



LAKE MINNIE BELLE MESSENGER

A Newsletter from the Lake Minnie Belle Improvement Association (LMBIA)

Winter 2025

The Chair's Corner

By Kristin Jaquith, *Chair - Lake Minnie Belle Improvement Association (LMBIA) Board*

Hello and Happy New Year!

"Grateful" and "thankful" are the words that come to my mind as we enter 2025 - I am so very "grateful" for the beautiful lake that we call home and/or refuge, and I am so very "thankful" for all the people and organizations that work so hard and contribute to our efforts to preserve and protect Lake Minnie Belle. I am especially "thankful" for:

- **My colleagues on the LMBIA Board** and the many hours of volunteer labor they contribute, and
- **You, the members of LMBIA** – without your contributions, we could not conduct the work we do!

My goal for this newsletter is to share information about the work that LMBIA does in concert with its partners in pursuit of our mission **to preserve and protect Lake Minnie Belle and the surrounding watershed**. You will also learn about the results of the work efforts. We proudly proclaim that Lake Minnie Belle is a "Jewel of a Lake", and we support that claim with information about the main activities that we conduct:

Minnie Belle is a "jewel" of a lake!

- **Water Quality Preservation and Protection** (includes Water Quality Testing, Water Quality Protection Project Administration)
- **Aquatic Invasive Species (AIS) Management and Prevention** (includes Aquatic Plant Surveys, AIS Treatment, Inspection and Decontamination Services at the DNR Access)

It truly does take a "village" to accomplish this work! We are extremely thankful for the "Lake Minnie Belle Village" including:

- LMBIA Members
- LMBIA Gold Business Members
- LMBIA Business Sponsors
- Lake Minnie Belle Users
- Area Farmers/Landowners
- Meeker County
- Greenleaf Township
- Toutges Brothers Septic & Excavating
- MN Dept of Natural Resources
- Shaggy's Bonfire Bar & Grill
- Litchfield VFW Post
- Beckville Lutheran Church
- RMB Environmental Laboratories
- Tigris
- Limnopro Aquatic Science, Inc.

As I look forward to serving as chair of LMBIA in 2025, I am thankful that we will be able to build on the successful work that has been done by LMBIA and its partners in the past. We will continue our mission **to preserve and protect Lake Minnie Belle** so that all can enjoy this **"jewel of a lake"** now and well into the future

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Lake Minnie Belle – A “Jewel” of a Lake!



Did you know that Lake Minnie Belle has better average water clarity than:

- **100%** of the lakes in Meeker County?
- **100%** of the lakes in its USEPA designated Ecoregion (includes parts of 7 states)?
- **97%** of the lakes in its watershed -North Fork Crow River?
- **86%** of the lakes in Minnesota?

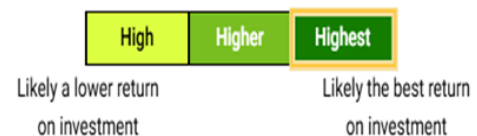
Minnie Belle is a “jewel” of a lake!

The Mission of the Lake Minnie Belle Improvement Association (LMBIA) is to **preserve and protect Lake Minnie Belle and the surrounding watershed**. One of the ways that LMBIA does this is by monitoring the lake’s water quality and based on the results, identifying opportunities for improvement.

DNR Benefit to Cost Assessment

The Minnesota Department of Natural Resources (DNR) ranks lakes based on the return on investment when actions are taken to protect the lake. This ranking is based primarily on phosphorus sensitivity (how much water clarity would be reduced with additional phosphorus loading to the lake). The DNR’s ranking scale for Lake Minnie Belle is shown to the right.(1) Lake Minnie Belle is in the “Highest” Benefit to Cost Class. This means that **Lake Minnie Belle is one of the lakes in Minnesota that has the potential for the best return on investment.**

Benefit to Cost Assessment Class: Highest



Annual Water Quality Monitoring

During each of the summer months, May through September, LMBIA collects lake water samples and sends the samples to RMB Environmental Laboratories Inc (RMB) in Detroit Lakes, MN. LMBIA Board Member, Don Kotila, has collected these samples for the past few years. RMB analyzes the water samples that are submitted and determines: 1)Total Phosphorus, 2) Chlorophyll-a, 3) Secchi Depth Number, and 4)Trophic State Index.

Water sample data is shared with state agencies that direct funds for clean water projects!

RMB then compares the current data to data obtained over the last 10 years to identify any significant changes that indicate a decline or improvement in the lake’s water quality. This data can be used to identify potential sources of pollution and the types of clean water projects that could be implemented to improve lake water quality. The data that is collected each year is also shared with the state agencies that direct funds for clean water projects. Information about the water sample results follows.

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Total Phosphorus

Plants and algae require nutrients, especially phosphorus, to grow. ***Even slight increases in phosphorus can result in increased plant growth and algae blooms – especially in lakes like Minnie Belle.***

Total Phosphorus Sensitivity Significance Priority Class: Highest



“Phosphorus Sensitivity is the predicted loss in lake clarity with additional phosphorus loading into the lake. The lake’s phosphorus sensitivity significance class is used to prioritize lakes for protection. Classes relate to the state’s priority of focusing on “high-quality, unimpaired lakes at greatest risk of becoming impaired.” The DNR rates Lake Minnie Belle in the “highest protection priority class” with regard to phosphorus sensitivity.” (1)

RMB’s analysis this year concludes that for the years 2014 through 2024, Total Phosphorus levels in Lake Minnie Belle are decreasing (80% confidence).

