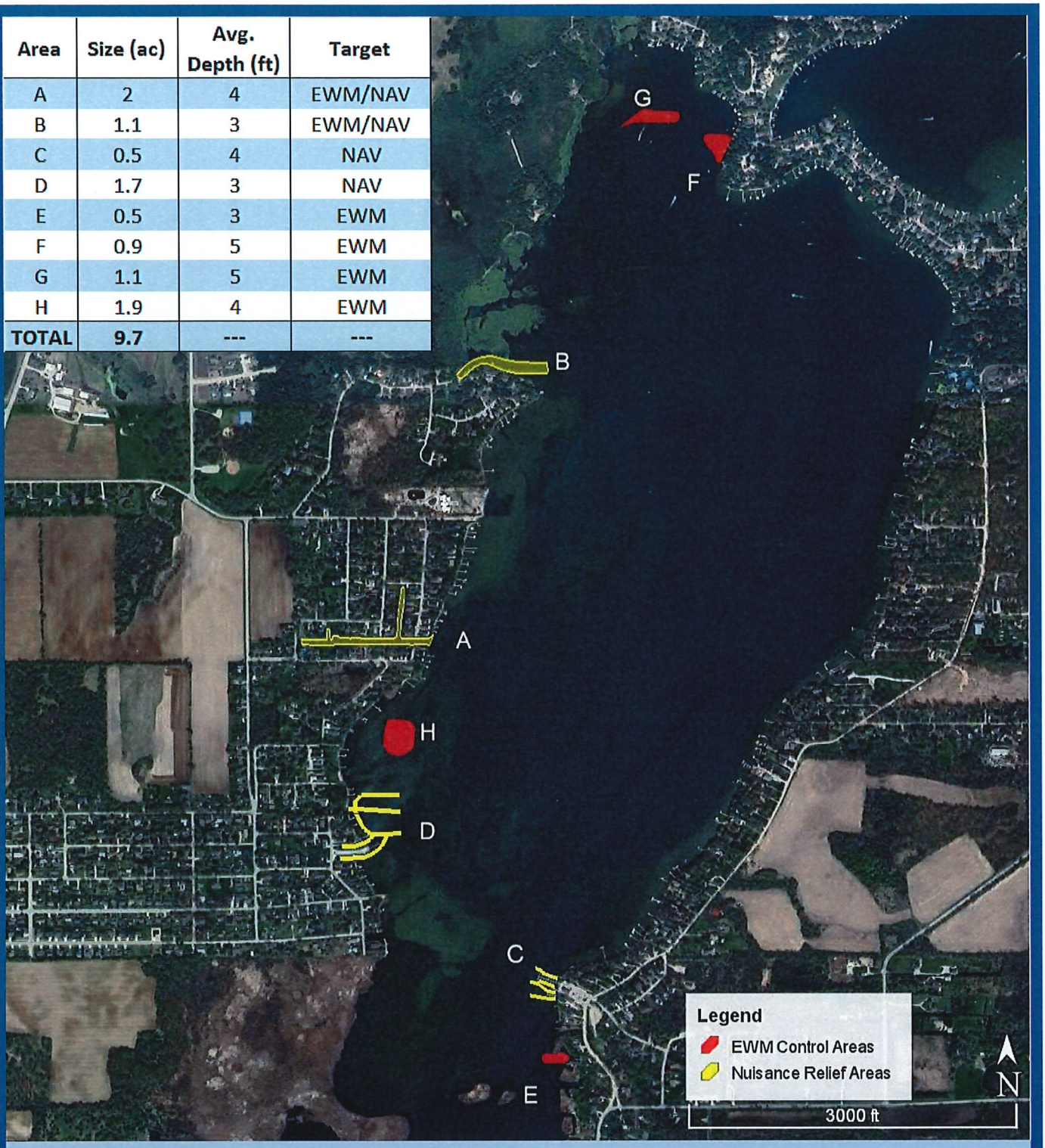
Jim Scharl: (920) 872-2032 or jim@wisconsinlpr.com
Sydney Kanz: (920) 872-2032 or skanz@wisconsinlpr.com