Chlorophyll-a

The pigment that makes plants and algae green is chlorophyll-a. All algae cells contain Chlorophyll-a and so, the level of Chlorophyll-a in a lake is a good indicator of the concentration of algae in the lake. (3)

RMB’s analysis this year concludes that for the years 2014 through 2024, Chlorophyll-a level trends in Lake Minnie Belle have not significantly changed.

Water Clarity – Secchi Disk Depth

The Secchi Disk Depth is a measure of water clarity/transparency – the depth that light can penetrate into the lake’s water. Water Clarity impacts the ability of plants (both native and invasive) to grow and impacts people’s perception of the lake for recreational purposes. It is a very good indicator of water quality and the overall health of the lake.

The Secchi Disk Depth is obtained by lowering a black and white metal disk into the water on a rope until the disk can no longer be seen. The disk is then slowly raised until it is visible. The depth of the disk to the surface of the water is measured on the rope (in feet). The resultant depth is the Secchi Disk Depth.

RMB’s analysis this year concludes that for the years 2014 through 2024, Secchi Disk Depths in Lake Minnie Belle have ranged from 13 ft to 16 ft. However, Secchi Disk Depth trends have not significantly changed.

The DNR has found evidence of improvements in water clarity when reviewing data from 1981 through 2023. The water clarity in Lake Minnie Belle improved at a rate of about 0.7 feet per decade!

In 2023, Lake Minnie Belle's clarity was 6.62 feet greater than the watershed's median lake water clarity. - MN DNR

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Trophic State Index (TSI)

The level of nutrients (nutrient richness) in a lake is measured by a number called the Trophic State Index. The parameters used to calculate the Trophic State Index are those discussed previously in this article:

- Total Phosphorus
- Chlorophyll-a
- Secchi Disk Depth

Trophic State Description of Lakes	
Water Description	Trophic State
Clear	Oligotrophic
Moderately Clear	Mesotrophic
Green	Eutrophic
Very Green	Hypereutrophic

*Lake Minnie Belle's Trophic State Index is 43 (calculated by the DNR using data from June and September - 2014 through 2023) which indicates that **Lake Minnie Belle is a "Moderately Clear, Mesotrophic" lake.***

The total cost for Lake Minnie Belle's Annual Water Quality Monitoring is only about \$500!

Other Water Quality Testing

From time to time, LMBIA becomes aware of the potential for bacterial contaminants in the lake water. One indicator organism that LMBIA has tested for from time to time is E. Coli bacteria.

Minnesota lakes located in agricultural areas are often subject to higher levels of E. Coli bacteria than the lakes found in the forested areas of northern Minnesota. Potential E. coli sources include failing septic systems, runoff from agricultural lands that receive manure applications, and runoff from areas containing waste from wildlife and pets. (4) (5) Although Lake Minnie Belle is surrounded by agricultural lands, area farmers employ responsible fertilization and other management practices that protect Lake Minnie Belle from contamination.

Bacteria levels can depend not only on its source, but also on weather and water temperatures. While some lower levels of E. Coli have been found at times, the levels have died off and, to date, have not been enough to cause significant alarm.

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Preserving and Protecting Lake Minnie Belle's Water Quality and Clarity

Total Phosphorus

Reducing phosphorus levels in Lake Minnie Belle can help protect and even improve the water quality. The MN DNR and the MN PCA predict that Minnie Belle has a Total Phosphorus Load entering the lake of 170 pounds per year. ***The DNR/PCA set a Phosphorus Load Reduction Goal for Lake Minnie Belle of 9 pounds per year (1).***

One of the best ways to reduce phosphorus levels is to prevent it from entering the lake! Phosphorus enters the lake via runoff containing agricultural fertilizer and manure, lawn and garden fertilizers, yard and animal waste, and compromised septic system discharge. Phosphorus also enters the lake when algae, weeds, leaves, and other vegetative materials decompose.

LMBIA is currently developing two projects that will prevent phosphorus from reaching the lake by

<p>Lake Minnie Belle Predicted Total Phosphorus Load 170 #/yr Phosphorous Load Reduction Goal 9 #/yr - MN DNR and MN PCA</p>
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precluding agricultural runoff from directly entering the lake. These projects will divert agricultural runoff from directly entering the lake via 1) the outlet on the north side of the lake and 2) a storm water inlet into the small lagoon on the south side of the lake. Both of these projects will also protect against bacterial contamination via agricultural runoff. Additional

information on these two projects will be included in a subsequent Newsletter.

Another project that LMBIA effectively implemented several years ago to prevent agricultural runoff from directly entering the lake is now commonly known as the "Bees and Butterflies" project. This project is described in the next section of this Newsletter.

LMBIA members and others living in Lake Minnie Belle's Lakeshed can also help to reduce the phosphorus loads entering the lake by: 1) fertilizing responsibly, 2) minimizing soil erosion into the lake, 3) removing algae and weeds that wash up on or near the shore and disposing of the material by composting away from runoff areas, 4) keeping yard waste from washing into the lake, 5) disposing of animal and yard waste away from runoff routes, and 6) maintaining septic systems.

References:

- 1) Minnesota Department of Natural Resources (MDNR). Watershed Health Assessment Framework: Lakes. [Explore Watershed Lakes: Minnesota Department of Natural Resources](#)
- 2) Minnesota Pollution Control Agency (MPCA). Lakes and streams water quality dashboard. Minnie-Belle: 4 MI S OF LITCHFIELD (Lake). [Surface Water](#)
- 3) University of Minnesota Duluth. Natural Resources Research Institute. Minnesota Natural Resources Atlas. WQ – Lakes – Chlorophyll. December 15, 2019. [WQ – Lakes – Chlorophyll : Minnesota Natural Resource Atlas](#)
- 4) Minnesota Pollution Control Agency (MPCA). wq-s1-93. January 2021. [Water quality and bacteria frequently asked questions](#)
- 5) Minnesota Pollution Control Agency (MPCA). wq-iw3-20. February 2008. [Bacteria: Sources, Types, Impact on Water Quality](#)

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A Transformation: From Major Phosphorus Contributor to Wildlife Habitat Preserve - The “Bees and Butterflies” Project

Beckville Ditch

Prior to 2002, the Beckville Ditch was the stormwater runoff outlet for agricultural land on the south side of 193rd Street just south of the Beckville Lutheran Church Picnic Grounds. Runoff from this area included high concentrations of phosphorus and soil materials - major contributors to water quality decline. The need for a project to improve this outlet into Lake Minnie Belle was identified in the Lake Assessment Program (LAP) Report completed in 1989. This report was developed under the auspices of the MPCA with collaboration from the Lake Association.

The Beckville Ditch (also known as “MB1”) is shown on Photo 1 to the right. It starts on the south side of 193rd Street -near its intersection with 194th Street, travels through a culvert under 193rd Street and then flows via ditch to a large culvert under 194th Street. Flow continues from that culvert via ditch to Lake Minnie Belle.



Photo1 - Beckville Ditch (North is at top)

Water Quality Improvement Project



Photo 2 – Purchased Land Area (inside shape outlined in blue)

In 2001, the Lake Association used \$30,000 of MPCA funds from its Lake Assessment Program (LAP) to develop a “Water Quality Preservation Area” south of 193rd Street. The project included the purchase of just under 17 acres of land, design and construction of a berm along the south side of 193rd Street, and a water retention area that would allow phosphorus, sediment, and debris from agricultural lands to settle out of runoff before it entered Lake Minnie Belle.

The Lake Association purchased the land (shown in the outlined area that looks like the head of a loon in the picture on the left) from Charles Anderson in April 2001 and obtained a Conditional Use Permit for the property in November 2021. ***In 2002, the purchased land was designated as a “Water Quality Preservation Area”.***

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A contractor, Mortenson, was hired by the Lake Association and the berm was constructed in the summer of 2002. A 6" drain tile crosses the berm and allows stormwater to drain from the Water Quality Preservation Area to the Beckville Ditch only when it reaches a specified elevation behind the berm. This system allows most of the phosphorus, sediment, and debris to settle out of the stormwater before it flows into Lake Minnie Belle. Initial seeding and tree planting followed in the spring of 2003. The berm along 193rd Street is shown in Photo 3.



Photo 3 – Water Quality Preservation Area Berm along 193rd St (Aug 2024)

Lake Improvement Associations do not have the legal standing needed to own property. As such, ownership of the Water Quality Preservation Area was transferred to Meeker County which, in turn, entered into a 10-year recurring contract with LMBIA for the control and management of the Area. This contract stipulates that LMBIA must maintain the property in a natural state taking care to control weeds and overgrowth.



Photo 4 – Evergreen stand planted by volunteers

For about four years after the initial seeding and planting of the area, a group of devoted Lake Association members – Larry Hlavka, Roger Jergens, Rich Peterson, Denny Herzog, Tom Hess – purchased trees and shrubs from the Soil and Water Conservation District on an annual basis and planted them on the property. For five years, Larry Hlavka regularly brought his water tanker to the site and watered the planting throughout the summer. The row of evergreens that can be seen at the right of Photo 4 survived in large part because of Larry's dedication. These evergreens delineate the north to south boundary on the east side of the property.

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Bees and Butterflies Prairie

LMBIA continued its search for a way to effectively fulfill its maintenance obligation for the Water Quality Preservation Area that would preserve its ability to retain and filter stormwater and protect Lake Minnie Belle.

In late 2017, LMBIA decided to pursue a project that would create a “Bees and Butterflies Prairie”. The Water Quality Preservation Area would be planted with specifically blended grasses and wildflowers that attract and support native bees and butterflies. In order to fund the project, LMBIA applied for and received funding from the LCCMR (Legislative-Citizen Commission on Minnesota’s Resources), MCAL (Meeker County Area Lakes), and the MN BWSR (Board of Water and Soil Resources). In 2018, LMBIA began working with the Meeker County SWCD (Soil and Water Conservation District) who hired a contractor, Josh Pommier (Farm Bill Biologist) to help LMBIA implement the project as follows:

- 2018 – Overgrowth including scrub trees and shrubs were removed
- 2019 – Vegetative kill-off in the summer, first application of herbicide in early September, first and second disking in November
- 2020 – Disked smooth and final disking in May, seeded and rolled in June, herbicide applied in June, mowed in August
- 2021 – LMBIA is obligated to maintain the restored prairie

Rob Kruger, LMBIA Board Member, has volunteered and now mows the Bees and Butterflies Prairie twice a year during times that are safest for Monarch butterflies.



Photo 5 – Berm and Bees and Butterflies Prairie (Dec 2024)

For the foreseeable future, a project that started with the Lake Association’s desire to improve and protect Lake Minnie Belle water quality is not only protecting water quality but is also providing a prairie habitat that will help wildlife for generations to come.

The total cost for Berm and Bees and Butterflies Prairie (not including grants and volunteer efforts) has been about \$2,000.

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Aquatic Invasive Species Management

LMBIA's Aquatic Invasive Species (AIS) Management consists of 1) conducting surveys to identify whether an AIS exists and to determine where it exists in Lake Minnie Belle, and 2) treating existing populations in accordance with DNR regulations. LMBIA Board Member, Don Kotila, coordinated the AIS Management Actions taken by LMBIA in 2024 as shown in the Table below.