Respectfully,

James Scharl
Senior Biologist/Lake Services Manager

Sydney Kanz
Aquatic Field Biologist

Area	Size (ac)	Avg. Depth (ft)	Target
A	2	4	EWM/NAV
B	1.1	3	EWM/NAV
C	0.5	4	NAV
D	1.7	3	NAV
E	0.5	3	EWM
F	0.9	5	EWM
G	1.1	5	EWM
H	1.9	4	EWM
TOTAL	**9.7**	---	---

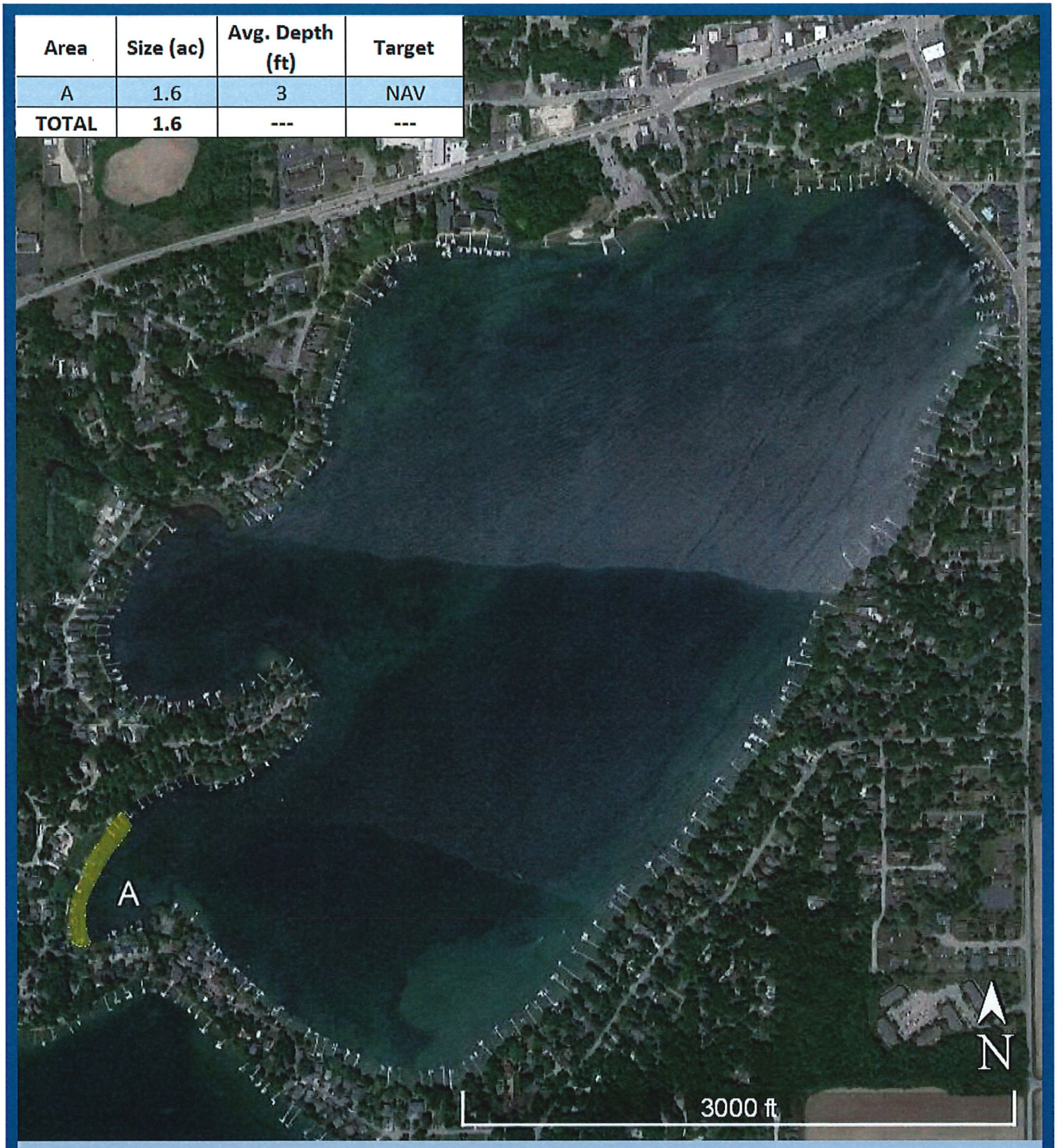


2024 Management Locations

WISCONSIN
LAKE & POND RESOURCE

Figure 1
Elizabeth Lake
Kenosha County, WI

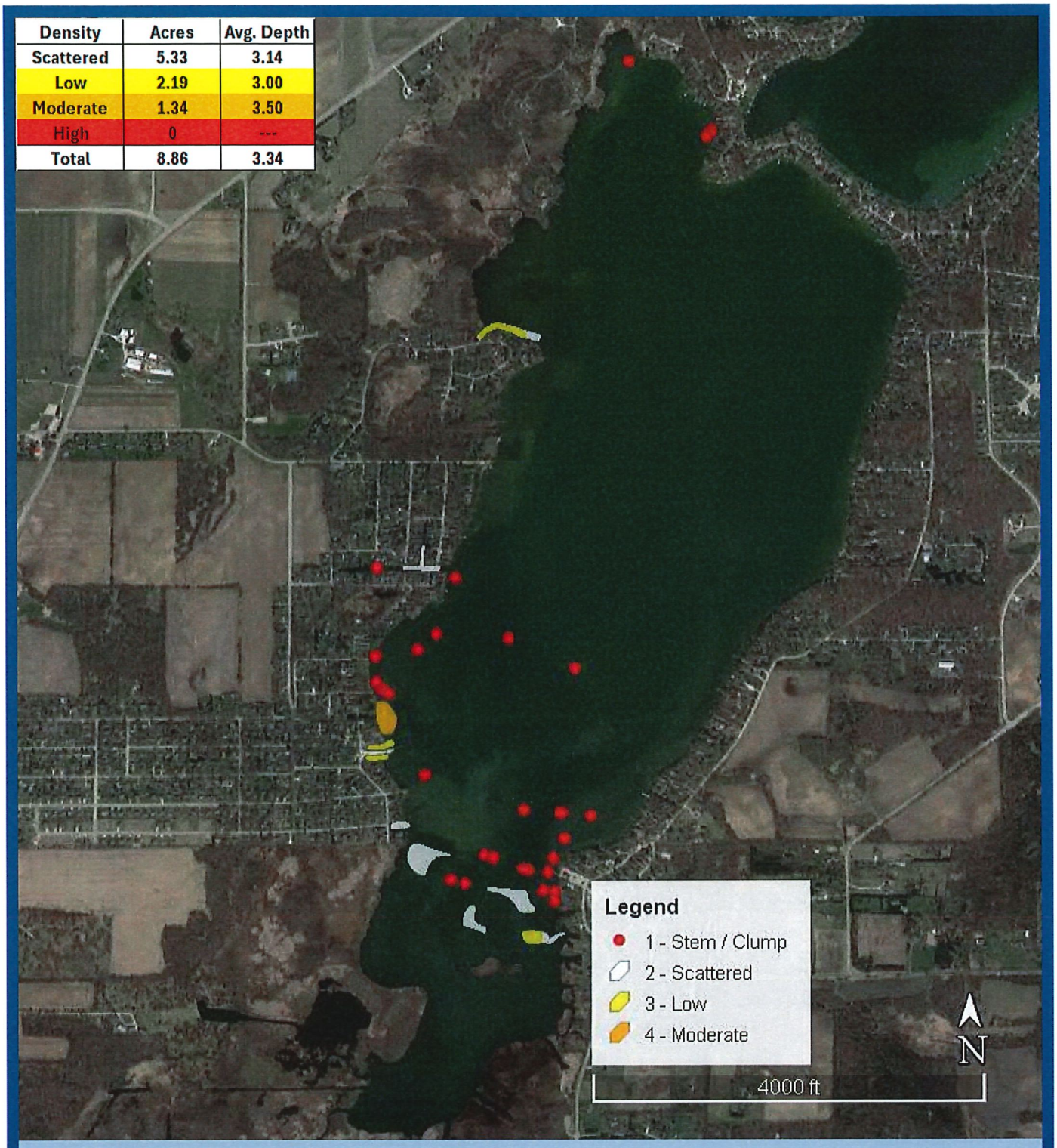
Area	Size (ac)	Avg. Depth (ft)	Target
A	1.6	3	NAV
TOTAL	1.6	---	---



2024 Management Locations

WISCONSIN
LAKE & POND RESOURCE

Figure 2
Lake Mary
Kenosha County, WI

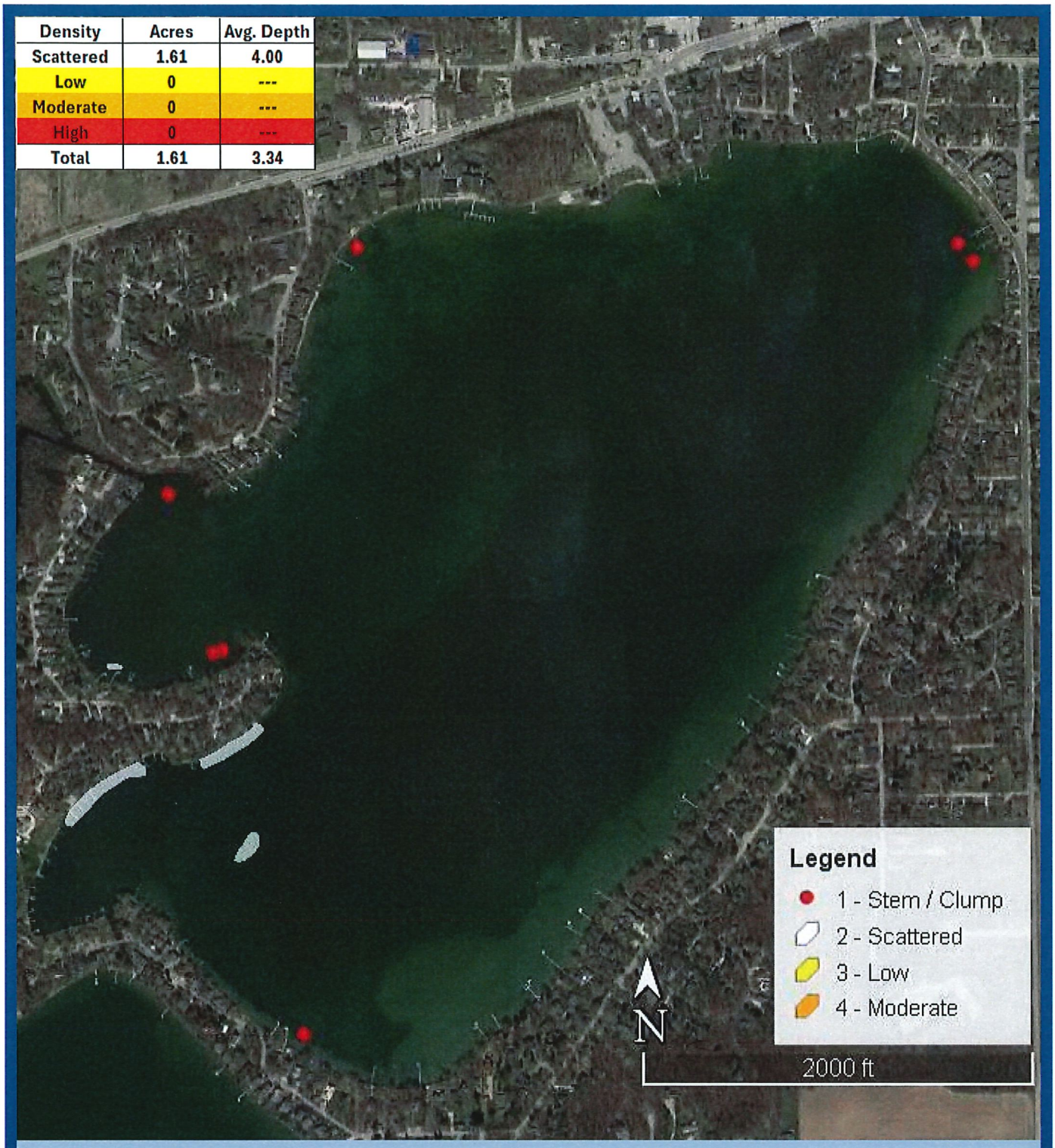


2024 Eurasian Water-milfoil Locations

Surveyed: September 26, 2023

WISCONSIN
LAKE & POND RESOURCE

Figure 3
Elizabeth Lake
Kenosha County, WI