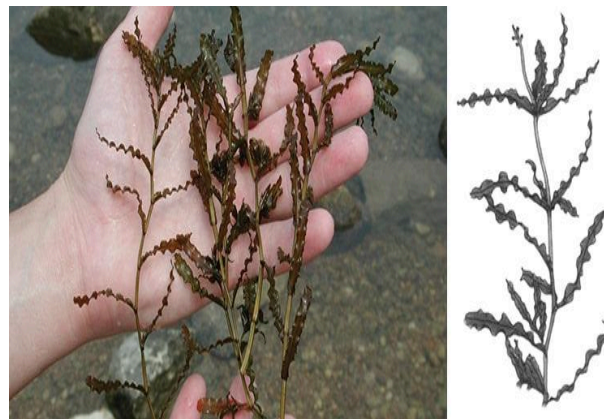
In 2024, two AIS plant species continued to be found in Lake Minnie Belle – Curlyleaf pondweed and Eurasian watermilfoil. Surveys were also conducted for a third AIS plant species, Starry Stonewort, which was not found in Lake Minnie Belle in 2024.

2024 AIS Management Actions for Lake Minnie Belle			
Action	AIS	Date	Who?
Survey	Curlyleaf pondweed	~04/15/24	Tigris
Treatment	Curlyleaf pondweed	04/24/24	Tigris
Survey	Curlyleaf pondweed - post treatment	06/05/24	Tigris
	Eurasian watermilfoil		
Survey	Eurasian watermilfoil	06/20/24	MN DNR
Survey	Eurasian watermilfoil	06/25/24	Tigris
Survey	Starry Stonewort	08/10/24	Starry Trek
Dive Survey	Aquatic Invasive Species Early Detection	08/28/24	Limnopro
Treatment	Eurasian watermilfoil	09/06/24	Tigris

Curlyleaf Pondweed

Description

Curlyleaf pondweed (shown in the photo to the right) grows at the bottom of the lake during the winter and takes off in early spring when it can form dense mats on the lake surface. As Curlyleaf dies off in early summer, it releases nutrients that can feed algae growth and degrade water quality (1). Curlyleaf pondweed has leaves that are “somewhat stiff and crinkled, resembling lasagna noodles” (2). Because it grows so early in the year, surveys for Curlyleaf pondweed and subsequent treatment occur soon after the ice is off the lake.



Curlyleaf pondweed (2)

2024 Survey and Treatment

Tigris, a national surface water management company, conducted a survey for Curlyleaf pondweed (CLP) in Lake Minnie Belle in early April 2024. Results of the survey are shown in the Graphic on the following page.

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Curlyleaf pondweed Survey Results (April 2024)

A significant population of Curlyleaf pondweed was found in the Southwest Lagoon with minor densities found along the shoreline just to the north of the Lagoon. Based on survey results, Tigris obtained a permit from the DNR and treated the Southwest Lagoon for Curlyleaf Pondweed in late April 2024.

Tigris conducted a post-treatment survey for Curlyleaf on June 5, 2024. Results showed that little Curlyleaf remained in the Southwest Lagoon and recommended that no further treatment was necessary in 2024. However, Tigris did find other native aquatic vegetation prevalent in the treated area.

On August 28th, 2024, a scuba diver from Limnopro surveyed the DNR, East, and West Accesses. Curlyleaf pondweed was found at the DNR and West Accesses, but was not found at the East Access. The timing of the year was not the best for a true assessment of Curlyleaf Pondweed.

Eurasian Watermilfoil

Description

Eurasian watermilfoil is difficult to manage as it easily re-produces from plant fragments. It can grow up to twenty feet long and forms dense mats at the surface of a lake that block sunlight, threaten native species (fish and other animals) and preclude recreational activities. The leaves of the Eurasian watermilfoil plant are feather-like and have a central axis with 12 to 21 leaflets. A leaflet consists of four leaves arranged in a whorl (radiating out from a single point) around the stem. Eurasian watermilfoil is shown in the photo to the right.



2024 Survey and Treatment

Tigris conducted a lake-wide survey for Eurasian watermilfoil on June 5, 2024. The MN Department of Natural Resources (DNR) conducted its own survey for Eurasian watermilfoil on June 20, 2024, and Tigris conducted another survey for Eurasian watermilfoil on June 25, 2024. Based on the results of these surveys, Tigris developed a plan to treat 15.6 surface acres of Lake Minnie Belle for Eurasian watermilfoil and obtained a permit for treatment from the DNR.

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A scuba diver from Limnopro found Eurasian watermilfoil at the DNR, East, and West Accesses when they conducted a diving survey on August 28, 2024, but the species was not dense. The watermilfoil species that were observed were predominantly native species.

On September 6, 2024, Tigris treated the areas delineated as “Application Tracks” on the map for Eurasian watermilfoil.



Areas treated for Eurasian watermilfoil on September 6, 2024

Starry Stonewort

Description

The greatest threat to Lake Minnie Belle’s future is Starry Stonewort, often called the “Lake Killer.” Starry Stonewort is an extremely aggressive aquatic invasive species that quickly forms dense, stinky mats reaching from the lake bottom to the surface. These mats make swimming and recreation impossible, choke out native vegetation, and damage fish spawning areas.

LMBIA produced a video that details the impacts that Starry Stonewort would have on Lake Minnie Belle. If you have not watched the video, please check it out. If you have watched the video, watch it again! Feel free to share it, too. You can access it via the link to our website that follows.



Starry Stonewort in Lake Koronis

LMBIA Website Link:

https://www.canva.com/design/DAF4HAPdV-g/kUWOoJcE-sOgjeas1Rqpww/watch?fbclid=IwAR3h4dzLO_PKegPkJN2XyiEG5kyIBojNvxpxZHdzvD8017Qmb07vNnM6H6ZA

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2024 Surveys

On Aug 10th, LMBIA hosted the seventh annual Starry Trek (sponsored by the Minnesota Aquatic Invasive Species Research Center & the U of M Extension in partnership with the MN DNR). No Starry Stonewort was found in Lake Minnie Belle or the other area lakes that were surveyed.

A scuba diver from Limnopro Aquatic Science, Inc. (a MN aquatic services company) conducted an Aquatic Invasive Species Early Detection Survey near the DNR Access, the East Access, and the West Access on August 28th, 2024. The diver found no Starry Stonewort near the Accesses.

Overall Results - 2024 Scuba Dive Survey

The scuba diver from Limnopro identified the species listed in the table below during the dive conducted on August 28th, 2024.

Limnopro Dive Summary - August 28, 2024			
Name	DNR Access?	East Access?	West Access?
Aquatic Native Species			
Northern watermilfoil	Yes	Yes	Yes
Water celery	Yes	Yes	Yes
Clasping-leaved pondweed	Yes	Yes	Yes
Flat-stemmed pondweed	No	Yes	No
Illinois pondweed	Yes	Yes	Yes
White-stem pondweed	No	Yes	Yes
Coontail	Yes	Yes	No
Flexous naiad	Yes	Yes	Yes
Muskgrass	Yes	Yes	No
Sago	Yes	Yes	Yes
Water marigold	Yes	No	No
Water stargrass	Yes	Yes	Yes
White water-crowfoot	Yes	No	No
Widgeon grass	Yes	No	No
Aquatic Invasive Species			
Curlyleaf pondweed	Yes	No	Yes
Eurasian milfoil	Yes	Yes	Yes
Banded mystery snail	Yes	Yes	Yes
Zebra mussels	Yes	Yes	Yes

The Limnopro report noted that a thick growth of water celery dominated all accesses at depth zones greater than 4 feet. Water celery “leaves are ribbon-like, dark-green, and grow below the water surface in late summer, producing a small, whitish-yellow flower, supported by a coiled stalk” (5).

“Eurasian watermilfoil was found at all three locations but was not dense. Most of the watermilfoil observed were native species” (Limnopro report). Northern watermilfoil (a Native Species) has recently exploded in Lake Minnie Belle. It looks quite similar to the invasive species – Eurasian watermilfoil, and it is very difficult to differentiate the two plants.



Northern watermilfoil – Lake Minnie Belle

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LMBIA's 2024 AIS Management Costs

Tigris Services Costs

2024 Total Cost for Tigris Services = \$14,400
(Program Management = \$3,500, Curlyleaf Pondweed Treatment = \$1,400, and Eurasian Watermilfoil Treatment = \$9,500)

In 2021/2022, LMBIA obtained a permit from the DNR that would allow a special treatment for the Eurasian watermilfoil in Lake Minnie Belle using the herbicide, ProcellaCor. This herbicidal treatment included a 3-year Extended Control Contract meaning that any re-growth in treated areas during the 3-year time period would be treated at no cost to LMBIA.

The ProcellaCor applications have been successful overall, but some areas treated in 2022 had some Eurasian watermilfoil develop in 2024. Board member, Don Kotila, worked with Tigris to identify these areas. He also obtained agreement from Tigris (with their supplier, Sepro) to treat 7.1 acres of regrowth in 2024 (estimated treatment cost of about \$9,000) at no cost to LMBIA. These areas are those shown along the north and west side of Lake Minnie Belle on the previous map titled "Areas treated for Eurasian watermilfoil on September 6, 2024".

Based on the 2024 surveys conducted by the DNR and Tigris, LMBIA identified an area of new Eurasian watermilfoil just east and south of "the Point" (see the application track on the previous map). Because of the depth of this growth area, the cost to treat the 8.5-acre site with ProcellaCor was over \$15,000. However, LMBIA was able to obtain \$6,000 from Meeker County to help offset these costs. LMBIA's past experience with the effectiveness of ProcellaCor indicates that this treatment should control Eurasian watermilfoil in the treated areas through 2025 and potentially through 2026.

2024 - Eurasian Watermilfoil Treatment Costs	
Total Cost	\$24,500
Tigris Extended Warranty	\$9,000
Meeker County Grant	\$6,000
LMBIA Cost	\$9,500

Limnopro Services Costs

2024 Total Cost for Limnopro Services = \$1300
(Dive Survey and Summary of Results)

- (1) Minnesota Department of Natural Resources. (2024). Curly-leaf pondweed (*Potamogeton crispus*). [Curly-leaf pondweed \(*Potamogeton crispus*\) | Minnesota DNR](#)
- (2) [Curly Leaf Pondweed | Weed ID Guide | The Pond Guy](#)
- (3) Minnesota Department of Natural Resources, Eurasian watermilfoil.(2024). (*Myriophyllum spicatum*). [Eurasian watermilfoil \(*Myriophyllum spicatum*\) | Minnesota DNR](#)
- (4) [Minn. DNR continues fight against invasive species | MPR News](#)
- (5) [Wild Celery \(*Vallisneria americana*\) | Minnesota DNR](#)

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Aquatic Invasive Species Prevention – Starry Stonewort

The greatest threat to Lake Minnie Belle's future is Starry Stonewort, often called the "Lake Killer." As noted in the previous section of this newsletter, the scuba diver from Limnopro found no Starry Stonewort near the DNR, East, or West Accesses during his dive survey on August 28th, 2024.

Although many believe that the introduction of Starry Stonewort to Lake Minnie Belle is inevitable, part of LMBIA's strategy is to keep that from happening as long as possible. ***In the meantime, Brian Kittelson (LMBIA Board Member) is leading efforts to fill the Starry Stonewort War Chest with at least \$100,000 and to develop the "Lake Minnie Belle Starry Stonewort Quick Response Plan".*** The War Chest will be critical to LMBIA's ability to respond quickly and effectively should Starry Stonewort be found in the lake.