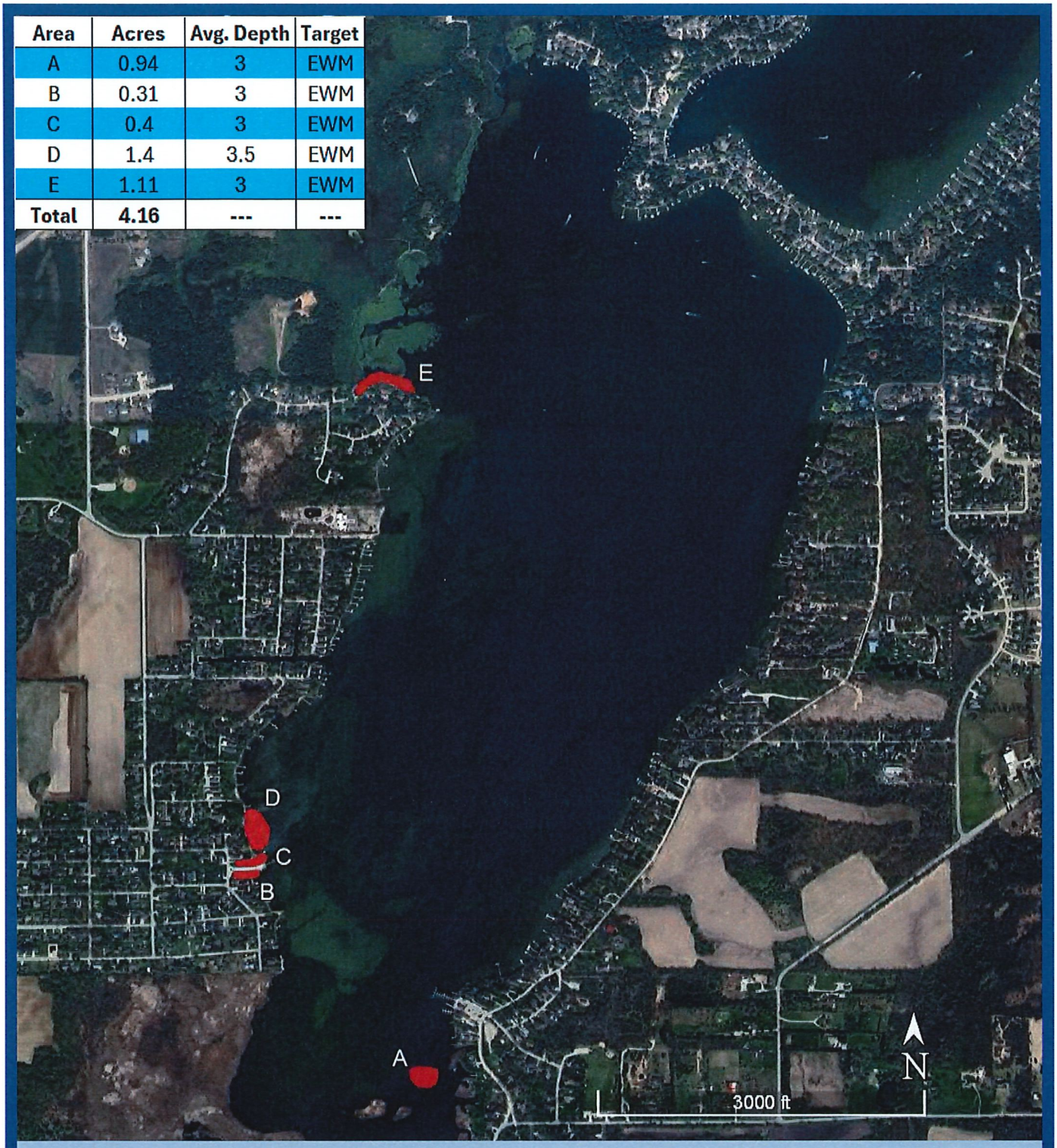
2024 Eurasian Water-milfoil Locations

Surveyed: September 27, 2024

WISCONSIN
LAKE & POND RESOURCE

Figure 4
Lake Mary
Kenosha County, WI

Area	Acres	Avg. Depth	Target
A	0.94	3	EWM
B	0.31	3	EWM
C	0.4	3	EWM
D	1.4	3.5	EWM
E	1.11	3	EWM
Total	**4.16**	---	---