An "Ounce of Prevention"

In 1736, Benjamin Franklin famously advised fire-threatened Philadelphians that "An ounce of prevention is worth a pound of cure." Clearly, preventing fires is better than fighting them! LMBIA has taken Ben Franklin's advice to heart and is implementing its own **PREVENTION** strategy to keep Starry Stonewort from gaining a foothold in Lake Minnie Belle. If Minnie Belle is infected with Starry Stonewort, the damage is done as no eradication method exists today and it is exceedingly difficult to manage. To date, over \$1,000,000 has been spent just to "manage" Starry Stonewort in Lake Koronis.

"An ounce of prevention is worth a pound of cure."

What is the LMBIA Board doing to prevent a Starry Stonewort invasion?

1. ***Routing Watercraft Traffic to the DNR Access for inspection/decontamination.*** In early 2024, LMBIA worked with Greenleaf Township to close the East and West Accesses to watercraft launches and landings (removals). Watercraft must enter and exit the lake via the DNR (North) Access as that is where inspections/decontaminations are conducted.
2. ***Expanding and Improving the Watercraft Inspection/Decontamination Program at the DNR Access.*** 2024 inspections/decontaminations started on May 10th and continued through the middle of September with inspectors on site daily from 6 am to 8 pm. Some additional coverage was provided at the end of September and for a weekend or two in early October. Based on feedback and general observations about the inspections/decontaminations, Brian Kittelson will lead the Board's efforts to work with the County to improve the quality of inspections conducted in 2025.
3. ***Enacting an Early Detection Program.*** The 2024 early detection program included: 1) the seventh annual Starry Trek survey (sponsored by the Minnesota Aquatic Invasive Species Research Center & the U of M Extension in partnership with the MN DNR) on August 10th, and 2) the dive survey conducted by Limnopro at the DNR, East, and West accesses on August 28th. ***Neither of these surveys found any Starry Stonewort in Lake Minnie Belle!***

LMBIA is working with the County to improve the quality of inspections in 2025

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Winter 2025

In an effort to learn as much as possible about the Starry Stonewort threat, Brian Kittelson recently talked with Blaine Barckley, Greater Lake Sylvia Association Board Member responsible for AIS, about Lake Sylvia's experience with Starry Stonewort. Lake Sylvia is located near Annandale in Wright County. Blaine shared that Starry Stonewort was detected in Lake Sylvia at the public landing about seven years ago. At the time of detection, it covered about a tenth of an acre. By ice-off the next spring, it had spread to about two acres. Yes - Starry Stonewort grows all year! Because Starry Stonewort spreads so quickly, early detection is essential. LMBIA is evaluating options that would improve the Lake Minnie Belle Early Detection Program with implementation planned for 2025.

LMBIA is evaluation options to improve the Early Detection Program

4. *Providing Proactive Education and Communications*. LMBIA continues to develop and issue communications about Starry Stonewort in an effort to increase awareness of Starry Stonewort within the Lake Minnie Belle community.
5. *Developing a Quick Response Plan and its enabler, the Starry Stonewort War Chest*. If the worst-case situation – Starry Stonewort is found in Lake Minnie Belle – should occur, we need to act immediately to keep the invasion in check. LMBIA is working with the DNR and Meeker County to develop a Quick Response Plan for Starry Stonewort. This plan will detail the steps that will be taken to respond to an invasion and will include supporting mechanisms for managing the invasion that are available on demand. Response to a Starry Stonewort invasion will be costly. LMBIA is working to fill a War Chest with \$100,000 that can be accessed to allow immediate response to any invasion.

LMBIA is developing a Quick Response Plan and its enabler, the Starry Stonewort War Chest

What can you do to prevent Starry Stonewort from invading Lake Minnie Belle?

1. The best chance we have is to make sure that every single thing that enters Lake Minnie Belle that has been in another water body is clean and dry! Fragments of Starry Stonewort can attach to trailered boats and watercraft, anchors, bait buckets and other water-related equipment. Fragments can also attach to docks and boat lifts. These fragments can then transfer from an infected lake to an uninfected lake when the items they are attached to are moved from infected to uninfected lakes without effective cleaning.
2. Contribute to the cause. Preventing Starry Stonewort is costly (increased inspection costs, etc.); but response to an invasion can be extremely expensive. So, if you can, please contribute to the Starry Stonewort War Chest. If you want to contribute, you can contribute during the annual membership drive or contact Kristin Jaquith at 320-282-5673 or kristinjaquith@hotmail.com.

Make sure that every single thing that enters Lake Minnie Belle that has been in another water body is clean and dry!

Contribute to the Starry Stonewort War Chest

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LMBIA's 2024 AIS Prevention Costs

LMBIA's 2024 AIS Prevention Costs only included those that were for inspection and decontamination services. Part of the cost for these services was paid for by Meeker County. Special donations covered part of the cost and the remainder was paid via LMBIA's annual budget.

2024 AIS Prevention Costs		
	Cost	Payment
Inspection/Decontamination	\$ 48,284	
Meeker County		\$ 18,665
Special Donations to LMBIA		\$ 15,000
LMBIA		\$ 14,619
TOTALS	\$ 48,284	\$ 48,284

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Fundraising for Preserving and Protecting Lake Minnie Belle

Expanding Needs

Efforts to preserve and protect Lake Minnie Belle fall into two main categories:

- 1) Water Quality
- 2) Aquatic Invasive Species

In the past, preservation and protection of the lake's water quality was the greatest need. Water quality improvement projects such as the development of the Water Quality Improvement Area for the Beckville Ditch (and subsequent Bees and Butterflies Prairie) were paramount to meeting preservation and protection efforts. Today, these projects remain important but the advent of aquatic invasive species – especially the impending threat of Starry Stonewort – add another critical facet to LMBIA's work.