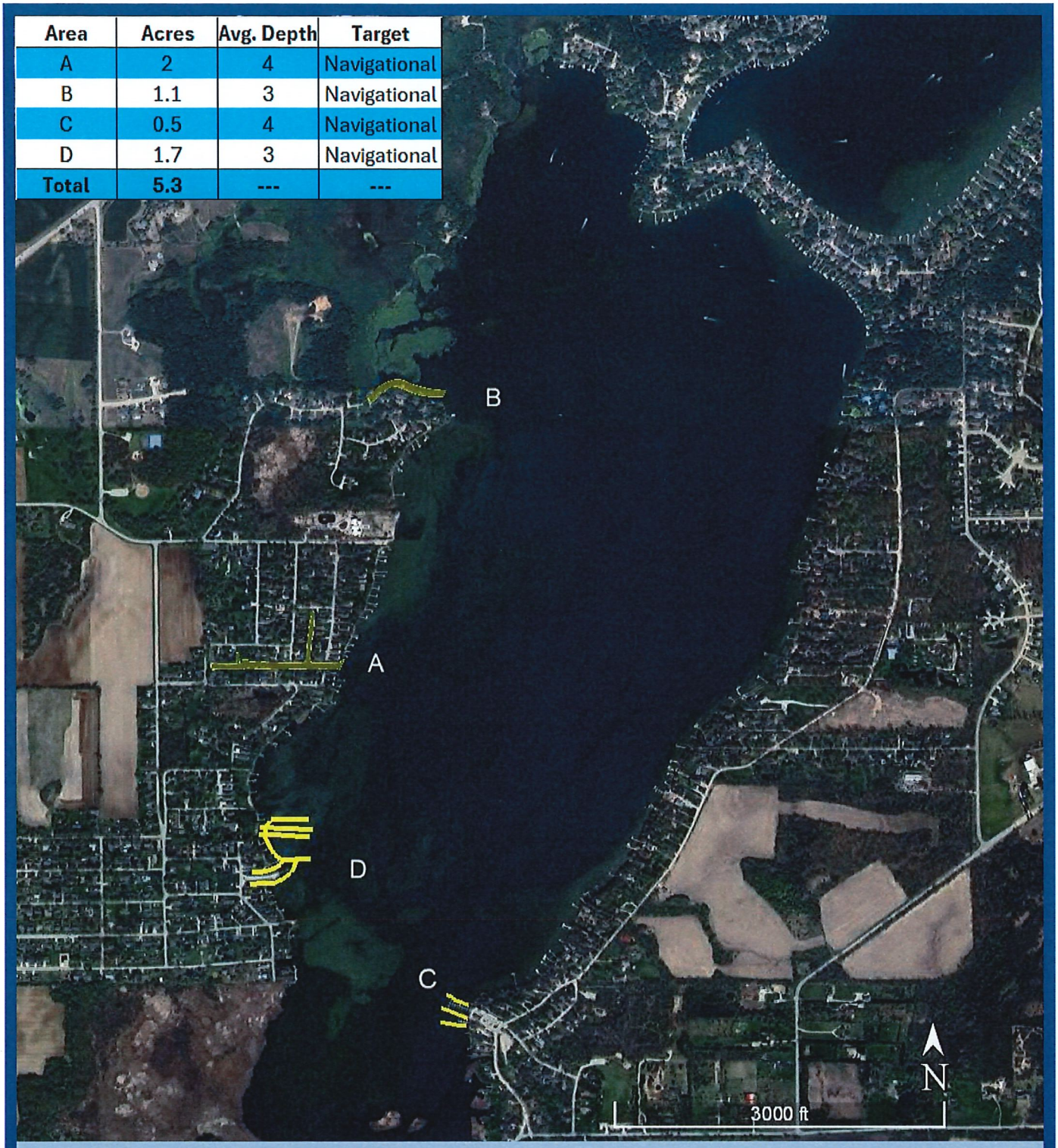


2025 HWM Management Locations

WISCONSIN
LAKE & POND RESOURCE

Figure 5
Elizabeth Lake
Kenosha County, WI

Area	Acres	Avg. Depth	Target
A	2	4	Navigational
B	1.1	3	Navigational
C	0.5	4	Navigational
D	1.7	3	Navigational
Total	5.3	---	---

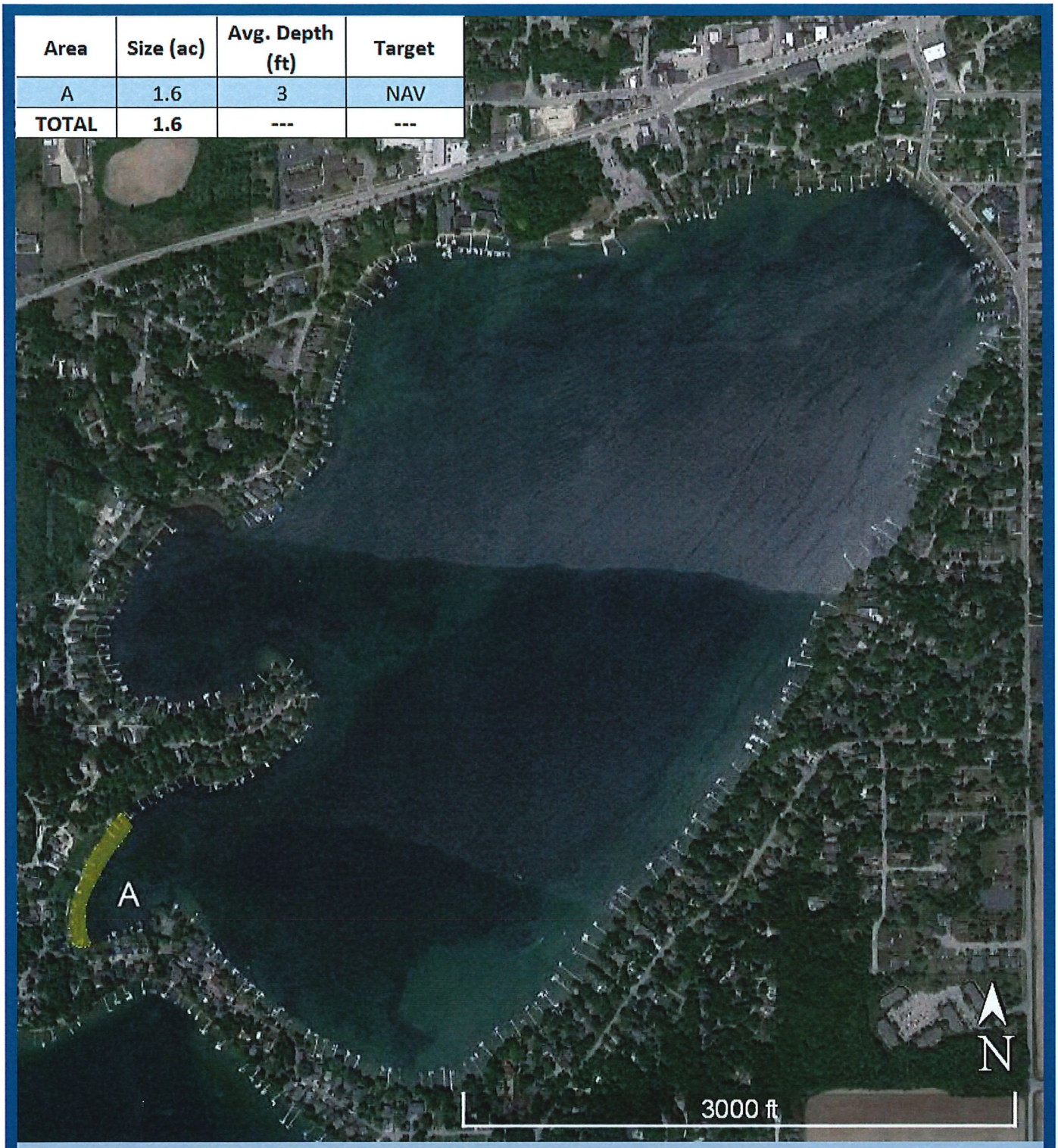


2025 Nuisance Management Locations

WISCONSIN
LAKE & POND RESOURCE

Figure 6
Elizabeth Lake
Kenosha County, WI

Area	Size (ac)	Avg. Depth (ft)	Target
A	1.6	3	NAV
TOTAL	**1.6**	---	---



2025 Nuisance Management Locations

WISCONSIN
LAKE & POND RESOURCE

Figure 7
Lake Mary
Kenosha County, WI