Water Quality

Annual water quality monitoring requires volunteer effort and a minimal financial expenditure – about \$500.00 in 2024. The data that is collected is used to identify significant changes in the lake's water quality, potential pollution sources, and the types of clean water projects that could be implemented to improve lake water quality.

LMBIA continues work on two projects that will prevent phosphorus from reaching the lake. These projects are primarily being funded through the generosity of local landowners and through Soil and Water Conservation District (SWCD) funds which can require some level of “match” from the local project sponsor (LMBIA).

Aquatic Invasive Species

In 2024, LMBIA's greatest expense was management and prevention of aquatic invasive species. AIS management includes conducting annual aquatic plant surveys and then treating areas of Curlyleaf pondweed and Eurasian watermilfoil with herbicides. AIS management efforts were paid for by LMBIA and Meeker County.

In 2024, LMBIA's greatest expense was management and prevention of aquatic invasive species.

AIS prevention primarily includes efforts to do whatever necessary to prevent Starry Stonewort from entering Lake Minnie Belle. AIS prevention also includes efforts to prevent AIS currently in Lake Minnie Belle (Curlyleaf pondweed, Eurasian watermilfoil, and Zebra Mussels) from transferring from Lake Minnie Belle to other water bodies. In 2024, AIS prevention efforts included inspection/decontamination services at the DNR Access and closing the East and West Accesses to watercraft launches and removals. AIS prevention efforts were paid for with a combination of Meeker County funds, LMBIA funds, and other donations.

LAKE MINNIE BELLE MESSENGER

Expanding Fundraising

AIS Management and Prevention Funding

In light of the expanding efforts required to protect Lake Minnie Belle against Starry Stonewort in 2024, the LMBIA Board worked to establish new fundraising opportunities. Board member, Bill Guptail, led the Board's efforts to maximize and enhance existing fundraising efforts and to identify and develop new fundraising opportunities to 1) finance continued AIS survey, treatment, and inspection efforts, and 2) achieve the multiple year goal of developing a \$100,000 War Chest for the fight against Starry Stonewort.

Enhanced existing and new fundraising opportunities that were implemented in 2024 include:

1. Obtained new financial support from Greenleaf Township consisting of a first-time grant of \$10,000 and the purchase of a new dock for the West Access.
2. Enhanced our local business sponsor program by adding the Gold Level Business Membership. In addition to our annual business sponsorships which totaled \$3,400 in 2024, the following Gold Level Business Members contributed \$2,000 in new revenue for LMBIA:

Jason Sabacky, RE/MAX RESULTS	ROD BURRISS, CROSSCOUNTRY MORTGAGE	B&B Sports & RV
BROADBAND	MID MN SEPTIC SERVICES	Yamaha Motorsports & Marine
Jason Tibbits, State Farm Insurance	TheHomeSource Store	

3. Partnered with the Litchfield VFW Post to hold meat raffles at Shaggy's Bonfire Bar and Grill on Monday nights. Almost every Monday night in 2024, two LMBIA Board Members with family/friends volunteered their time to conduct a meet raffle that has resulted in approximately \$8000 of new revenue for AIS Management and Prevention.
4. Launched the 1st Annual Lake Minnie Belle Summer Raffle which generated \$4000 in revenue allocated to AIS Management and Prevention.

Enhanced and new fundraising in 2024 generated an additional \$24,000 in revenue for LMBIA!

2024 Special Donations: In addition to these new/enhanced fundraising activities, we were fortunate to receive significant donations beyond our annual membership dues of \$125. Overall, we had seventy-five members donate more than the \$125 annual dues for a total of about \$13,000 in revenue used to support the general fund and AIS Management and Prevention.

Other Donations – Southwest Lagoon Dredging Project

Finally, the association was also able to administer the project to dredge the east side of the access to the Southwest Lagoon with volunteer project management assistance from Scott Lemke and Dick Penk (Southwest Lagoon property owners). Scott and Dick worked with the owners of properties in the Lagoon to obtain donations for the project. The dredging project on the east side of the access to the lagoon was paid for with donations from Lagoon property owners, other LMBIA members and a \$1,000 donation from the Contractor - Toutges Brothers Septic and Excavating. The west side of the Lagoon access is currently scheduled for dredging in 2025.

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Winter 2025

2025 Lake Minnie Belle Improvement Association (LMBIA) Membership – the key to preserving and protecting Lake Minnie Belle

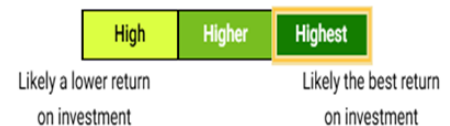
LMBIA Board Members are representatives elected by LMBIA Members and have the mission to preserve and protect Lake Minnie Belle. Board Members volunteer their time and rely on others that volunteer in order to achieve the mission. The Board funds activities via annual membership dues, additional donations, Meeker County grants/funding, and fundraising activities.

Why should you be a Member of LMBIA?

Lake Minnie Belle currently has better average water quality than 86% of all lakes in Minnesota and 100% of the lakes in Meeker County. Joining LMBIA means that you are **participating in the stewardship of Lake Minnie Belle and the local environment** - preserving and protecting our beautiful lake ensures that you, your family, and future generations will be able to enjoy Lake Minnie Belle for years to come!

Members can consider annual membership dues a good investment! The DNR has ranked Lake Minnie Belle as likely to have the best return on investment.

Benefit to Cost Assessment Class: Highest



Preserving and protecting Lake Minnie Belle also helps to **protect your property values**.

When you are a Member of LMBIA you will have one vote at the annual meeting and will receive the bi-annual newsletter and the Annual Membership Directory.

How are membership dues used?

The LMBIA Board uses membership dues to **help fund** the following activities:

1. Lake Management
 - a. Water Quality Preservation
 - i. Water Quality Testing
 - ii. Water Quality Protection Project Administration
 - b. Aquatic Invasive Species Management and Prevention
 - i. Aquatic Plant Surveys (Surface Observation and Scuba Diver Observation)
 - ii. AIS Treatment (i.e., Curlyleaf pondweed, Eurasian watermilfoil)
 - iii. Inspection/decontamination Services at DNR Access
 - c. Access Maintenance
 - d. Ongoing Educational Programs
 - e. Other Projects
2. Administration
 - a. Directory/Newsletters
 - b. Attorney/Accountant Fees
 - c. Miscellaneous

Membership dues will account for about 40% of the funds needed to support these activities in 2025.

Note that membership dues are **NOT** used to fund the AIS Catastrophic Fund (aka “Starry Stonewort War Chest”). In 2025, other fundraising efforts will continue to be used to grow this fund.

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How much are LMBIA membership dues for 2025?

LMBIA's work to preserve and protect Lake Minnie Belle continues to grow more difficult because of the current population of invasive species and the impending threat of Starry Stonewort. The LMBIA Board works diligently to obtain funding from grants, government entities, and other fundraising activities and will continue to do so. However, the availability of these funds and the ability of the Board to fundraise is subject to change from year to year.

As such, the LMBIA Board voted to raise 2025 membership dues from \$125 per year to \$175 per year at their December 2024 meeting. This change means that membership dues will account for about 40% of the funding needed to support the activities listed above in 2025.

Are LMBIA membership dues tax deductible?

Yes. LMBIA membership dues and any additional donations are tax deductible.

How do I pay LMBIA membership dues in 2025?

Please complete your 2025 membership using one of the two following options:

1. Use the online membership form on our website www.lakeminniebelle.org/membershipform (Preferred)
2. Complete the attached form and mail it with your check payable to LMBIA to:

**Jeff Bullert, LMBIA
5054 134th St NW
Clearwater, MN 55320**



Scan with your Phone
to pay online

Local Activities and Entertainment

Join us at Shaggy's Bonfire on Monday nights! LMBIA hosts a MEAT RAFFLE with proceeds going to the LMBIA Aquatic Invasive Species fund. The raffle starts at 6:00 PM each Monday. You can have dinner at Shaggy's and win Tuesday night's dinner, all while helping LMBIA manage aquatic invasives!

Board Meetings

Board meetings are held the 3rd Tuesday of every month at 7pm.
Location to be posted via Facebook Page.



Lake Minnie Belle
Improvement Association
PO Box 34, Litchfield, MN 55355

Check Us Out!

LMBIA website:
www.lakeminniebelle.org

LMBIA on Facebook
www.facebook.com/LMBIA

LMBIA Email
info@lakeminniebelle.org

Lake Minnie Belle Board of Directors

<p>Jeff Bullert Website/Membership 763-445-9533 jeff.bullert@gmail.com</p>	<p>Robert Kruger MCAL, Bees & Butterflies (320) 894-6361 wilkrug@msn.com</p>
<p>Bill Guptail Fundraising (320) 296-6129 gupw44@gmail.com</p>	<p>Todd Kuechle Treasurer (320) 894-6361 appraise@hutchtel.net</p>
<p>Kristin Jaquith Chair/AIS (320) 282-5673 kristinjaquith@hotmail.com</p>	<p>Karen Peterson Secretary/AIS/Special Projects (612) 210-6333 krnpete@gmail.com</p>
<p>Brian Kittelson Starry Stonewort Prevention (612)-799-1530 kittelsonbrian@gmail.com</p>	<p>Charlie Schlauderaff Special Projects (612) 367-7130 soniczoo@gmail.com</p>
<p>Don Kotila AIS/Special Projects (320) 221-3164 Donrk58@yahoo.com</p>	<p>Curt Wendland Adopt A Highway Program (320) 583-4266 curtwendland@hutchtel.net</p>



2025 LAKE MINNIE BELLE IMPROVEMENT ASSOCIATION MEMBERSHIP

2025 Membership Dues: \$175



Pay for your Membership Online

Go to www.lakeminniebelle.org/membershipform or scan the QR code

Mail In Form

Memberships are due by April 19th

Please Complete and return with your check payable to LMBIA

Name _____ Spouse _____

Lake Property Address _____ Litchfield, MN 55355

Mailing Address (If different from lake property address)

Primary Phone Number _____ Phone Type Mobile Landline

Primary Email Address _____

Additional Email Addresses _____

(Email addresses are used only for specific notifications to lake residents and are not given to any outside sources)

If you own property at Lake Minnie Belle, what year did you first purchase your property at Lake Minnie Belle? _____

Additional Lots: If you are a member who owns additional lot(s), list the lake address(es) or Lot #'s below:

Newsletter Delivery: Sent via USPS Mail Sent Via Email

Additional Donation: I want to make an additional donation to LMBIA

General Fund

\$25 \$100
 \$50 \$_____

Aquatic Invasive Species Fund

\$25 \$100
 \$50 \$_____

Lake Minnie Belle Membership: \$175

Additional Donation: _____

Total Tax-Deductible Amount Enclosed: _____

Mail to: Jeff Bullert - LMBIA
5054 134th St NW
Clearwater, MN 55320